

Instantia Crucis

“Understanding is, in the end, the scope of science – and science is much more than a mechanical computation bereft of understanding.”

Roger Penrose

A dramatical simplification of man's relation with the world uncovers a functional dichotomy: human condition founds the economy, while human nature determines the politics.

The pre-moderns had hoped to save themselves from living the duality by relegating the economy to the empire of necessity and assigning politics to the empire of liberty. They would approximate the disjunctions with the specific ingenuity of beings destined to evolve beyond good and bad, within the framework of the world allowed this side of Olympus. In the end it was about escaping the context, a sort of excusable inconsequence on the basis of the ideal of happiness, in the pursuit of which anything could be useful, even the reductions of sense. Private and public life, be it under different rules of order, were, in the end, for the ancients the faces of the same coin of human existence.

Rationalization, as a function of the validity of the thoughts and actions, assumed by the moderns, instead of diluting the dilemma, it increased its degree of complexity: the necessity was placed at the fundamentals of wealth, while liberty has legitimized the instrumentalization of power. The new Atlantis of the Enlightenment's modernity was formed on the assumption that wealth is a natural part of property while power has the sacred mission of organizing liberty as the gendarme of property. Liberty now moves around the halls of the right of ownership on the same vehicles which would have benefited the slave of ancient Greece, when he was seen as a natural part of his owner's family.

Through property, liberty takes an individual face, though losing its social front. From public order, natural to its substance, it turns into private order.

The conclusion, which strives only for logic and not morality, is that happiness proves to be a consequence of property. Government, as an active expression of politics, was fully rationalized because it deals with something ponderable: the human condition. That which was its prime destination, the human nature, as a sum of Hobbesian imponderables, remains at most in filigree.

For the moderns the perception is blurred when they hesitate to moderate the explicative heresies as to the sources wealth and property. On the conceptual path of property as theft and of wealth as human completion, the dilemmas were ideologically sulfurized. The private order was centered on the individual and this has become the battlefield between the human condition and human nature. The trajectories of necessity and liberty were projected on a Möbius strip. The natural individual-society and private-public complementarities were temporally

positioned in a principle of conflictual order. On one side the social prevalence over the individual, and, on the other, the extension of the private in the area of public goods.

The estrangement of human nature from the human condition is the original sin of the Enlightenment from which the modern fratricide between capitalism and communism has resulted. In fact, it was the tragedy, brought to life by the modern ideology of fragmenting the unity of human life, of functionalizing some autarchic patterns of the evolution of the complementary components of life. Life is not judged in terms of the prevalence of its imponderables which define the private zone and the public area. It is about an order of relevance and not of prevalence. The territory of necessity and the territory of liberty have an infallible relative essence pertaining to the anthropic principle of the universe. Drawing limits to them in order to legitimize the ideas of political action is counter to nature, life being a unique and unitary process. Any attempt of making one of its facets absolute not only creates monsters set to dominate the world but also undermines the basis of life along with the extinction of civilization as an expression of human nature.

The modern overlaying of the wealth-property relation over the natural relation between necessity and liberty is more than just a change of context; it really is the alteration of the natural context of life. Coming out from under the empire of necessity through property and conquering the empire of liberty through wealth, as well as any other combination attained through the substitution of the terms of reference, sustain the illusion of transgressing the borders between human condition and human nature. Only that the result is, in the modern interval, a falsification of the objective-functions: with politics taking care of the economy, the economy produces and distributes power. An impossible phase is arrived at in which freedom pre-defines the necessities – with the limit to which the liberty of necessities exists, perhaps in the manner of political correctness – while the necessities of life are substituted by political liberties, which would mean that the human nature would actually be the human condition.

The Marxist dream of liberating work is fulfilled under the guise of the alteration of life: the necessity is made absolute, while liberty is made relative.

The empire of necessity is organized around the principle of absolute freedom, while the empire of liberty becomes the accidental phenomenon of fulfilling the necessities. Their coexistence signifies the apocalyptic exit from the context. Which is the context of life.

Vitae veritas non sequitur.

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Interest Rate Risk Management using Duration Gap Methodology

■

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Abstract. *The world for financial institutions has changed during the last 20 years, and become riskier and more competitive-driven. After the deregulation of the financial market, banks had to take on extensive risk in order to earn sufficient returns. Interest rate volatility has increased dramatically over the past twenty-five years and for that an efficient management of this interest rate risk is strongly required. In the last years banks developed a variety of methods for measuring and managing interest rate risk. From these the most frequently used in real banking life and recommended by Basel Committee are based on: Reprising Model or Funding Gap Model, Maturity Gap Model, Duration Gap Model, Static and Dynamic Simulation.*

The purpose of this article is to give a good understanding of duration gap model used for managing interest rate risk. The article starts with an overview of interest rate risk and explains how this type of risk should be measured and managed within an asset-liability management. Then the article takes a short look at methods for measuring interest rate risk and after that explains and demonstrates how can be used Duration Gap Model for managing interest rate risk in banks.

Key words: interest rate; risk; management; assets and liabilities; duration gap; bank; interest rate risk.

■

1. Interest rate risk management – overview

First of all, we consider that it is necessary to give a definition to interest rate risk. Interest-rate risk can be defined as “a loss ensuing from an adverse change in cash flow and from an adverse change in the value of interest-rate sensitive assets and liabilities, in consequence of a change in interest rates.”⁽¹⁾ If the change in interest rates

is favourable or unfavourable depends on the presence of certain components, or sources of interest-rate risk in the balance sheet and off-balance sheet accounts of the bank. In this context, the most important three sources of interest rate risk can be:

- *Maturities mismatching* of balance sheet and off-balance sheet items, which can be defined as a non-alignment in the maturity (in the case of fixed interest rates) and revaluation (in the case of variable interest rates) of assets, liabilities and off-balance sheet instruments.
- *Basis value risk* which is connected with the imperfect correlation in the adaptation of interest rates to assets and liabilities with otherwise similar maturities and revaluation. In the case of a change in an interest rate, these differences in adaptation of interest rates can cause an adverse impact on financial flows and the value of the bank.
- *Yield curve risk*, which arises when changes in the values, slope and shape of the yield curve have an adverse impact on the financial flows and value of the bank.

In this case the unexpected fluctuation of the level of interest rates can affect the banking profitability in two ways:

- *Exploitation risk* which consists in losses caused by the decreasing of interest income;
- *Balance sheet risk*, determined by the deterioration of the bank's patrimony (decreasing of the equity) as a result of the variation of interest rate in the market.

In this context, it is vital that banks have comprehensive risk management processes in place that identify, measure, monitor, and control a bank's exposure to interest rate risk. A bank's ALCO is responsible for monitoring the bank's risk and return profile. Traditional asset and liability management focuses on measuring interest rate risk and monitoring performance, setting policies to stabilize or increase net interest income. Senior management must ensure that the structure of the bank's business and the level of interest rate risk it assumes are effectively managed, that appropriate policies and procedures are established to control and limit these risks, and that resources are available for evaluating and controlling interest rate risk.

2. Interest rate risk measurement techniques

From the historical point of view, the higher the interest rates fluctuations are, the more sophisticated the coverage of the interest rate risk becomes. Thus, various models used for measure of the interest rate risk were identified:

- Repricing Model or Funding Gap Model = based on gap between sensible assets and liabilities;
- Maturity Gap Model = based on the maturity gap;
- Duration Gap Model = based on duration gap;
- Static and Dynamic Simulation.

These methods are also recommended by the Basel Committee⁽²⁾ in order to create a standardized model which can be used by the regulatory authorities for evaluating the banks exposure to interest rate risk.

Main elements of these interest rate risk measurement models (technics) take into consideration the following elements:

- *Changing the market value* of the equity or the assets and liabilities portfolio, namely an economic perspective of the risk management;
- *Changing the net income resulting from the interest*, namely the risk management from the income perspective.

Many techniques available for measuring the interest rate risk exposure are orientated both to modifications in earnings and modifications in economic value of equity. Their complexity ranges from simple calculations to static simulations using current holdings to highly sophisticated dynamic modelling techniques that reflect potential future business and business decisions. From the models shown above, used in the interest rate risk management, we shall present the duration gap model.

3. Duration gap model

Duration gap (DGAP) model focuses on managing net interest income or the market value of stockholders' equity, recognizing the timing of all cash flows for every security on a bank's balance sheet. Unlike static GAP analysis, which focuses on rate sensitivity or the frequency of repricing, duration gap analysis focuses on price sensitivity.⁽³⁾ Duration gap and market value of equity sensitivity analysis represent alternative methods of analyzing interest rate risk. They emphasize the price sensitivity of assets and liabilities to changes in interest rates and the corresponding impact on stockholders' equity. As the labels suggest, they incorporate estimates of the duration of assets and duration of liabilities, which reflect the value of promised cash flows through final maturity. Duration gap analysis compares the duration of bank assets with the duration of bank liabilities and examines how the market value of stockholders' equity

will change when interest rates change. This analysis requires that a bank to specify a performance target (the market value of equity or net interest income) and strategically manage the difference between the average duration of total assets and the average duration of total liabilities (DGAP).

The general relationship between the sign of a bank's duration gap and the impact of changing rates on market value of equity is summarized below:

DGAP Summary

Table 1

DGAP	Change in Interest rate	Change in market (economic) value			
		Assets	Liabilities	Equity	
Positive	Increase	Decrease	>	Decrease	⇒ Decrease
Positive	Decrease	Increase	>	Increase	⇒ Increase
Negative	Increase	Decrease	<	Decrease	⇒ Increase
Negative	Decrease	Increase	<	Increase	⇒ Decrease
Zero	Increase	Decrease	=	Decrease	⇒ None
Zero	Decrease	Increase	=	Increase	⇒ None

4. Application of duration gap model for managing interest rate risk in commercial banks – study case

In this paragraph we explain and demonstrate how can be used Duration Gap Model for managing interest rate risk in commercial banks. Before application of model, we consider necessary to present the working hypothesis:

- The analysis assumes that there will be no defaults, prepayments, or early withdrawals.
- All securities make equal annual interest payments with annual compounding.
- The duration of cash is zero because cash doesn't change in value when interest rates change.
- At the initial time, for each balance sheet item, the nominal interest rate is equal with the market interest rate.
- The effects of both on- and off-balance sheet items are incorporated.

We shall take into consideration the balance sheet of a hypothetical bank "Omega Bank" which on 30.06.2007 have the following structure:

Balance sheet on 30.06.2007 (mil. Euro)

Table 2

Assets	MV	Rate (%)	Liabilities	MV	Rate (%)
Cash	1,500	0	Time deposit (1 yr)	3,700	6
Commercial loan (3 yr)	3,000	14	Certificate of Deposit (3 yr)	3,000	8
Treasury bond (5 yr)	2,500	11	Certificate of Deposit (6 yr)	1,800	10
Morgage (10 yr)	3,000	12	Debts	8,500	
			Equity	1,500	
Total assets	10,000		Total Liabilities	10,000	

As shown by this balance sheet, the value of assets is of 10,000 thousand RON, the value of debts is of 8,500 thousands RON and the value of equity⁽⁴⁾ is of 1,500.

Application of Duration Gap Model consists in the following steps:

1. Calculation of the market value corresponding to each balance sheet item (assets, debts, equity)

■ The market value of each balance sheet item is calculated as an actualized sum of the cash-flows generated in the future by the balance sheet item as follows:

$$V_p = P_0 = \sum_{t=1}^n \frac{CF_t}{(1+k)^t} + \frac{VR_n}{(1+k)^n},$$

$$CF_t = VN \times r, VR = VN$$

where:

CF_t = cash flow generated in year t (annual rate);

VN = nominal (accounting) value of each balance sheet item;

VR = value to be paid on the maturity (in the final year);

k = market interest rate;

r = nominal rate of interest;

n = number of years at the maturity.

Example⁽⁵⁾: For a commercial loan with three years maturity (CL3Y), the market value is calculated as follows:

$$V_p = (CL3Y) = P_0 = \frac{3.000 \times 0.14}{1.14} + \frac{3000 \times 0.14}{(1.14)^2} + \frac{3000 \times 0.14}{(1.14)^3} + \frac{3.000}{(1.14)^3} = 3.000$$

At the initial moment, the market value of each balance sheet item is equal with the accounting value (VN) because the nominal rate of the interest is equal with the market interest rate.

■ The market value of the equity (E=equity) is calculated as a difference between the market value of the assets (A=assets) and the market value of debts (L=liabilities), as follows:

$$Vp(E) = Vp(A) - Vp(L)$$

Assets	Liabilities
	Equities

Exemple:

$$Vp(E) = Vp(A) - Vp(L) = 10.000 - 8.500 = 1.500$$

$$D(CL3Y) = \frac{\frac{3.000 \times 0.14}{1,1} \times 1 + \frac{3.000 \times 0.14}{(1,1)^2} \times 2 + \frac{3.000 \times 0.14}{(1,1)^3} \times 3 + \frac{3.000}{(1,1)^3} \times 3}{\frac{3.000 \times 0.14}{1.14} + \frac{3000 \times 0.14}{(1.14)^2} + \frac{3000 \times 0.14}{(1,14)^3} + \frac{3.000}{(1,14)^3}} = 2.65$$

3. Calculation of the average duration of assets and liabilities

The average duration of assets/debts was calculated as an average of duration of each asset/debt with weight of the market value of asset/debt in the market value of the total assets/total debts.

$$D_A = \sum_{i=1}^n X_{Ai} \times D_{Ai} \quad D_L = \sum_{i=1}^n X_{Li} \times D_{Li},$$

where;

D_A/D_L = average duration of assets/debts;

D_{Ai}/D_{Li} = duration of the asset/debt;

X_{Ai}/X_{Li} = weight of the market value of asset/debt in the market value of the total assets/total debts.

2. Calculation of the duration of each balance sheet item

The duration (D) of each balance sheet item is calculated by using the Macauly formula:

$$D = \frac{\sum_{t=1}^n t \times \frac{CF_t}{(1+k)^t} + n \times \frac{VR_n}{(1+k)^n}}{\sum_{t=1}^n \frac{CF_t}{(1+k)^t} + \frac{VR_n}{(1+k)^n}} = \frac{\sum_{t=1}^n t \times \frac{C_t}{(1+k)^t} + n \times \frac{VR_n}{(1+k)^n}}{P_0}$$

Exemple: For Commercial Loan with three years maturity, the duration is calculated as follows:

Example

$$D_A = 0 \times \frac{1.500}{10.000} + 2.6467 \times \frac{3.000}{10.000} + 4.1024 \times \frac{2.500}{10.000} + 6.3282 \times \frac{3.000}{10.000} = 3.7181$$

$$D_L = 1.000 \times \frac{3.700}{8.500} + 2.7833 \times \frac{3.000}{8.500} + 4.7908 \times \frac{1.800}{8.500} = 2.4321$$

The results of the first three steps are shown in the following balance sheet:

Market value balance sheet, as of 30.06.2007

Table 3

Assets	MV(Vp)	Rate (%)	DUR	Liabilities	(MV)Vp	Rate (%)	DUR
Cash	1,500	0	0	Time deposit (1yr)	3,700	6	1.0000
Commercial loan (3yr)	3,000	14	2.6467	Certificate of Deposit (3yr)	3,000	8	2.7833
Treasury bond (5yr)	2,500	11	4.1024	Certificate of Deposit (6yr)	1,800	10	4.7908
Treasury bond (10yr)	3,000	12	6.3282	Debts	8,500		2.4321
				Equity	1,500		
Total assets	10,000		3.7181	Total Liabilities	10,000		

4. Calculation of duration GAP (DGAP)

DGAP shall be calculated as follows:

$$DGAP = -(DA - DL \times l), \quad l = \frac{L}{A}$$

$$DGAP = -(3.7181 - 2.4321 \times 0.85) = 1.6508,$$

$$l = 8,500/10,000 = 0.85$$

In the analyzed case, the average duration of assets exceeds the average duration of liabilities, which emphasizes the existence of the interest rate risk (DGAP = 0.85). The higher the value of this indicator is, the higher the potential modification of the equity market value is, when such modifications of the market interest rate shall appear. Therefore, in order to eliminate the interest rate risk it is necessary to reduce the duration gap to zero.

5. Immunization of the bank balance sheet by reducing DGAP to zero

In order to protect the equity to the variations of the market interest rate, Omega Bank shall reduce the duration ecart to zero (DGAP = 0), thus:

- Either by reducing the duration of the assets;
- Or by increasing the duration of debts;
- Or by changing the levier effect ($l =$ weight of the debts in the total assets at the market value).

In our example, we shall use the second hypothesis, i.e. the increase of the liabilities assets by issuance of Zero Cupon Certificates of Deposit with 7 years⁽⁶⁾ maturity and reducing the weighted of the deposits with 1 year maturity. For this, we shall proceed as follows:

$$DGAP = 0$$

$$DGAP = -(3.7181 - D_L \times 0.85) = 0 \Rightarrow$$

$$D_L = \frac{3.7181}{0.85} = 4.3742$$

$$D_L = 1.000 \times \frac{3.700 - X}{8.500} + 2.7833 \times \frac{3.000}{8.500} +$$

$$+ 4.7908 \times \frac{1.800}{8.500} + 7.000 \times \frac{X}{8.500} = 4.3742$$

$$\Rightarrow X = 2751.25 \approx 2.751$$

Thus, it shall be issued zero coupon certificates of deposit amounting 2.751, and the deposits with one year maturity shall decrease to the value of 949. Under such circumstances, DGAP is zero and, thus, it takes place a balance sheet immunization to the changes of the market interest rate (regardless of the modification of the market interest rate, the market value of the equity shall remain unchanged, i.e. 1.500).

Therefore, after the immunization, the Omega Bank balance sheet shall have the following structure:

Balance sheet after DGAP reduction to zero (mil. Euro)

Table 4

Assets	MV	Rate (%)	Duration	Liabilities	MV	Rate (%)	Duration
Cash	1.500	0	0,0000	Time deposit (1yr)	949	6	1,0000
Commercial loan (3yr)	3.000	14	2,6467	Certificate of Deposit (3yr)	3.000	8	2,7833
Treasury bond (5yr)	2.500	11	4,1024	Certificate of Deposit (6yr)	1.800	10	4,7908
Mortgage (10yr)	3.000	12	6,3282	Zero coupon CD (7yr)	2.751	11	7,0000
				Debts	8.500		4,3742
				Equity	1.500		
Total assets	10.000		3,7181	Total Liabilities	10.000		

6. Forecast interest rates

We assume that the forecast analysis indicate an increase of the market interest rate with 0.5% for each asset and liability.

The increase of the market interest rate affects the market value of the balance sheet items (their decrease) and consequently it shall produce a decrease of the market value of equity in case the immunization would not be done. This fact occurs because $DGAP > 0$, and the extent

to which the market value of the assets decreases exceeds the extent to which the market value of the debts decreases. This fact shall produce a decrease of the market value of equity.

In case of a perfect immunization of balance sheet, the decrease of the market value of assets will be equal with the decrease of the market value of debts, and the market value of equity will remain unchanged. We shall demonstrate this in the following stages.

7. Estimate the new market value of bank assets and liabilities after increase of interest rate without immunization of balance sheet of bank

Estimation of the new market value (after increase of market interest rate) of the assets/liabilities will be done by using the following formulas:

$$A_1 = A_0 + \Delta A, \Delta A = -\frac{1}{1+k} \times DA \times A \times (\Delta k)$$

$$P_1 = P_0 + \Delta P, \Delta P = -\frac{1}{1+k} \times DP \times P \times (\Delta k)$$

For example, for a commercial loan with 3 years maturity, the increase of the interest rate with 0.5% shall produce a decrease of the market value of this item in the following way:

$$\Delta A(\text{CL3Y}) = -\frac{1}{1+0.14} \times 2.6467 \times 3.000 \times (0.005) = -34.825 \Rightarrow$$

$$A_1(\text{CL3Y}) = 3.000 - 34.825 = 2.965.175 \approx 2.965$$

The table below synthesizes the influence of increasing interest rate with 0.5% on the market value of balance sheet items.

The effects of increasing interest rate with 0.5% (without immunization)

Table 5

	Initial interest rate	Duration	Value	Interest variation	Balance sheet var.	New value
Commercial loan (3 yr)	1.14	2,6467	3.000	0.005	-35	2.965
Treasury bond (5yr)	1.11	4,1024	2.500	0.005	-46	2.454
Morgage (10yr)	1.12	6,3282	3.000	0.005	-84	2.916
Time deposit (1yr)	1.06	1,0000	3.700	0.005	-17	3.683
Certificate of Deposit (3yr)	1.08	2,7833	3.000	0.005	-38	2.962
Certificate of Deposit (6yr)	1.10	4,7908	1.800	0.005	-38	1.762

8. Redrafting the balance sheet in market values, after modification of market interest rate and the calculation of the new market value of equity (without immunization)

Balance sheet in market values after the increase of interest rate, without immunization (thousand Euro)

Table 6

Assets	MV	Rate (%)	Duration	Liabilities	MV	Rate (%)	Duration
Cash	1.500	0	0,0000	Time deposit (1yr)	3.683	6.50	1,0000
Commercial loan (3 yr)	2.965	14.50	2,6446	Certificate of Deposit (3yr)	2.962	8.50	2,7818
Treasury bond (5yr)	2.454	11.50	4,0935	Certificate of Deposit (6yr)	1.762	10.50	4,7765
Mortgage (10yr)	2.916	12.50	6,2763	Debts	8.407		2,4191
				Equity	1.429		
Total assets	9.835		3,6798	Total Liabilities	9.835		

The market value of equity is calculated by using the formula: $V_p(E) = V_p(A) - V_p(L)$.

Example: $V_p(E) = 9.835 - 8.407 = 1.429$, i.e. the market value of equity decreases with 71 (starting from value of 1.500), because of a bad management of interest rate risk.

9. Estimate the new market value of bank assets and liabilities after increase of interest rate with perfect immunization of balance sheet of bank

Estimation of the new market value (after increase of market interest rate) of the assets/liabilities shall be done by using the same methodology as used in seventh stage.

The effects of increase the interest rate with 0.5% (after immunization)

Table 7

	Initial interest rate	Duration	Value	Interest variation	Variatia elem bil	New value
Commercial loan (3yr)	1.14	2,6467	3.000	0.005	-35	2.965
Treasury bond (5yr)	1.11	4,1024	2.500	0.005	-46	2.454
Mortgage (10yr)	1.12	6,3282	3.000	0.005	-84	2.916
Time deposit (1yr)	1.06	1,0000	949	0.005	-4	946
Certificate of Deposit (3yr)	1.08	2,7833	3.000	0.005	-38	2.962
Certificate of Deposit (6yr)	1.10	4,7908	1.800	0.005	-38	1.762
Zero coupon CD (7yr)	1.11	7,0000	2.751	0.005	-85	2.665

10. Redrafting the balance sheet in market values, after modification the market interest rate and calculation of the new market value of equity (after balance sheet immunization)

The methodology used in this stage is the same with that used in the eighth stage.

Balance sheet after 0.5% interest rate increase

Table 8

Assets	MV	Rate (%)	DUR	Liabilities	MV	Rate (%)	DUR
Cash	1.500	0.00	0,0000	Time deposit (1yr)	945	6.50	1,0000
Commercial loan (3 yr)	2.965	14.50	2,6446	Certificate of Deposit (3yr)	2.962	8.50	2,7818
Treasury bond (5 yr)	2.454	11.50	4,0935	Certificate of Deposit (6yr)	1.762	10.50	4,7765
Treasury bond (10 yr)	2.916	12.50	6,2763	Zero coupon CD (7yr)	2.666	11.50	7,0000
				Debts	8.335		4,3510
				Equity	1.500		
Total assets	9.835		3,6798	Total Liabilities	9.835		

After calculations, it can be noticed that while the increasing of market interest rate with 0.5%, the market value of total assets decreases with 165 (from 10.000 to 9.835) and with the same value also the market value of

total debts decreases (from 8.500 to 8.335). Under such circumstances, the market value of the equity remains unchanged due to the fact that a perfect immunization of balance sheet to the fluctuations of market interest rate was done (DGAP = 0).

Notes

⁽¹⁾ See Marek Liěák, National Bank of Slovakia, On the Measurement of Interest-Rate Risk, <http://www.nbs.sk>

⁽²⁾ According to Basel Committee on Banking Supervision, "Principles for Management and Supervision of Interest Rate Risk", 2004, <http://www.bis.org>

⁽³⁾ GAP and duration gap represent two ways of viewing interest rate risk. For understanding the difference it is necessary to make the difference among rate sensitivity and price sensitivity. Rate sensitivity refers to the ability to reprice the principal on an asset or liability. Price sensitivity refers to how much the price of an

asset or liability will change when interest rates change. So, GAP and earnings-sensitivity analysis focus on how frequently the principal amount of an asset or liability will reprice and duration gap analysis focus on how much the market value of an asset or liability will change when interest rate change.

⁽⁴⁾ The market value of equity represents the residual (plug figure) between asset and liability values

⁽⁵⁾ All the dates are in mio. eur

⁽⁶⁾ For Zero Cupon Certificates of Deposit the duration is equal with maturity (eg. 7 years)

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The Organic Products in the Green Marketing Laboratory



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***Abstract.** A healthy way of life requires green products which protect the environment and the quality of life. Organic products have relevant green characteristics and particular benefits for the consumers, the producers and the environment. The benefits support the rapidly growing world market of organic food in both developed and developing countries.*

Green issues and products have a growing importance in Romania. Even if the Romanians have not become fans of the green products yet, a growing number of consumers prefer organic food. More important, Romanian organic food has success on the export markets.

Supporting and promoting organic products on both domestic and international markets requires significant efforts, including those in the green marketing area. The requirements of the green marketing imply new thinking and acting towards new responsibilities and solutions. The task of the marketing is to bring on the market the green problems under the form of new products, the change of the existing products through ecological improvement and abandoning the ecologically obsolete products.

Key words: organic product; organic product policy; ecological conscience; green consumers; green marketing.



1. The green marketing, the laboratory of the success of the organic products

The green marketing is often considered a solution to the many issues of the degradation of the environment and the consumers' health. The ecological, green or environmental marketing attempts to connect the classical components of the marketing and management to the ecological issues. The key-concept attempting to define the green marketing is how the responsibility and environmental issues are integrated into the concept of (the) marketing management. In this respect, the green

marketing might be defines as the holistic management process responsible for identifying, anticipating and satisfying the requirements of the customers and society, in a profitable and sustainable way (Kärnä, 2003, p. 11). Green marketing incorporates a board range of activities about ecological products, including organic products as an important part, about changes in the production process, in the packaging as well as modifying promotion and distribution (Polonsky, 1994, p. 1).

All these issues ask for new management and marketing strategies, able to face decisive challenges and finding workable solutions connected to the meaning of the terms ecological, green or environmental, the development process of the green products, the commitments and initiatives for the safeguard of the environment and quality of life.

The solution of these specific issues is possible if a new conscience – the green conscience – is developed. The companies with green conscience and philosophy don't consider consumers as individuals having instable appetites for material possessions, but as human beings with a life, concerned with the condition of the world they live in. The products are not designed in a linear way any more and without concern about their long-term impact on the individuals and society.

The green marketing aims at achieving two main goals. The first goal is to develop products which might satisfy consumer's needs and exigencies for quality, health, performances, appropriate price and convenience of buying but at the same time consistent with the environment. The other goal is aiming to design an image of high quality, which incorporates the environmental sensitivity. This image of high quality facilitates the communication of the features of the product as well as the green values of the producer.

The requirements of the green marketing ask for redirecting the way of thinking and action towards new responsibilities and solutions. In this way, the green marketing is acquiring some *particular characteristics* (Danciu, 2006, pp. 25-28).

The green marketing is oriented towards the protection of the environment and quality of life. This characteristic calls for marketing actions aiming to restrict and reduce the consumption of the resources, to emphasize the stabilization of the ecosystem and improve the quality of life. The common element of all these solutions is finding the alternatives which are not affecting the individual and collective health by producing and consuming goods which have no long-term harmful effects.

The philosophy of the green marketing relies on the circular thinking. The concept of circular thinking believes that marketing practices, especially those regarding the products, are driven by the “cradle – to cradle” approach. According to this approach, the design of the green product follows a complete life cycle,

without experiencing the stage of being “dead”. Each new product used parts of the old product. This new product has a “rebirth” on the other coordinates of its green qualities and features. In this way, the green product is better for the environment and consumer's health at each rebirth.

The green marketing has a social responsibility. It generally refers to business decision-making linked to ethical values, compliance with legal requirements and respect for people communities and the environment. The companies which are putting into practice the green marketing should not limit the consumer's rights and should not force them to choose what does not meet their desires, preferences, expectations and, particularly, their ecological conscience. Products safer for health as the organic products which are more efficient to pollution control, reduction of resources and energy consumption might be such solutions.

The harmonization among the ecological interests of the green consumers, companies and society as a whole is an imperative, but difficult to put into practice.

2. Organic products: controversial history, promising future

2.1. The organic products as a category of the green products

A product is green if it meets the lower requirements of the ecological legislation. The consumers may consider a product as green if it meets the demands and expectations about environment and health. This approach may often exceed the legislation and the producers' willingness to manufacture goods which protect the environment and the quality of life. Therefore, the green product should be the result of the harmonization between the requirements of the market and the ability to produce it. In order to estimate the greenness of a product, one should use a scale that provides its variability. The producers may obtain green products only if they alter some unessential components of the traditional, brown products. A product policy which foresees and realizes the development of new green products is needed for manufacturing true green products.

In order to obtain green products, the conceiving, development, alteration and diversification of the

products should be dependent of the maximization and the elimination of the negative effects on the environment and quality of life. Organic products meet the best these requirements, since they give the best opportunities for obtaining entirely ecological qualities.

The consistence of the green product with the market's requirements should be a clear and distinct feature, since the green consumers don't abjure their claims for the green qualities of the product. The organic products have relevant green characteristics and both objective and subjective components, of the ecological quality. These products have the physical features which provide objective green quality as a result of their manufacturing or growing process. They also have the capacity for meeting the subjective expectations of the consumers which want healthy products.

The organic nature of a product is the result of the elimination of any artificial preservatives, coloring, irradiation, synthetic pesticides, fungicides, rodenticides, ripening agents, fumigants, drug residues and growth hormones (Ottman, 1998, Chapter 2, p. 8) and genetically modified organisms. Early consumers interested in organic food would look for chemical free, fresh or minimally processed food. They also had to buy directly from growers. "Know your farmer, know your food" was the motto. At that time, personal definitions of what constituted "organic" were developed through first hand conditions, and farming activities. Small farms could grow vegetables and raise livestock using organic farming practices, with or without certification, and this was more or less something the individual consumer could monitor. This process is present in both developed and developing countries where the green consumers become active. As demand for organic food continues to increase, high volume of sales through mass outlets, like supermarkets, is rapidly replacing the direct farmer connection. For supermarket consumers, food production is not easily observable, and product labeling, like "certified organic", is relied on. Step by step, various alternative organic standards are emerging. They generally bypass formal certification, which can be expensive and cumbersome, and provide their own definition of organic food.

In the United States, the Authentic Food standard includes criteria that are incompatible with current agribusiness. These criteria demand that all foods should be produced by the growers who sell them, fresh fruits

and vegetables, milk, eggs and meat products should be produced within a 50 mile (80 km) radius of their place of their final sale, the seed and storage crops (grains, beans, nuts, potatoes etc.) should be produced within 300 miles radius of their final sale and only traditional processed foods such as cheese, wine, bread and lacto fermented products may claim "Made with Authentic Ingredients" (<http://en.wikipedia.org/wiki/organicfood>). In the United States, agricultural products that claim to be "organic" must adhere to the requirements of the Organic Food Production Act of 1990, and the regulations promulgated by the United States Department of Agriculture (USDA), through the National Organic Program (NOP) under this act. These laws essentially require that any product that claims to be organic must have been manufactured and handled according to specific NOP requirements. A USDA Organic seal identifies products with at least 95% organic ingredients, as defined by the National Organic Program.

Most food industry research of the last 50 years has focused on developing chemical agriculture and modern food processing and less has been done to investigate side effects of conventional agriculture. In response, organics is concerned in "large part with what not to do". "As much as possible, let Nature does its thing" seems to be the most used formula rather than in devising precise formulas for organic production. A strictly rules – based definition of organic farming and organic food, consisting of approved inputs and practices created and maintained by regulatory agencies, is inevitably subjects to "exceptions" and special interest pressures to modify rules. As organics become "whatever the rules say it is", the line between organic and conventional food can get blurred.

2.2. Organic products, between a controversial history and a promising future

The "conventional" agriculture, utilizing large amounts of artificial chemical inputs, monocultures, and intensive farming methods, is a recent phenomenon, dating to the Green Revolution of the mid 20th century – Almost the entire history of agriculture consists of what would be now termed "organic farming".

Rising consumer awareness of "organic" methods began in the 1950 \$ with the promotion of organic gardening. In the 1960 s and 1970 s one effect of a

growing grassroots concern with environmental issues was the appearance of more elaborate approaches to organic food. In the 1970 s and 1980 s, private sector organic certification and development of regulations at the governmental level began around the world. In the 1990 s, formal organic certification began to be legislated in various countries, and this trend continues today. During the same period, the organic food market experienced a sustained surge in growth, expanding at around 20% a year, exceeding the rest of the food industry by a factor at least 10. The first years of the 21st century saw multinational food corporations taking major stakes in the organic market and this has dramatically increased the variety, availability and falling cost, of processed organic food (<http://en.wikipedia.org/wiki/organic-food>).

The costs and prices of organic food has been, and continues to be higher than their conventional counterparts. This is because farmers who grow organic food have to meet stricter standards to have their products certified organic. More labor is required to do this, bringing up the cost. Some observers of the demand of organic food see this difference in price as being a way to get people to spend more money on a “trendy” food-fad. Globally, since the 80’s there is an increasing number of supermarkets that carry large volumes of organic food. These large retailers, like Whole Food Market in the United States, have been bringing the price of organic food down. In the United Kingdom, organic food was introduced in supermarkets by Wait rose in 1983, with other supermarkets following some years later. In the United States the pressure to bring cost down will vastly increase soon because in 2006, Wal-Mart, the largest grocery retailer, announced plans to increase the amount of organic food available in its stores (Schener, 2006). Wal-Mart intends to keep price of the organic versions to no more than 10% over the price of the conventionally grown counterparts. Because of Wal-Mart’s size and business practices, their move into selling organic food has some people worried. The increase in demand for organic food in the north-american market will require that the more organic food products be imported. On the other hand, the push to lower prices would virtually

guarantee that Wal-Mart’s version of cheap organic food is not sustainable (Polland, 2006).

The organic food seems to be, if not only, the quasitotally present in the growing and marketing of ecologic products, in Romania.

The area ecologically cultivated was about 74,000 hectares, in 2005, while some 7,000 cattle, 20,000 sheep’s and about 5,000 chicken were available (Ziarul Financiar, 20 decembrie, 2005, p. 3). The surface for organic products accounts for below 1% of Romania’s total agricultural potential.

Studies show that Romania could ecologically grow about of 10-15% of its agricultural surface. The cereals, eggs, diary produce, vegetables, honey, forrest fruits and medicinal plants are the organic food from Romania, in which is taking into consideration the ecologic agriculture as one of its sectorial priorities for the 2005-2009 period, explicitly recognizes the importance of the organic products. The goal of this approach is the positioning of the ecologic agriculture as the central point of the Romanian agriculture. In this way, the ecologic agriculture may substantially contribute to the improvement of the environment’s quality, the soil preservation, and the improvement of water quality, biodiversification and the protection of nature. In quantitative terms, the Strategy aims to extend the surface which is ecologically cultivated to 150,000 hectares in 2007, and to create a domestic market for organic food. Thanks to its total agricultural surface of 14.8 millions of hectares and unpolluted soil, Romania has great opportunities for the promotion and development of the ecologic agriculture. Some 1.5 to 2.2 million hectares may be ecologically cultivated.

In a matter fact way, Romanian organic food is exported. The reasons for that are as various as clear. High prices, poor income, and no interest in healthy food, lack of green conscience are the main reasons for the very low consumption of ecologic products in Romania. Organic food is present now and then in Romanian stores. Moreover, the lack of transparency and promotion and the very few organic food which may by found in the retail channels could explain why Romanian organic food is only exported.

3. (The) organic food in the context of the ecological conscience

3.1. The ecological conscience as a premise of organic solutions

The organic food, as one of most important categories of ecologic products, should be correlated with the consumer's system of values. The ecologic value is the key-element of the beliefs and behavior of both producers and consumers of organic food. How many importance is attached to the ecologic value in the green marketing's processes and mechanisms depends on the ecological or green conscience.

The green conscience may be understand as a feeling, a representation, an image, a goal, an attitude, a way of action and a tendency of the behavior which primary values are the protection of the environment and the quality of life (Faix, Kurz, Wichert, 1995, p. 158). Because of its dynamic character, the ecological conscience is a variable of the green values' system. The consumers and the producers give the first position on a value scale to an undamaged environment, unchanged by macro, microeconomic and technical actions.

People who have a healthy way of life, which is aimed to preserve the environment and the good quality of life, take into account/consideration the consumption of organic food as a priority. The ecological conscience, as a result of a substantial, constant and long-term effort, should be hold as a compulsion and a support for reaching the goal of the presentation and improvement of the environment and the quality of life.

The AIDA model seems to be appropriate for the pursuit of the successive transformation of the buying and consumption behavior, in order to place the green conscience as a support for reaching the ecologic goals. The first stage of such a process is becoming aware of the ecologic problems. The appropriate *attention* is then payee to these specific problems. In the next stage of the development of the ecologic conscience a solid *information* take place. The information about ecological problems and exigencies is obtained by data collecting, systematization and processing. The results of the research may be the support of the *decision* to find ecologic solution. The final effect may be the *action* for buying or consumption of organic products. As a

result of the successfully cover the whole process, the ecological conscience is build up.

The environmentalists behave following their green conscience. The environmentalist or green consumer is the individual who actively searches products which have scanty or zero impact against the environment and favorable effects on the quality of life. The active behaviors, high level of education, liberal spirit, restless and informed are the basic characteristics of the green consumer. The environmentalists are – as a rule – leaders of opinion. Catalyzing the ecologic trend within the community where they are living in. As far as ecological consumption becomes a long term trend, it makes evident the passing to a new ethics of the buying and consumption. The passing from the consumption's increasing philosophy to the one which considers the quality of consumption as a priority is the main characteristic of the new green ethics. The developed countries have the greatest ecological concerns and actions and the most of the green consumers. These consumers comply more with the essence, simplicity, moderation, strictness, quality and social responsibility than with materialism (Ottman, 1995, p. 3). Many countries and consumers are left outside the environmental and organic practices. In exchange, in all countries more and more people become sensitive to the ecological problems begin to award the products which are considered (as) having different degrees of risk for environment and life and the firms which are producing and selling them. The more pronounced preference for the organic products is a part of the green ethics of buying and consumption, which is based on the ecologic, green values. The new ethics of the green consumer puts a mark on the relaxation of the psychological pressions on the individual philosophy and the emergence of new form of social conscience. This new form is part of the idea of both cooperation and action, which is important for facing the global problems before which an individual is powerless. The ecologic conscience of the consumers is an expression of their concerns with the creation of a greener world and the acceptance of everybody, including the future generations, to the resources. To deal with the societal problems and their solutions, the ethics of the production and consumption, commanded by the priority of the ecological and social values, calls to pass from the short term to the long term strategy.

The gradual rethinking of the philosophy based on the convenient buying and lack of concern for the production's and consumption's effects is not only required but perfectly possible. This is possible if the implications for consumption without control become fully aware.

The concerns about the possible effects of the products after consumption are a manifestation of the green conscience. Similarly, the cause-effect relationship becomes more important for the understanding of the damages on the environment and their long term impact on the quality of life. More and more consumers are troubled by the finding of the research and the statistics on the permanent harmful effects of the different no ecologic components of the products may be caused to the different parts of the body. These consumers are putting themselves questions like which is the impact of the pesticides on the fruits? What effects may have the preservatives or the fertilizers? May varnish and paint alter the health of the utilizers? How may be accustomed the individual health with hormones and vitamins residues?

Only the long term solutions may give answers to these questions and to many more others. Such a solution with potential favorable effects might be the organic products as a principal part of the green efforts made for the improvement of the quality of life and of environment.

3.2. The benefits of organic products, a powerful support for their acceptance by the green consumers

The production and the consumption of organic products are strongly stimulated by their benefits. Defining and disseminating the benefits of organic products has largely been left to word and mouth, occasional media coverage, and the promotional effort of organic advocates.

This is not the case in conventional marketing where terms like "low fat", "low sodium" and "whole grain" are often used to signify health benefits. The "certified organic" label is generally left to stand on its own as a self explanatory, assisted only by general terms like "natural".

Benefits for consumers. A study published by the National Research Council (USA) in 1993 determined that for infants and children, the major source of exposure to pesticides is through diet. A more recent study, from

2006, has confirmed and described in detail these findings by measuring the levels of organophosphorus pesticide exposure in 23 school children before and after replacing their diet with organic food. In this study it was found that levels of organophosphorus pesticide exposure dropped dramatically and immediately when children switched to an organic diet (Lu Chen Sheng et al., 2006, <http://www.ehpnl.org/imembers/2005/8418/8418/>).

Thus, the reality confirms that conventionally grown food contains pesticide and herbicide residues – stuff most people wouldn't normally want to feed their children. These residues include herbicides like Atrazine, which have been shown that even at concentrations as low as 0.1 part per billion, the herbicide will emasculate a male frog by causing its gonads to produce eggs, effectively turning males into hermaphrodites. But until a chemical has been directly linked to illness in people it will continue to be used.

Unfortunately finding a directly link is difficult, because it requires the result of chemical testing on humans that scientists, ethically, don't perform.

Benefits for the environment. Some critics complain that organic farms have lower yield than conventional farms. Yet, studies comparing yields have had mixed results with some showing less yield and others showing roughly equal yield. But all the studies are consistent in showing that organic farms are more energy efficient. One study, for example, that found a 20% smaller yield from organic farms (in USA), found that they had used 50% fertilizer, 97% less pesticide (Organic food/<http://en.wikipedia.org/wiki/organic/food>). Those farms are more energy efficient makes it easier for them to be sustainable. In addition, because organic farms don't use toxic pesticides, there is more biodiversity in the soil. Beside higher soil quality, more life in the soil allows for higher water retention. This helps increase yields for organic farms in drought years, during which organic farms have been found to have yields 20-40% higher than conventional farm, in the United States.

3.3. A framework for multiple options: the variety of organic products

The organic food can be either fresh or processed, based on production methods, availability and consumer perception.

The fresh organic food. The fresh organic food is seasonal and perishable. Vegetables and fruits are the most available type of organic, fresh food, and are closely associated with organic farming. They are often purchased directly from growers, at farmers markets, from on – farm stands supermarkets, through specialty food stores. Unprocessed animal products, such as organic meat, eggs, dairy, are less commonly available. For fresh food “organic” usually means produced without extensive use of synthetic chemicals such as fertilizers, pesticides, antibiotics, hormones, substantially free of genetically modified organisms, and often, but not necessarily, locally grown.

The processed organic food. Processed food accounts for most of the items in a supermarket, often, within the same store, both organic and conventional versions of products are available, and the price of the organic version is usually higher. Most processed organic food as producing and marketing products like canned goods, frozen vegetables; prepared dishes and other convenience foods is beyond the scope of small organic producers.

Processed organic food usually contains only, or at least a certain specified percentage, of organic ingredients and no artificial food additives, and is often processed with fewer artificial methods, materials and conditions (e.g.: no chemical ripening, no food irradiation). In the United States, a recent amendment to the organic legislation has allowed some in the second largest in the world. Market growth slowed to 7.8 percent in 2002 with a number of countries reporting slowing growth rates. In Germany, baby food is almost exclusively organic, and over 30% of bread baked in Munich is organic. The German market was hit by the Nitrofen food scandal and consumer demand in countries like the United Kingdom and Denmark is stabilizing whilst other countries like Italy or Switzerland continue to report high sales growth. In Italy, the existing legislation calls for all school lunches to be organic by 2003. In Austria, the government has created incentives so that, within the next few years, 10% of its food will comprise locally grown organic foods. In the United Kingdom, by January 2005, 686,100 ha of land were managed to organic standards. The organic food sales increased from just over GBP 100 million in 1993/1994 to GBP 1.21 billion in 2004, an 11% increase on 2003.

The organic food production is stepping up in the four corners of the globe with almost 23 millions hectares

of farmland managed organically. Much of the increase is occurring in the third world countries where some farmers are attracted to the export benefits of organic food production. Many governments are encouraging farmers to convert to organic farming for this reason, however the studies call for a cautionary synthetic processing agents to be classified as “organic”, so the exact composition of *certified* organic processed food may vary according to regional regulations.

4. The global market for organic food: facts and statistics

As statistics shows, the organic food world market is growing rapidly, far ahead of the rest of the food industry, in both developed and developing nations.

The world organic food sales were USD 23 billion in 2002, an increase by 10.1 percent on 2001. The world organic market has been growing by 20% a year since the early 1990s, with future growth estimates ranging from 10-15% annually depending on the country (The Global Market for Organic Food and Drink, Organic Monitor, Retrieved 2006 – 06 – 20).

The highest growth was observed in North America where the US market has been given a lift by the implementation of the National Organic Programme (NOP). The NOP has raised the profile of organic products and they are becoming highly visible in mainstream retailers. The organic products are available in nearly 20,000 natural food stores and 73% of conventional grocery stores, and account for approximately 1/2% of the total food sales in the US, in February 2003 (Catherine Greene and Carolyn Dimitri, 2003). Americans are buying organic food as they are seen to be healthier and more natural than non/organic products. This is a factor for most organic food sales in approach for the potential of export markets is often overstated. The market growth rates are slowing and supply-demand imbalances are expected to become a feature of the global organic food industry.

The global market of organic food is projected to continue to expand however at slower growth rates. The industrialized world is expected to comprise most revenues, however other regions are to show high growth due to the growing popularity of regional markets, the increase of green conscience including. The formation of trading blocs and the convergence of consumer demand are also stimulating demand in other countries.

5. The Romanian market and consumers of organic products

The Romanians haven't become fans of the green products yet. The protection of the environment and quality of life has little significance for most of them. Poor income and the great importance attached to the capital goods and houses don't allow the Romanians to be much preoccupied about healthy food. Moreover, the self-consumption has its part in meeting the demand for food, organic food included.

A study about the development of the organic products, worked out within the project "Extension for ecoprofit", which was financed by The World Bank and Romania's government, has identified the main reasons of the absence of the success for the organic products within the domestic market. The Romanian consumer is too little informed and interested has a poor buying power, and the price of green products is much more higher than conventional products. An organic product is 20% more expensive, on an average, than a conventional one and people like better buying cheaper products.

There are organic products in Romania, but they are slowly seller. Eggs and dairy are the most important organic food which are delivered to the distribution network. The organic food is distributed through supermarkets, natural food stores, and the outlets of the processing industry.

The value of domestic market for organic products is difficult to estimate. The National Strategy for Export of Romania suggests that the market of green products is growing by a 20% a year.

A proportion of 70 percent of the Romanian production of organic food is exported. The absence of information and ecologic concern, poor budgeting power and high prices of organic products may easily explain the high weight of the exports.

The cereals, dairy produce, fruits, vegetables, honey and ecologic plants are the main green products which are exported. The cereals go quasitotally towards the EU markets, the honey and ecologic plants arrive on the tables of nederlanders, germans, polish and americans.

Although the prices of Romanian organic products are higher, they are comparable with such products which originate from other countries. In Romania, the costs are even smaller, what may facilitate to get a competitive advantage.

6. The product policy, the support for the success of the organic product

The achievement of ecological objectives of the marketing and their integration into the area of its particular characteristics depend on the development and putting into practice of the green marketing policy. Ecological marketing policy has the product policy as main/principal element. This policy has as task bringing on market the green problems under the form of new products, change of existing products by ecological improvement and elimination of the ecologically obsolete products (Hopfenbeck, 1994, p. 307).

The problems of green product should have several approaches. The economic approach relay on the green product as a tool of the commercial and marketing policy aimed to influence and persuades the customers. The technologic approach considers the product's technology as the decisive factor for the green product's manufacture. The ecological approach calls for taking into consideration the environmental and health effects. These very complex problems which cause a complicate system of relations give the green product policy an ample and various content (Faix, Kurz, Wichert, 1995, pp. 160-166), and these problems and content are fully present in the organic product policy.

First, the utilizations of the organic product should be identified. The utilization of the organic product concept should be extended, because of ecological philosophy. The product shown meet a wide/broad palette of demands and expectations and different levels of additional utilizations, the green utilizations included. The green consumer doesn't diminish any of demands about the features and qualities of the organic products. As a result, the product's compatibility/consistence with the ecological demands of the market should be a distinct feature of it. The ecological utilization of the organic products is consistent with the demand of the consumers who have ecological conscience for a green product.

The organic features of the products are the next step and component of product policy. According to the dynamic character of the demand of the customers, these features should be well defined and included into organic product. The dynamics of green expectations is a strong stimulus for developing and modeling an organic product. Since the organic product's features facilitate

its precise improvement, the dynamic problems are important. The organic qualities of the product have a permanent dynamics, too. Their number and the combinations of the organic qualities lead different organic products. This aspect is very important for the organic product strategies.

The achievement of the organic product under the form a reference model is the result of a precise combination of green features and qualities. Since the growth of the organic product has a strong relation with the potential favorable or unfavorable effects on the health of consumers and environment, it is an significant component of the green policy of the company.

The quality of the organic product may be considered the most important element of all. The concept of product's quality is the key of understanding and obtaining the green quality of the organic product. The quality has an objective and a subjective component (Danciu, 2005, p. 54). The objective quality means getting/to get the technical and physical features as a priority. Taste, colors, nutritive value, absence of colorants, additives, and the chemical fertilizers, pesticides gives the objective quality of the organic product. The subjective quality suggests the assessment of the organic product through the point of view of the customers. If the organic product is accepted by the green customers, its quality depends on the needs and expectations, mostly subjective, of these customers.

The green consumers like better the products which correspond to their philosophy for the environment's presentation and improvement of the quality of life. For that reason, they prefer products which contribute to the achievements of goals for the improvement of the quality of life and environment. The organic quality calls for the product modeling and organic strategies by the companies, so that they observe the essential principles to obtain convincing results.

The proactive behavior implies that the companies would always be informed, ready to learn permanently, being vigilant and, particularly, planning in advance the rhythm of the organic product's development and the activities for its growth. The permanent approach of ecological problems is a result of the dynamic character of the product depends on the dynamics of actual or foreseen changes in the sensitivity of the consumers

regarding organic solutions. In their turn, the producers and distributors of organic products should by dynamic, permanently having green initiatives, mostly green innovations.

The ecological issues should be subject of concern, beginning with the first step of organic product getting. Obtaining organic products is possible, if the green principles of the consumers with ecological conscience are observed. In other words, the organic products should meet entirely the green demands of the consumers. Since a consensus/agreement about the methods for exactly measuring the impact of a product on the consumers' health and environment in comparison with others doesn't exist, the producers should early begin the organic activities.

An important strategic green principle is *the change of the entire system of getting, growth, harvest and distribution of the product.* The holistic nature of the ecological issues entails the importance of this principle. The holistic character calls for an organic approach which should be present in all components of the product strategy.

The flexibility is essential to the organic product policy. If they observe this principle, the producers and distributors are obliged to have the capacity to find proper solutions to every situation. They should have the ability to offer variants of the product, depending on customer, market and season. The companies' which produce organic food should observe the principle of *the variety of supply*, as well. The diversification may be obtained as a result of different formulas of growth, dosage and harvest. It may be extended by the variety of package, labeling and weight for sale.

The reconsideration of the value delivered to the green consumers is required because of their perception in advantage and profit terms of every acquisition. The utility of organic products is the main stimulus of the preferences for organic products of the green consumers.

The utility of the organic products seems to be directly proportional to their potential contribution in order to maintain and improve the health of green consumers, as individuals and groups. Many opportunities for the consolidation/strength and development of the loyalty of the consumers and profits may arrive if this mechanism is well understood.

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Considerations on the Role of Foreign Banks in the Improvement of Romanian Bank System's Performance

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***Abstract.** On the general background of restructuring and privatization processes in Romanian banking system, the presence of foreign capital recorded an increasingly trend after 1996, especially in the form of banks located in Romania. The foreign banks involved in Romania, especially multinational banks' affiliates, proved to be remarkable about capital adequacy and profitability. All these developments are driven both by the access to cheaper resources from their parent bank or other banks in the group and by a more pronounced propensity to risk, as they are fully covered.*

Key words: Romania; foreign banks; financial intermediation; capital adequacy; profitability.

■

JEL classification: G21, G32

1. Introduction and literature review

The researches conducted till now on the effects of the foreign banks' entry in Central and Eastern Europe economies focus on its contribution to the stability and the efficiency in the host country. A lot of studies concluded that foreign bank entry has positive efficiency effects (Claessens et al., 2001, Lensink and Hermes, 2004). However, as efficiency gains may be (partly) offset if a trade-off between banking efficiency and banking stability is present. On the positive side, this parent bank may act as a "back-up facility" or lender of last resort during crisis periods (de Haas and van Lelyveld, 2006). It may also manage an internal capital market and centralized treasury operations to allocate capital and liquidity over its subsidiaries (Stein, 1997). This may translate into a more

stable credit supply of the foreign based subsidiary. More specifically, a supportive parent bank and abundant funding sources may make foreign bank subsidiaries less prone to the adverse effects of a host country bank capital shock. Foreign bank subsidiaries may be able to recover relatively fast and keep up their credit supply relatively well (when compared to domestic banks).

Contrary to this potentially positive role of foreign bank subsidiaries, it can be argued that foreign banks' credit supply may be less stable than credit granted by domestic banks. This will be the case if foreign banks react more procyclically to changes in the host country macroeconomic environment (Morgan, D., Strahan, P.E., 2004). A reason for such behaviour could be that the parent

bank reallocates capital over different geographical regions on the basis of expected risks and returns. When economic growth in a particular host country declines, the activities of the subsidiaries in this country may be scaled down in favour of other regions. Domestic banks may not have such foreign alternative investment opportunities and may therefore be less sensitive to host country macroeconomic conditions. In this line of reasoning, there will thus be a positive relationship between the host country business cycle and the foreign subsidiary's credit supply. Moreover, greenfield foreign banks have had a positive stability effect on total credit supply in CEE countries (de Haas, van Lelyveld, 2006).

The studies of Bonin et al. (2005a) and Grigorian and Manole (2002) investigate a number of countries in Central and Eastern Europe and the Commonwealth of Independent States. Additionally, the banking markets of Hungary (Hasan and Marton, 2003), Croatia (Kraft, Tirtiroglu, 1998), Poland (Opiela, 2001), Ukraine (Mertens, Urga, 2001), Czech Republic (Weill, 2003) and Poland (Havrylchyk, 2003) were studied.

The comparison of efficiency between foreign and domestic banks revealed that foreign banks in developing and transition countries have succeeded in capitalizing on their advantages and show a higher level of efficiency than their domestic peers (Bonin et al., 2005, Isik, Hassan, 2002, Hasan, Marton, 2003, Bhattacharyya et al., 1997).

On the other hand, foreign banks' conduct is driven by the motives of their entry (Konopielko, J., 1999) and the form of penetration (Havrylchyk, Jurzyk, 2005). Thus, the banks *de novo* created have a better ROA (return on assets) than the domestic banks and takeovers, the last two being quite similar. The way and time of banks' privatization have also an influence on profitability: the banks being sold to strategic investors earlier report less cost and greater profits than the banks privatized later, so the positive impact of privatization is not immediate (Bonin, J. et. al., 2005b). Moreover, because the return on assets in the case of subsidiaries open in Central and Eastern Europe is greater than the ROA reported by the parent bank in their origin country, the affiliates located in this area lead to a better profitability of the whole group (Havrylchyk, Jurzyk, 2005).

In the majority of cases, foreign banks contributed to enhance the competitiveness and efficiency of domestic banks, the efficiency gains being visible in less operating costs and less margins between interest rates for loans and deposits, both for foreign banks and for domestic ones (Mathieson, Roldos, 2001).

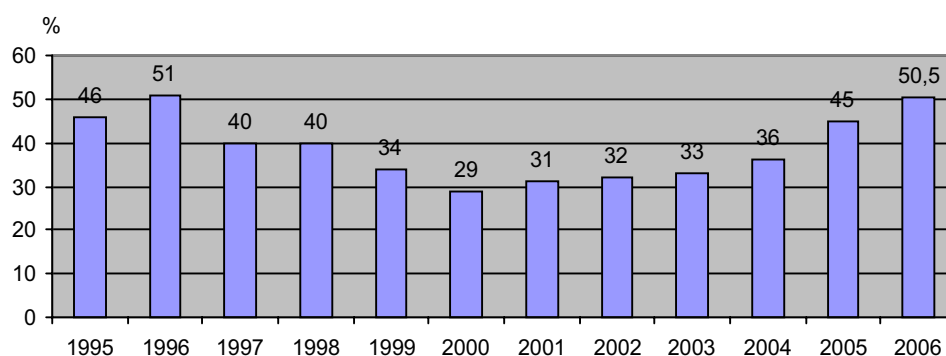
It is interesting to notice that, even there is a cost reduction and an improvement in productivity (Claessens et al., 2001, Claessens, Laeven, 2003, Martinez Peria et al., 2003, Kim, Lee, 2004), the profits do not increase, or do not increase with the same rate, the possible causes being either a greater provisioning or a decline in income due to margins' narrowing.

The enhancement of efficiency in host countries would finally conduct to a better allocation of credit. Indeed, foreign banks will allocate financial resources based on standard evaluation criteria, being more "immune" from subjective criteria or political pressures (Cardim de Carvalho, 2000, mention that foreign banks may be more independent toward local government and could have less unfair relationship with national firms), reducing the subsidies to non-viable activities. In Central and Eastern Europe, foreign banks' presence was accompanied by the declining of non-performing loans, so that the privatization and foreign banks' entry can be appreciated having positive effects on the banking system's performance (Engerer, Schrooten, 2004). Moreover, it appears that if the institutional distance between the host and the home country governance becomes smaller, foreign banks operate more efficiently (Lensink et al., 2007).

2. Foreign banks and the financial intermediation

Despite progress achieved in the last years, Romanian banking market may be still considered as underdeveloped, both in comparison with the average of the EU and the average of the Central and Eastern Europe. The market penetration of banking services is still low: only 40% of the population aged 15 or older had some business relationship with a bank, 28% had a bank account and 17% had a bank card at the end of 2004 (BA-CA Report, 2005, p. 49).

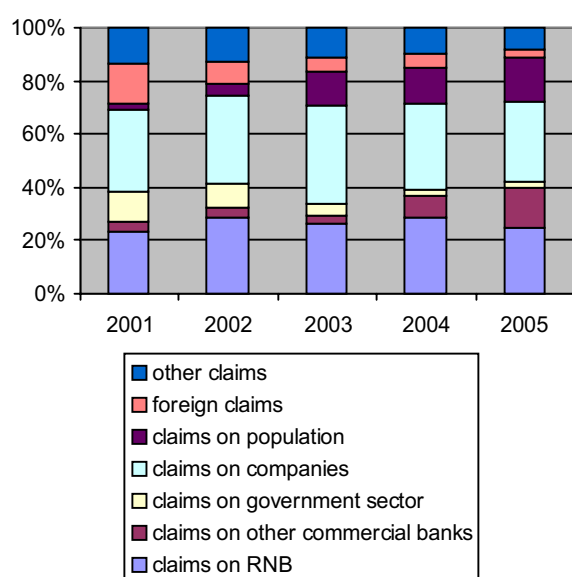
The underdevelopment is also reflected in the main efficiency indicators, although significant and systematic progresses were achieved. Financial intermediation (the banking sector's total assets to GDP) remains low and it's downward trend between 1996 and 2000 witnesses the lag of banking sector behind the aggregate macroeconomic expansion. In the last years, more specific after 2000-2001, the Romanian banking system experienced the real restructuring and recover, facts conducting to systematic increases of the financial intermediation degree (ratio of bank assets to GDP), to 50.5% in 2006 (NBR, 2006a, 2006b, 2007) (figure 1).



Source: NBR Annual Reports, 1995-2006.

Figure 1. Financial intermediation degree in Romania, 1995-2006

About the structure of the commercial banks' assets, in figure 2 it can be seen the development of its components:



Source: NBR Annual Reports, 2001-2005.

Figure 2. The structure of balance-sheet assets of commercial banks

The share of non-government credit in GDP (ratio of private sector loans to GDP) is relatively low, but increasingly: 9.3% in 2000, 10.1% in 2001, 11.8% in 2002, 15.3% in 2003, 17% in 2004 and 21.1% in 2005 ⁽¹⁾ (comparatively, in Poland was 30%, in the Czech Republic 33%, in Hungary 42%, in Croatia 62%, and on Euro area 102%) (BA-CA Report, 2005, p. 50). This low level can be attributed, first, to the very cautious approach of banks to

lending in the first years after the banking crisis, attitude not surprising given the difficulties in enforcing creditors' rights, uncertainties in gathering information on potential borrowers' financial status and the hesitant reforms in the corporate sector. The low-risk businesses for the banks, such as: foreign exchange and inter-bank transactions, purchasing government bonds etc. are preferred, which led not only to a slow development of private sector, but also left the banks very exposed to unexpected fluctuations of the exchange rates. More, half of the overall loans to the private sector are on short term, and the transformation (expansion) of their maturity will have much importance, because long run projects, with positive macro-economic impact, are sustained by long term credit.

The contribution of foreign banks to the expansion of non-government credit is certain. If in 2004 the foreign-owned banks had got 60.4% of the assets of the bank system, their contribution to the non-government credit was greater, e.g. 67.4%. The most reticent (or less competitive) about financing non-government sector proved to be the state banks (which had, in the same year, 7.4% of the assets and only 2.55 in non-government credit) but also, in a less measure, the domestic private banks (32.3% in assets and only 30.1% in non-government credit). More, for April 2006, according to NBR data, the trend is still the same: the foreign banks have, compared to their position in the overall assets of the banking system, a bigger contribution to non-government credit and a lower one to deposit collection (see table 1):

Banks' position in assets, non-government credit and non-bank clients' deposits, by the nature of the capital, in %

Table 1

	Total assets		Non-government credit		Non-bank clients' deposits	
	2004	April 2006	2004	April 2006	2004	April 2006
Banks with majority foreign equity (including BCR, for 2006)	60.4	87.8	67.4	88.7	55.4	85.4
Banks with majority domestic private equity	32.3	6.4	30.1	7.7	35.9	7.7
Banks with majority domestic state-owned equity	7.3	5.8	2.5	3.6	8.7	6.9

Source: based on data in: Bozga, M., *The Romanian Banking System Catching up on Europe*, presentation made in London, 2004 and Georgescu, F., *Evoluția sistemului bancar românesc*, June 2006, available on www.bnro.ro

It can be seen that including BCR in the calculations for April 2006 is diminishing the contribution of foreign banks to the expansion of non-government credit, BCR being from too little time with foreign capital.

Let us notice the declining trend of foreign assets among total assets, meaning that the majority of the banks are channeled to household lending, raking advantage from the market opportunities.

Indeed, after 2003, the strong real wage growth and the powerful growth in private consumption led to a pick-up in lending; total lending to households rose almost three-fold over 2003, with corporate loans following suit with impressive growth of 45%. In 2004, loan expansion continued, but slower. In order to counter the burgeoning current account deficit, NBR, in the frame of more restrictive monetary measures, raised the policy rate in several steps (in 2002) from 14.4% to 21.5% (BA-CA Report, 2005, p. 50). This measure has a limited effect and determined NBR to continue tempering the credit, by setting up more difficult conditions to access loans (since February 2004).

Starting with 2001, foreign banks were more active than the other banks in lending, fact proved by the analysis of loan granting to the clients by several banks, comparative with the average and with the largest bank in the system, BCR.

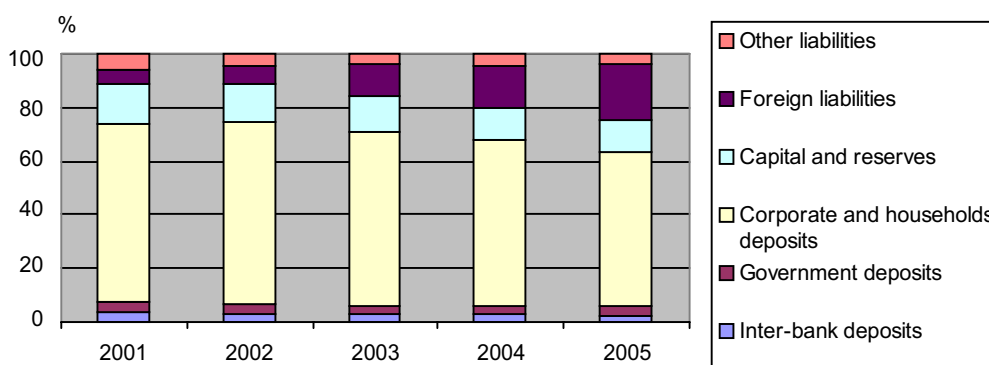
Loans and advances to clients, 2001-2005, on selected banks

Table 2

Bank	Annual growth			
	2001-2002	2002-2003	2003-2004	2004-2005
BRD-GSG	1.42 times	1.63 times	1.38 times	1.49 times
Raiffeisen	n.a.	2.62 times	1.63 times	1.1 times
HVB Bank	1.41 times	2.41 times	1.75 times	1.44 times
Alpha Bank	1.2 times	1.73 times	1.27 times	1.36 times
Internal credit	1.42 times	1.49 times	1.33 times	1.44 times
BCR	1.28 times	1.42 times	1.23 times	1.51 times

Source: balance sheets of commercial banks and Monthly Bulletin NBR June 2006.

The consumption growth was accompanied by a moderate growth of savings (deposits). As a result, after two years of increasing share of private deposits in GDP, the deposits started to decrease again in 2003. More specific, the development of balance-sheet liabilities' structure is as follows:



Source: same as figure 2.

Figure 3. Banks balance-sheet liabilities' structure

It can be noticed that deposits of non-bank sector, especially corporate and household deposits, are the main source in financing loans. However, its share is decreasing (from 66.7% in 2001 to 57.5% in 2005), on the general background of population savings contraction in the last years. In exchange, foreign liabilities consistently increased (from 5.9% in 2001 to 20.9% in 2005), driven by the expansion of foreign currency-denominated loans, which asks foreign currency resources from outside the country.

As in the case of non-government credit, the role of foreign banks was to stimulate it's expansion, the case of non-bank clients' deposits is different. State owned banks (mainly CEC) are leaders in household deposits'

collection⁽²⁾, while foreign banks are the less interested in collecting these deposits.

The differences between various types of banks have, in our opinion, several explanations:

- The bigger interest and capacity of foreign banks to be involved in financing the non-government credit, due to better interest rates that can be offered; this fact is more obvious as it can be correlated with the increasing share of foreign currency- denominated loans, where foreign banks are more competitive, due to the access to cheaper resources denominated in foreign currency;
- The less interest of foreign banks to attract household deposits, fact that can be attributed to these banks' behaviour: first, many of the multinationals were – till

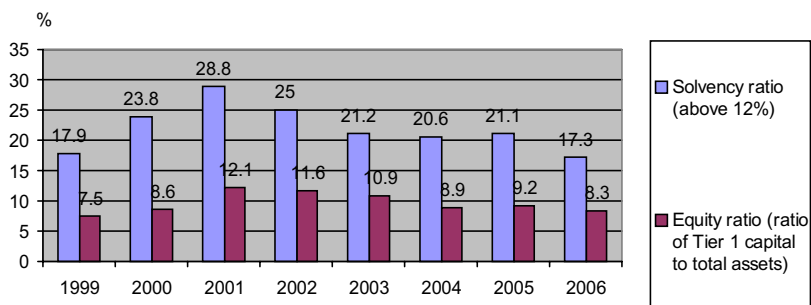
recent times – very little involved (or even not involved at all) in retail activities, activities requiring a much numerous network and involving higher operational costs; on the other hand, the access to cheap foreign currency resources in the context of great demand for foreign currency-denominated loan makes no necessary collection of household deposits, denominated in most cases in lei. Indeed, foreign currency-denominated loans is about 54% of all credit, despite of NBR efforts to discourage by all means their expansion (some results were however obtained, but the share of foreign currency lending in overall non-government lending changed from 60% in 2001 to 63% in 2002, 55% in 2003, 61% in 2004, 54% in 2005⁽³⁾, as result of NBR measures to reduce that and the inventive counter-reactions of commercial banks).

- It cannot be ignored the preferences on corporate and household sectors, interested in taking advantage from loan expansion at lower interest rates and, on other hand, were discouraged to save and make deposits by the same low interest rates. Moreover, the preference for foreign currency-denominated loans is due to the lower interest rates in euro-denominated loans. This situation

is potential risky for the system, especially in the context of high expansion of household lending (the great majority of households are obtaining incomes in ROL).

3. Prudentiality

The main indicator of prudentiality in bank sector, e.g. solvency ratio⁽⁴⁾, notably improved during the last years, especially because of privatization of state banks and the level of reserve requirements. This is a very important step, leading to consolidating Tier 1 capital of credit institution. In the same time, however, the high solvency ratio proves the above-mentioned risk aversion of banks (to the credit supply), that have a slowing effect on lending to private sector and adverse effects on the efficiency of financial intermediation. Although, in the last years, loan expansion seems to indicate that credit institutions, in the fight for market share, are increasingly refraining from maintaining liquid assets. At the end of 2005, solvency ratio was 21.1% (NBR 2005, 2006b), above the legal requirement of 12% and the international benchmark of 8% (Cooke ratio).



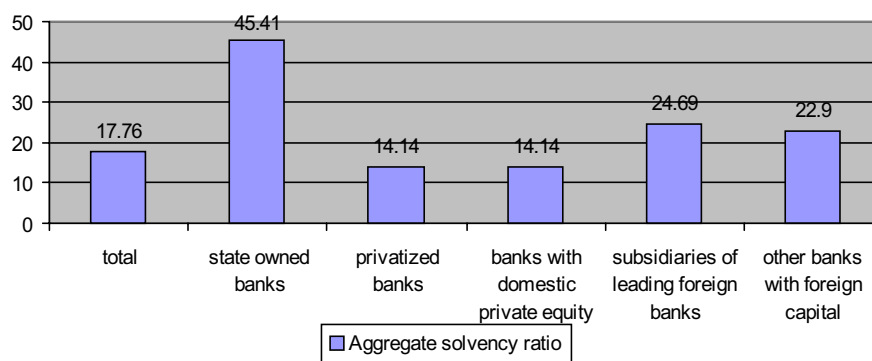
Source: NBR, Annual Report 2005, 2006.

Figure 4. Some prudentiality indicators, 1999-2006

How did foreign banks contribute to a better capital adequacy?

The solvency ratio calculated by NBR for different groups of banks was – at June 30, 2006 – between

14.14% (privatized banks and banks with domestic private equity) and 45.41% (state banks), the average of bank system being 17.76%.



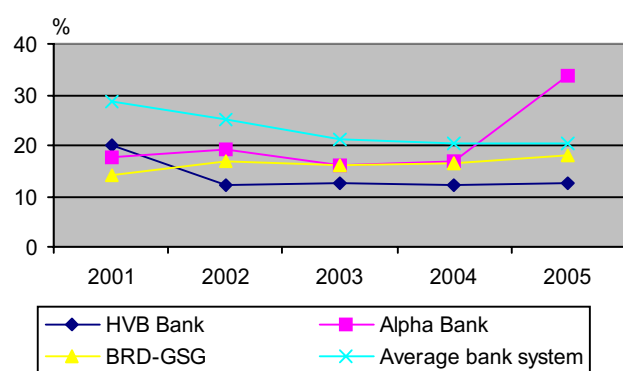
Source: NBR, Report on financial stability, 2007, p. 26.

Figure 5. Aggregate solvency ratio, by type of banks, June 30, 2006 (in %)

If we exclude the state-owned banks (mainly CEC), where the capital adequacy is due to less exposure on credit, the local branches of multinational banks have the best capital adequacy ratio, followed by private domestic capital-owned banks and the other foreign banks, all of them indicating a capital adequacy ratio above the average of bank system.

If we analyse the foreign banks annual reports, the results are not concluding: some foreign banks indicate a capital adequacy ratio more than the average, other less; however, all of them exceed the legal requirement of 12%, the average of euro area (11.5%) and Cooke ratio (8%).

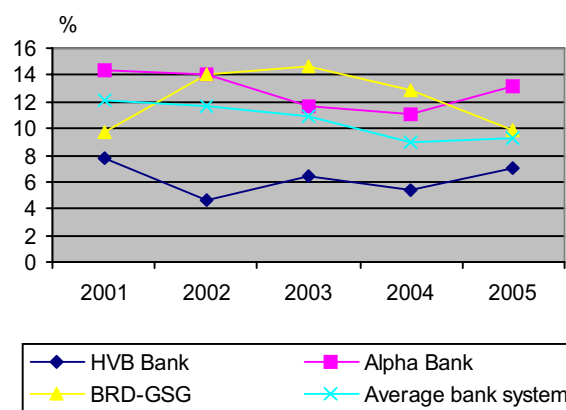
It is important not to exaggerate looking for a higher capital adequacy ratio, because a great value can prove a less involvement in credit supply; if the assets are low, capital adequacy ratio is high. Its level has to be seen also in the context of banks' contribution, especially the foreign banks' contribution as we saw, to the growth of credit and financial intermediation.



Source: balance sheets of selected banks.

Figure 6. Solvency ratio on selected foreign banks, compared with the average of bank system, 2001-2005

The same evolution is noticed in the case of own capital ratio. Some foreign banks are below the average, some of them under. A lower own capital ratio (reasonable, of course) can be the result, on one hand, of a greater involvement in credit supply (making the assets growing), and, on the other hand, can be the consequence of a smaller need for own resources, proof of a better mobilization of resources from other sides than own funds. Resources mobilization (others than the own resources) could reflect the availability of the parent bank to sustain its subsidiary with capitals, result of a re-allocation of funds at group level, searching the opportunities and the best placements.



Source: balance sheets of selected banks.

Figure 7. Equity ratio (ratio of Tier 1 capital to total assets) on selected foreign banks, compared to bank system average, 2001-2005

Important is that the prudentiality indicators (mainly the solvency) have reasonable levels, but without affecting the healthy expansion of credit, as necessary in an economy in full growth and transformation as Romania. It is also important that these indicators not to suffer deterioration in the case of eventually shocks in the economy.

In this idea, NBR built (NBR 2006a), on the basis of data available on June 30, 2006, a *stress test* simulation on the bank system behaviour in case of a exogenous shock (scenario envisaging a 19.1 percent depreciation of the domestic currency and a 6.1 percent point decline in interest rate, on the backdrop of a null growth over a two-year period, as an extreme, yet plausible assumption) and the effects of this shock on the level of own funds and solvency ratio. As banks still enjoy adequate capitalization and a high level of liquidity, the stress test has revealed that the Romanian banking system is capable of absorbing the negative effects of shocks considered in the scenario. The solvency ratio after the shock, calculated at aggregate level, shows a 14.91 percent level, higher than the 12 percent minimum level laid down in the Romanian prudential regulations in force as at 30 June 2006. The impact of the above-mentioned exogenous shocks is differently felt by the groups of banks under scrutiny. Therefore, in the case of privatised banks and domestic banks, which post lower levels of solvency ratio (14.4 percent) as compared to the average calculated at aggregate level, impact of the shocks considered in the scenario is reflected in the decline of this indicator to 11.19 percent and 10.94 percent, respectively.

As regards the estimated effect of the said shocks on the aggregate level of banks' own funds, it entailed the contraction of these funds by 19 percent. The analysis of own funds

by group of banks shows that privatised banks and domestic banks might be most affected. In the case of these banks, the stress test has revealed a decrease in own funds by 23 percent and 25 percent, respectively (NBR 2007, p. 26).

Even for 2006 NBR did not provide detailed data about the impact of simulated exogenous shock on commercial banks, we can analyze the same data available for 2005. The results of this simulation are presented below:

The impact of simulated exogenous shock on commercial banks (%)

Table 3

	Total	Banks with state owned capital	Privatized banks	Banks with domestic private capital	Subsidiaries of leading foreign banks	Other banks with foreign capital
Direct effect	-8.1	-2.5	-13.4	-1.3	-0.9	-0.8
-exchange rate	-0.04	0.3	-0.1	0.7	-1.3	0.1
-interest rate	-8.0	-2.8	-13.3	-2	0.4	-0.9
Indirect effect	-1.4	-0.1	-1.8	-0.2	-3.7	-1.0
-credit risk (gross exposure)	-46.0	-1.0	-59.7	-7.2	-81.7	-35.9
-credit risk mitigated by collateral	-1.4	-0.1	-1.8	-0.2	-3.7	-1.0
Total impact	-9.5	-2.6	-15.2	-1.5	-4.6	-1.8

Source: NBR, *Report on financial stability*, 2006, p. 58.

Some remarks:

1. About the direct effect

The direct effect of the depreciation of the domestic currency is very small, on all banks, a little greater in case of foreign branches, due to a greater share of foreign currency-denominated lending. However, the direct effect of the interest rate decline is strongly felt by the privatized banks. This fact confirms that, in some of these banks, the restructuring process has not been fully assessed yet, and also their sensitivity to the lower spreads reported in the last two years. If we aggregate the two effects, the only more vulnerable banks to direct effect are the privatized ones.

2. About the indirect effect

The indirect effect of the depreciation of the domestic currency is highly affecting all foreign banks (more affected are multinationals' branches, followed by privatized banks and greenfield settlements). This fact is due to credit risk and it is the consequence of much greater exposure to lending, loans being the main part of their assets). As we noticed above, loans have a greater share in total assets in the case of foreign branches, compared with the domestic ones. Certainly, loan exposure provides higher profits, but is much riskier. Fortunately, and in the same time prove of foreign banks' capability to provide health lending and with the lowest risks, net exposure to credit risk (mitigated by collateral) is minimum, so that the indirect effect is, overall, very low.

3. About the total effect

Total impact (direct and indirect) of the two simulated shocks is considerably greater in the case of privatized banks than in the case of all other banks. The greater elasticity to this shock results more from the interest rate

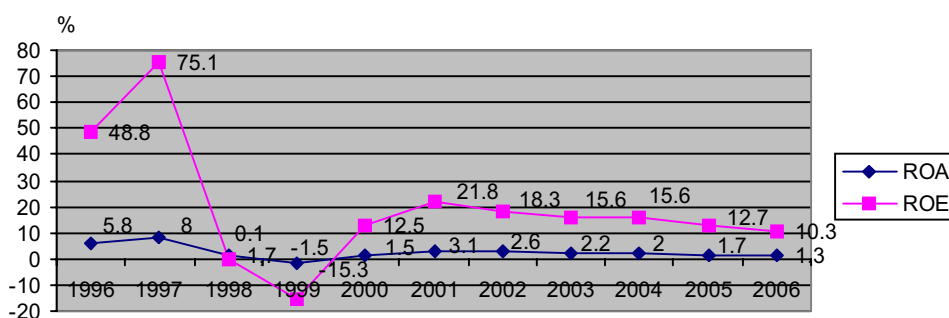
decline than from spread narrowing. Indeed, in the last two years, when the net interest spread considerably declined, the profitability of privatized banks was the most affected⁽⁵⁾.

4. Profitability

The efficiency and profitability of bank sector were negatively affected during the crisis time. In the last years, together with the growing stability of the macroeconomic background and the process of restructuring and privatization, slow but determined privatization of state-owned credit institutions were accomplished significant improvements. The shut down of the greatest commercial bank, Bancorex (former Banca Română de Comerț Exterior) and the restructuring and successful privatization of Banca Agricola played an essential role in this matter.

The consolidation policy taken generated, in a first phase, a significant decrease of non-performing loans (gross value) in overall loan portfolio, from 58.5% in 1998 to 2.8% in 2002 (NBR 2003). The implementation of a strict regulation about classifying loans at the beginning of 2003 generated, however, a new increase of the part of non-performing loans (gross value) in overall loans, to 8.2% (NBR 2003). In order to enhance the efficiency of the process of loan verifying and the continue decrease of non-performing loans, NBR launched in 2000 The Loan Bureau (Biroul de Credit), with the role of supplying information about the composition of loans and payment behaviour of potential debtors.

In the same time, the profitability of bank sector has been improved after the crisis episode 1997-1999, both on what concerns the return on assets (ROA) and return on equity (ROE) – see figure 8:



Source: NBR, Annual Reports, 1998-2006.

Figure 8. Bank profitability in Romania, 1996-2006

After 1999, due to progress made in the field of bank restructuring and privatization and clean-up measures, credit institutions with majority foreign equity gained importance, with consequences on improving performance indicators. ROA (return on assets) rose from -1.5% in 1999 to 3.11% at the end of 2002. Likewise, over the same period return on equity increased from -15.3% to 18.3% (NBR 2003). Moreover, the presence of foreign banks intensified competition and caused a downward trend in spreads. The gradual decrease of spreads is attributed also to disinflation trend in last years and to lower need to provision non-performing loans.

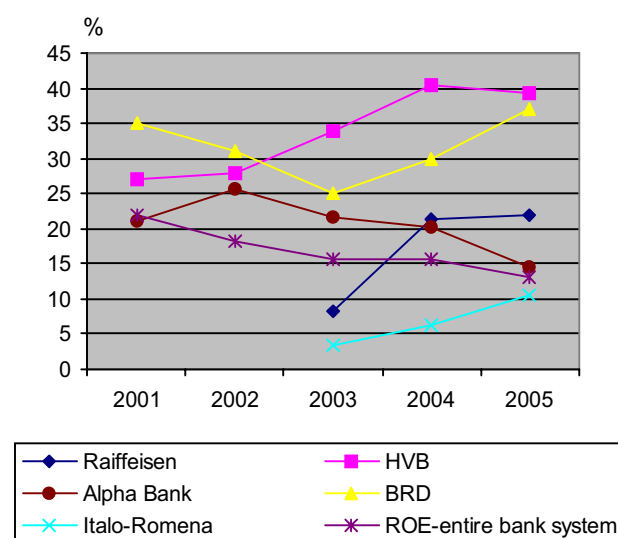
Available data on selected foreign banks shows that, generally, foreign banks are more profitable. However, several issues must be taken into consideration.

First, foreign banks are actively involved in Romanian economy from not enough time to draw final conclusions. Not to forget that major greenfield bank investments are still in the stage of network building (it is about those banks willing to build an extended network, because some multinational banks, like Citibank or even ING and ABN Amro are not intending to do so, given their involvement more likely in wholesale than retail) or recently accomplished their network. Much of them have a very recent entry on market (e.g. those banks entering the market via acquisition, like National Bank of Greece), therefore some of them are confronted with the inefficiency of overtaken bank (case of OTP), and they cannot be charged with it. In any case, empirical observations about foreign banks profitability in Central and Eastern Europe⁽⁶⁾ seem to be valid also for Romania: foreign banks are, generally, more profitable than the domestic ones, especially that the state owned banks, and greenfield investments are more profitable than acquisitions and takeovers. It must be mentioned that, in order to finally conclude if foreign banks are more

profitable than the domestic ones, the time is not sufficient yet. The issue is that when the time will be sufficient to make such comparisons (let's say 10 years) there will be no more domestic banks in Romania. Actually, now there are only two domestic owned banks over the banks with more than 1% market share, e.g. CEC and Banca Transilvania, which will be probably sold in the next 2-3 years, when it will reach the critical weight for such process.

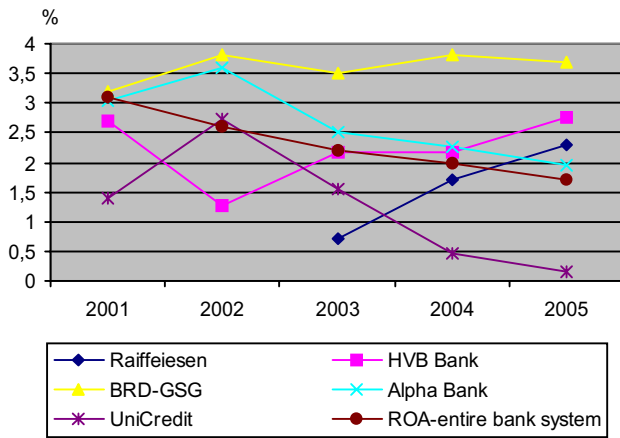
Second, foreign banks present in Romania are very heterogeneous as financial strength. Near prestigious multinationals (Société Générale, HVB, UniCredit, ING, ABN Amro, Citi) there are a lot of exclusively regional banks (from Greece, Hungary etc.) which took over small banks, with less than 1-2% market share.

However, for several foreign banks for which are available more extended and consistent data, it can be noticed, generally, a profitability above the average of bank system (see charts below).



Source: balance sheets of selected banks.

Figure 9. ROE on selected foreign banks, compared with the average bank system, 2001-2005



Source: balance sheets of selected banks.

Figure 10. ROA on selected foreign banks, compared with the average bank system, 2001-2005

It is interesting that foreign banks has a much better ROE (compared with the average of the system) than ROA, meaning that they are more capable to make more profit with less own funds, by using other types of resources, attracted from the market or from the head-office.

5. Summary and conclusions

The researches we conducted about the foreign banks' contribution in improving the performance of the

Romanian banking system show their more consistent dynamism in comparison with domestic banks, reflected in a stronger involvement in lending. This fact is driven both by the easier access to cheaper resources from the parent banks or other banks in the group and by a less risk aversion. The good reputation enjoyed by multinational banks exercises an important attraction for the clients and, together with the quality of banking products and services and competitive interest rates contributed to the gains recorder in terms of market share and profitability.

The main benefits for the banking system as a whole result from the experience of great multinational banks (meaning more qualified and well trained personnel, IT software, new products and services, a client-oriented even aggressive attitude, but also prudential and risk management good practice) and also from the direct affiliation to the group (access to cheaper financial resources for the clients, lower interest rates). Domestic banks are "pushed" by to competition, benefiting indirectly from the "learning by doing" process. Moreover, foreign banks proved to be, generally, more profitable, because of the involvement in the more profitable activities: corporate and government lending, asset management, international trade financing etc.

Notes

- (1) calculated on the basis of data provided by NBR and INSSE
- (2) CEC counted, in 2004, for 6% of the banking system total assets and 16% of household deposits (cf. Bozga, M., *The Romanian Banking System Catching up on Europe*, presentation available on www.bnro.ro)
- (3) calculated on the basis of data from monthly bulletins of NBR
- (4) the solvency ratio shows the own funds calculated as a share of total risk weighted assets and off-balance sheet items, net of provisions (cf. NBR, *Raport asupra stabilității financiare*, 2007, p. 21)
- (5) it is interesting that the simulation made by NBR in June 2005 was followed by the margins' narrowing from 20 p.p. at the beginning of 2005 to 11.9 in June 2006, fact that, in addition with the restructuring efforts and network expansion, ended in the reduction on some banks' profits, such as Raiffeisen and Bancpost, in June 2006 compared to the same period of 2005 (cf. *Ziarul financiar*, August 30, 2006)
- (6) see Badulescu, D., *Globalizarea si bancile. Cu o privire specială asupra Europei Centrale și de Est și asupra României*, Editura Economica, Bucuresti, 2007

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The Analysis of Unemployment Degree using Econometrics Methods

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Abstract. *In the shown material I will analyze the evolution of the unemployment rate registered in the time period during January 1. 2001 and March 30. 2007 by using the Box Jenkins model.*

The model is based on the ARIMA processes and with its help a large number of time series met in economy can be pattern.

The steps that have to be follow are shown to transform a time series and then they have to be covered, in the single case shown by the registered unemployment rate and ending with a prognoses for a future period.

Key words: time series; methodology; corelograma; estimation; unemployment; rate.

The Box –Jenkins Methodology is being applied for the stationary time series (average, dispersion and the self-correlation function doesn't modify itself significantly in time).

Most of the times, an encountered time series in economics is not a stationary series. In this case, a number of correspondent modifications will be applied to it, to become stationary.

The easiest way for a stationary analysis is the behavior analysis of the values for the self-correlation function. The self-correlation function (FAC) and the part self-correlation function (FACP) measure the correlation degree between the observation pairs separated through various time periods $\{z_t, z_{t+k}\}$, $k = 1, 2, 3, \dots$

If the time series is known, $(z_i)_{i=1, \dots, T}$ the self-correlation coefficients are estimated through the following relationship:

$$\hat{\rho}(h) = \frac{\sum_{i=1}^{T-h} (z_i - \bar{z})(z_{i+h} - \bar{z})}{\sum_{i=1}^T (z_i - \bar{z})^2}, h = 0, 1, 2, \dots, H,$$

For a time series with T terms, it's recommended the calculation of an H number of self correlation coefficients smaller than T/4.

If in the frame of the self-correlation series are values which differ significantly from zero or from following sensitively equal values, then the date series is not stationary. For this series a first range differences operator is being applied. For the resulted series, expressed from the differentiation operation, is being afterward applied the above operation. Through successive steps a stationary series is being obtained.

To test if the coefficient of the self-correlation differs significantly from zero or from an estimated value, a test Student will be applied.

To establish starting with which order the self-correlation coefficient significantly differs from 1, the following space will be defined:

$$[-t_{T-2}; \alpha/2\hat{\sigma}(\hat{\rho}(h)), t_{T-2}; \alpha/2\hat{\sigma}(\hat{\rho}(h))].$$

If the order is being identify as equal with d, then, to obtain the stationary series, a differential operator of the respectively order is applied. The stationary series is obtained:

$$\begin{aligned} X_t &= (1-L)^d Z_t \\ X_{t+1} &= (1-L)^d Z_{t+1} \\ &\dots \\ X_{T-d} &= (1-L)^d Z_{T-d}. \end{aligned}$$

By applying the differential operator of d order, a stationary time series is obtained but with a smaller d terms number.

Another test used to find out if a series is stationary or not is the Unit Test (Unit Root) - *Dickey - Fuller test*.

Let the model $Z_t = \rho Z_{t-1} + \varepsilon_t$ be. If the coefficient of Z_{t-1} equals 1, then we have what is called "random walk".

In this case, the $\rho = 1$ hypothesis must be tested.

An easier way for testing the stationer, based on the unit - root problem, is the one of the model that uses the first order differential operator $\Delta Z_t = Z_t - Z_{t-1}$.

The equivalent model is considered: $\Delta Z_t = (\rho - 1)Z_{t-1} + \varepsilon_t$ or $\Delta Z_t = \delta Z_{t-1} + \varepsilon_t$. For which the $\delta = 0$ hypothesis will be tested.

The testing of will be done with the help of Dickey - Fuller test. This test is build after the model on a statistic of Student type but the theoretical values are not given by the Student distribution instead they were generated by Dickey and Fuller through simulation based on the Monte Carlo method.

The Dickey - Fuller test is for the self regressive predictors rang 1. Dickey - Fuller test uses the general equation:

$Z_t = c + \gamma t + \alpha Z_{t-1} + \varepsilon_t$ or, to ease to process, the equation:

$\Delta Z_t = c + \gamma t + \alpha Z_{t-1} + \varepsilon_t$ for which the following elements are checked:

- the meaning of c constant: With the help of Student test, the following hypothesis are tested:

$$H_0 : c = 0$$

$$H_1 : c \neq 0$$

- the presence of a trend. With the help of Student Test the following hypothesis are tested:

$$H_0 : \gamma = 0$$

$$H_1 : \gamma \neq 0$$

- the presence of an unitary root. With the help of Student test the following hypothesis are tested:

$$H_0 : \alpha = 0$$

$$H_1 : \alpha < 0$$

If the variable follows a self regressive example higher than 1, then the test Augmented Dickey - Fuller is used. The Augmented Dickey - Fuller test uses the equation:

$$\Delta Z_t = c + \gamma t + \alpha Z_{t-1} + \beta_1 \Delta Z_{t-1} + \dots + \beta_n \Delta Z_{t-n} + \varepsilon_t$$

The Phillips Perron test uses the same equation as the Dickey - Fuller (DF) test, $\Delta Z_t = c + \gamma t + \alpha Z_{t-1} + \varepsilon_t$ and the test are being calculated to check the shown hypotheses at the DF test not only under the errors independent hypothesis but also under the hypothesis of an eventual self correlation.

After testing, the model that minimizes the information criteria will be remembered and the parameters for the check of non stationary will be tested. The information criteria's remembered are:

- Akaike criteria $AIK = -\frac{2LnL}{T} + \frac{2k}{T}$, where:

T - observations number;

k - parameters number.

LnL - verisimilitude log

$$LnL = -\frac{T}{2}(1 + Ln2\pi) - \frac{T}{2}Ln \frac{\sum \varepsilon_t^2}{T}$$

- Schwartz criteria, $SC = -\frac{2LnL}{T} + \frac{2LnT}{T}$

The Box-Jenkins procedure assumes getting over various steps to identify the most suitable self regressive analysis model for a time series. Those steps are:

Step I: Identification of the estimated model

- The self-correlation function (ACF) and the partial self-correlation function will be calculated to establish if the series is stationary. If it is stationary, on goes to the next step, if the data series will be stationar itself through several adequate changes.

- Identification in advance of the model. The estimated values of the self-corrallad and partial self-correlation functions are compared for the structure of the brought in model (p, d, q orders), resulting as a model structure ARIMA for that series for which theoretical ACF AND PACF approximate with enough precision ACF and PACF estimated from the given realization, under a minimum number of the model parameters.

Step II: Estimation

In the estimation phase it will be determined, for the chosen model, the efficient estimations from the statistic point of view of the model parameters, of which structure and preliminary values of the parameters have been established in the above step. Also in this step the stationery, the contrarily of the model, the statistic meaning and other quality indicators for the model modulus of the series will be analyzed.

Step III: Diagnosis ratification

The diagnosis ratification step consists mainly in the analysis of the model wastes for the establishment of the statistic independence of those. In this way, it is applied to:

- establish if the model parameters differ significantly from zero.
- check the conformation of the waste hypothesis of nocorrelation of homoscedasticitate and of the normal allocation of the waste.

In the situation in which this hypothesis does not check itself, it will return to the identification phase for the selection of a new model, adequate to the given accomplishment.

In the case of the model identification phase, the association of some theoretical functions of partial self-correlation and of processes partial self-correlation, which are analyzed, do not ensure the determination of the “best” model for the given outcome, specially at the first identification attempt.

Step IV: The prognosis

The prognoses assume the determination of an appraisal for the studied function, at a t+k moment. To establish the prognoses, it is taken into consideration the differential procedure, which the model has taken in an identification and appraisal step.

Use of the model

For illustration, we will analyze the unemployment rate registered in Romania based on monthly dates reported in the time period 01.01.2001 – 30.03.2007 with the help of Eviews program.

The values of this indicator are represented through time series and although the dates are independently analyzed by other macro-economics indicators, the influence of these indicators at the economics processes is observed through them.

Phase I: Identification of the apriorical model

Step I: The analysis of the data series corelogram

As a result of the accomplishment of the data series corelogram formed out of the 75 observations the results presented in figure 1 are obtained:

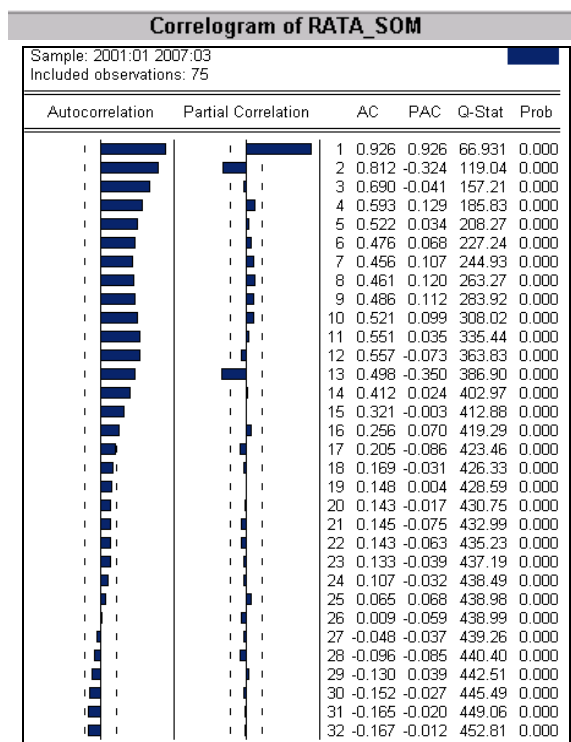


Figure 1. Unemployment rate corelogram

The corelogram shows that the series is seasonal (not stationary), also confirmed by the graphic

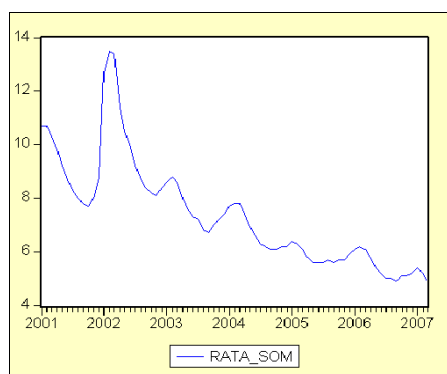


Figure 2. Graphic representation of the unemployment rate

The series is being unseasonable, with the help of season coefficients. Those are:

Date: 05/05/07 Time: 14:16	
Sample: 2001:01 2007:03	
Included observations: 75	
Ratio to Moving Average	
Original Series: RATA_SOM	
Adjusted Series: RATA_SOSA	
Scaling Factors:	
1	1.107056
2	1.139231
3	1.129881
4	1.050093
5	0.993398
6	0.965536
7	0.939740
8	0.926575
9	0.917069
10	0.926567
11	0.948235
12	0.993077

Figure 3. Monthly season coefficients

The unseasonable corelogram series is showed in figure 4:

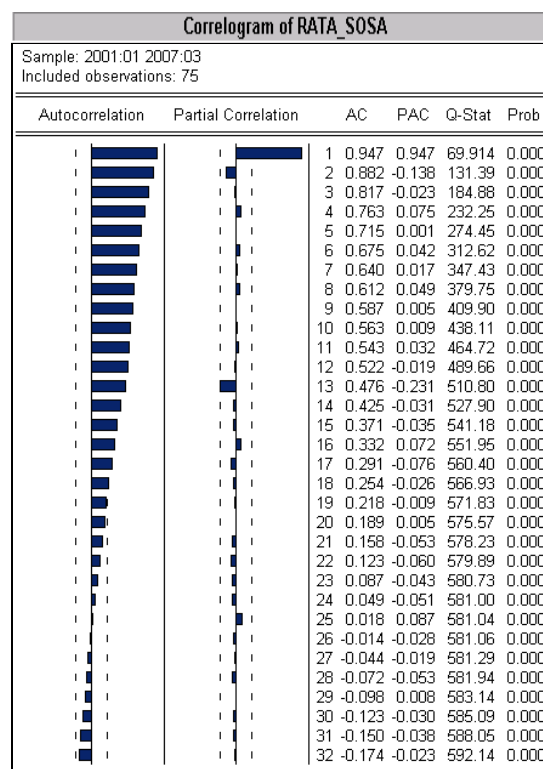


Figure 4. The unemployment rate unseasonable corelogram

The corelogram points out that between all terms important gaps exist. We estimate three models with the help of Dickey – Fuller test (with a gap of 4 periods) obtaining the following results:

Augmented Dickey-Fuller Unit Root Test on RATA_SOM					
Null Hypothesis: RATA_SOM has a unit root					
Exogenous: Constant, Linear Trend					
Lag Length: 1 (Automatic based on SIC, MAXLAG=2)					
			t-Statistic	Prob.*	

Augmented Dickey-Fuller test statistic			-4.606221	0.0021	
Test critical values:					
1% level			-4.088713		
5% level			-3.472558		
10% level			-3.163450		

*MacKinnon (1996) one-sided p-values.					

Augmented Dickey-Fuller Test Equation					
Dependent Variable: D(RATA_SOM)					
Method: Least Squares					
Date: 05/05/07 Time: 14:52					
Sample(adjusted): 2001:03 2007:03					
Included observations: 73 after adjusting endpoints					
	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	RATA_SOM(-1)	-0.247614	0.053756	-4.606221	0.0000
	D(RATA_SOM(-1))	0.595379	0.096896	6.144547	0.0000
	C	2.506918	0.569632	4.400945	0.0000
	@TREND(2001:01)	-0.018868	0.004966	-3.799292	0.0003

	R-squared	0.404970	Mean dependent var	-0.079452	
	Adjusted R-squared	0.379099	S.D. dependent var	0.604373	
	S.E. of regression	0.476229	Akaike info criterion	1.407401	
	Sum squared resid	15.64880	Schwarz criterion	1.532906	
	Log likelihood	-47.37014	F-statistic	15.65350	
	Durbin-Watson stat	2.184145	Prob(F-statistic)	0.000000	

Figure 5. The Dickey – Fuller test

Step II: Identification of the model type:

Correlogram of D(RATA_SOM)						
Date: 05/05/07 Time: 14:56						
Sample: 2001:01 2007:03						
Included observations: 74						
	Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob

	1	0.470	0.470	17.044	0.000	
	2	0.135	-0.111	18.469	0.000	
	3	-0.251	-0.351	23.469	0.000	
	4	-0.232	0.067	27.784	0.000	
	5	-0.243	-0.132	32.613	0.000	
	6	-0.271	-0.290	38.678	0.000	
	7	-0.244	-0.072	43.659	0.000	
	8	-0.203	-0.155	47.169	0.000	
	9	-0.099	-0.175	48.015	0.000	
	10	0.023	-0.031	48.061	0.000	
	11	0.209	0.084	51.960	0.000	
	12	0.239	-0.091	57.144	0.000	
	13	0.187	-0.061	60.367	0.000	
	14	0.038	-0.058	60.503	0.000	
	15	-0.078	-0.155	61.084	0.000	
	16	-0.083	-0.016	61.752	0.000	
	17	-0.110	-0.094	62.946	0.000	
	18	-0.111	-0.149	64.195	0.000	
	19	-0.122	-0.072	65.709	0.000	
	20	-0.050	-0.040	65.969	0.000	
	21	0.043	-0.060	66.164	0.000	
	22	0.099	-0.084	67.219	0.000	
	23	0.144	-0.007	69.514	0.000	
	24	0.181	0.041	73.192	0.000	
	25	0.126	-0.070	75.021	0.000	
	26	0.039	-0.010	75.203	0.000	
	27	-0.060	-0.014	75.633	0.000	
	28	-0.120	-0.086	77.399	0.000	
	29	-0.107	0.023	78.838	0.000	
	30	-0.110	-0.018	80.392	0.000	
	31	-0.068	-0.029	80.996	0.000	
	32	-0.033	0.006	81.138	0.000	

Figure 6. The differential unemployment rate corelogram of I ordinal

The self-correlation functions are being calculated based on the differential series of I order.

The simple corelogram presents a decreasing of its terms and the partial corelogram has only the first term different from 0, which makes us anticipate a model type AR (1) MA (1).

Phase II. Estimation

The estimation of the parameters can be done based on the unseasonable differentiate series order I.

Dependent Variable: D(RATA_SOSA)					
Method: Least Squares					
Date: 05/05/07 Time: 15:04					
Sample(adjusted): 2001:03 2007:03					
Included observations: 73 after adjusting endpoints					
Convergence achieved after 2 iterations					
	Variable	Coefficient	Std. Error	t-Statistic	Prob.
	AR(1)	0.358027	0.109914	3.257343	0.0017

	R-squared	0.100855	Mean dependent var	-0.069254	
	Adjusted R-squared	0.100855	S.D. dependent var	0.391989	
	S.E. of regression	0.371697	Akaike info criterion	0.872128	
	Sum squared resid	9.947423	Schwarz criterion	0.903505	
	Log likelihood	-30.83269	Durbin-Watson stat	2.014858	

	Inverted AR Roots	.36			

Figure 7. Parameters estimation

Phase III:

The process coefficients AR (1) are eloquently different from 0. The waste analysis is done beginning with the self-correlation function.

Correlogram of RESID						
Date: 05/05/07 Time: 15:06						
Sample: 2001:01 2007:03						
Included observations: 73						
	Autocorrelation	Partial Correlation	AC	PAC	Q-Stat	Prob

	1	-0.023	-0.023	0.0412	0.839	
	2	0.108	0.108	0.9482	0.622	
	3	-0.298	-0.297	7.9155	0.048	
	4	0.013	-0.001	7.9298	0.094	
	5	-0.053	0.010	8.1586	0.148	
	6	-0.074	-0.182	8.6055	0.197	
	7	-0.085	-0.085	9.1994	0.239	
	8	-0.036	-0.027	9.3106	0.317	
	9	0.069	0.007	9.7210	0.374	
	10	-0.096	-0.165	10.527	0.395	
	11	0.054	0.019	10.761	0.462	
	12	-0.141	-0.128	12.565	0.401	
	13	0.071	-0.052	13.024	0.446	
	14	-0.009	0.020	13.032	0.524	
	15	-0.036	-0.156	13.157	0.590	
	16	0.064	0.056	13.550	0.632	
	17	-0.016	-0.027	13.575	0.697	
	18	0.037	-0.087	13.708	0.748	
	19	-0.100	-0.088	14.726	0.740	
	20	0.002	-0.044	14.726	0.792	
	21	0.062	0.076	15.132	0.816	
	22	0.026	-0.101	15.205	0.853	
	23	-0.011	-0.024	15.218	0.887	
	24	-0.080	-0.072	15.927	0.891	
	25	0.025	-0.045	15.997	0.915	
	26	0.038	0.050	16.162	0.932	
	27	0.057	-0.043	16.552	0.942	
	28	-0.038	-0.011	16.731	0.954	
	29	0.016	-0.003	16.764	0.966	
	30	-0.001	-0.020	16.764	0.975	
	31	0.002	-0.032	16.765	0.982	
	32	0.014	0.009	16.793	0.988	

Figure 8. The waste corelogram

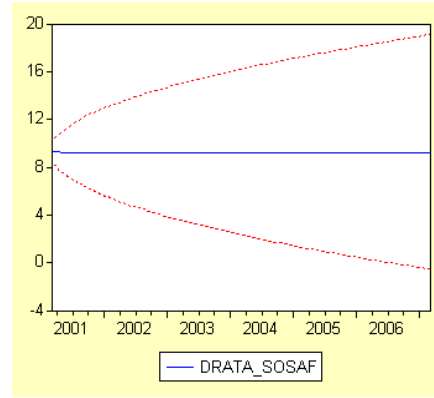
From the above corelogram results that no term is outside the two trust and statistic intervals. Q has a critical probability close to the value 1. We can say that we can assimilate the wastes through a process white noise type.

The estimation of ARIMA (1, 1, 0) model is validated, in conclusion the series can be represented through a process ARIMA (1,1,0) type.

The series formed from the unseasonable and differential order I unemployment rates is represented through the process:

$$DRATA_SOSA = (1-0,358D) \times \epsilon_t = \epsilon_t - 0,358 \times \epsilon_{t-1}$$

Phase IV: The foreknowledge



The foreknowledge can be calculated with the help from the table below:

	e_t	DRATA_SOSA	RATE_SOSA	CS	UNEMPLOYMENT RATE
03.06	-0,001		4,336738		
04.07		0,000358	4,33736	1,050	4,553933
05.07			4,337716	0,993	4,306739
06.07			4,338074	0,965	4,18531

where:

e_t is the waste value;

DRATE_SOSA is the unseasoned and differential series rang I;

RATE_SOSA is the unseasoned series;

CS are the seasoned coefficients;

UNEMPLOYMENT RATE is the brute series of the inflation rate.

$$DRATA_SOSA_{07:04} = e_{07:04} - 0,34 \times e_{07:03} = 0 - 0,358 \times (-0,001) = 0,000358$$

$$RATA_SOSA_{07:04} = RATA_SOSA_{07:03} + DRATA_SOSA_{07:04} = 4,337 + 0,000358 = 4,33736$$

This result from the column RATE_SOSA, if we multiple it with the seasoned coefficients, we will obtain the brute forecasting series.

From the prognoses done with the help from the Box Jenkins method, a downfall of the unemployment rate is being observed for the following months.

It's interesting to apply this method and the time series obtained from the registration done through AMIGO, the BIM unemployed, but having an insufficient number of registered dates (< 50), it is necessarily to do a time extension to complete the series with a sufficient number of observations. It can be analyzed and forecasts can be made at national level but mostly locally to capture the given influences and by other specific regional development factors.

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Contributions to the Definition of the Managerial Profiles



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Abstract. *Considering that the superior manager variety is a result of the different levels of “accommodation” of the characteristics met in the dedicated literature, in the beginning we have summed up the opinions of the subjects of a statistical research in some managerial profiles, closer to the real life. The same procedure was applied in middle management, making some adjustments regarding the main characteristics.*

The last part of the study is dedicated to define the best performing managerial teams (tandems), reported to the role of the two representatives of the organizational structures in accomplishing the general objectives of each company.

Key words: top-manager; entrepreneur; commandant; conductor; administrator; coach; middle manager; second; concertmaster; business administrator; team captain (project manager); managerial characteristics; optimal tandem.



The emblematic figure of every hierarchy, *the top-manager* is identified up to one point with all the organizational aspects. Most of the analyses regarding the role of the human factor upon the institutional behaviour, even if it refers to the so called “Managerial team”, refer in fact to the position of the “manager master” – the leader of the organization.

If the different approaches of the organization-lieder duo generate for the leader a more and more sophisticated profile, the analysis of “real” top-managers behavior reveals a great variety regarding the concrete means of realizing the leading function and the ways of acting with the subordinates.

There are at least three coordinates in order to establish the particularities of behavior defined through the management style:

- The top manager’s personality (Nicolescu, Verboncu (coord.), 2003);

- The specific of the organization (Hoffman, 2004);
- The managerial team characteristics (Nica et al., 1994).

From the criteria used for characterizing the management styles, we appreciate that the most significant regarding the organizational structures implications are:

- The attitude towards responsibilities (styles: repulsive, indifferent, dominant);
- Means of manifesting the authority (authoritarian, democratic, permissive);
- Interest for humans;
- Professional value;
- Interest for results and efficiency.

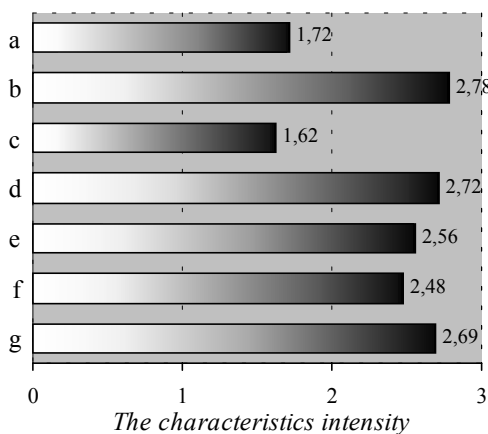
The multidimensional systems offer more complex managerial profiles, either by grouping the styles determined based on one-dimensional criteria, or based on a multiple criterion approach. For instance:

- The correlation between the decisions and the information, used for establishing the risk predisposition;
- The human-results binomial, proposed by Blacke and Mounon;
- The relationship between behaviour and attitude;
- The three-dimensional model developed by Reddin, based on the combination of the variables regarding the interest for humans, results and efficiency, which offers a pertinent but enjoyable typology (the altruist, the apathetic, the autocrat, the hesitant, the promoter, the bureaucrat, the consequent autocrat and the achiever) (Nica et al., 1994).

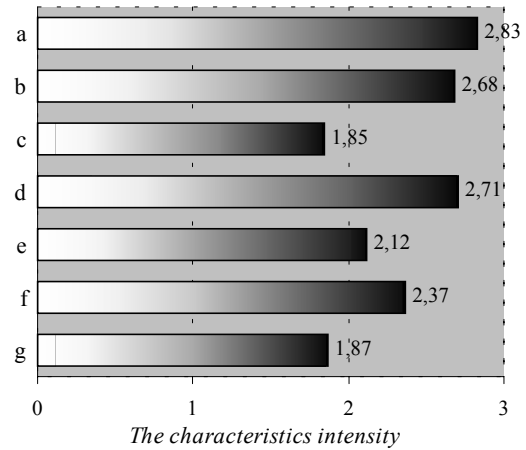
Without denying the cognitive significations of such an approach, we will observe that the superior manager variety results from the “accommodation” on different levels of the previously presented characteristics. This is the reason why we have summed up in some profiles, closer to the real life, the opinions of the subjects of a statistical research, expressed on a scale from 0 to 3 (Constantinescu, 2003): The selection has been made starting with grouping the representative population based on dominant characteristics (the first five from the seven included in the questionnaire):

- responsibility (a);
- authority (b);
- interest regarding humans (c);
- interest for results (d);
- interest for efficiency (e);
- professional value (e);
- risk approach (e).

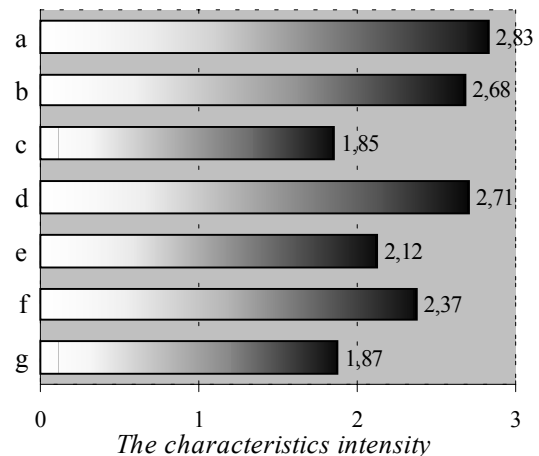
The entrepreneur is a manager who is too little preoccupied by his evolution within the company. The fact that we find him usually as top-manager (23% of the cases) is due to his shares (very often the majority number of shares) and to his authoritarian style, combined with a high consideration for himself. Not the same thing can be said about his consideration for the others. That is why his interest for results and for efficiency is much higher than his interest for humans. He is a competent manager, ready to assume risks in rational limits but the lack of communication with the employees makes him look like a proud or irrational person.



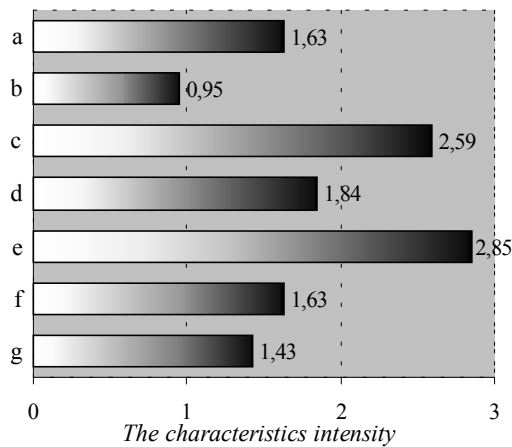
The commandant has most of the dominant style: an excessively high self-consideration, an authoritarian character, a professional competency proved in time and a constant equilibrium in the decision making process. The interest for humans exists as long as they represent factors for achieving the projected results. From here derives a low consideration for the subordinates and a lack of style in the inter-human relations.



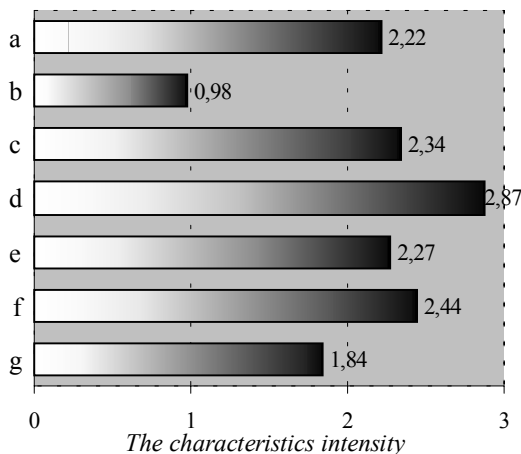
The conductor is not interested in his leading position, being a prototype of the democratic management. His interest for humans, the consideration for the subordinates – whom he considers partners, the behavioral abilities and, less, the professional value or the consideration for himself are the ways of achieving the goals. Being mainly preoccupied by performance, he is likely to take risks, sometimes even in a speculative way.



The administrator is a top-manager without vocation, being repulsive towards this position in which his abilities are not accordingly valued. Equilibrate both in self-appreciation and in the relationships with the others, he considers the results as a natural consequence, being more interested in the efficiency of obtaining them. He is a permissive manager that proves a remarkable prudence, not always necessary in taking the decisions.



The coach (the captain-not-playing) is different from the conductor through a permissive authority, encouraging the organizational and leading spontaneity. Thus, he manifests the same consideration regarding the subordinates and interest for humans, maybe just a more selective style, because he is equally preoccupied both by the results and the performance.



An interesting remark is the fact that, no matter the profile the subjects of the questionnaire have drawn based on their own superior manager's behavior, more than 80% out of them consider it adequate, at least approximately, to the organization they are part of. The percentage remains high (73%) even if we cut the top-managers' opinion.

Most of the considerations and of the systems of characterizing the management styles existing in the specialty literature are pointing to the top hierarchy, namely the top or superior managers (Nica et al., 1994).

In the same time, the analysis regarding the correlation between motivation and performance is found basically on the basis of the hierarchical pyramid (the performer employee) or, at most, on the first line managers (Mathis et al., 1997).

Because of these reasons and not only, we appreciate that an approach of the human factor within a hierarchy, more significant from the representativeness point of view, can be made on the *middle manager*, the "second line manager", existing practically in all the organizations.

The specialty literature offers us enough elements to highlight a diver's typology of middle managers, depending on the nature of their responsibilities, the specialization level, the managerial style and behavior, the capacity and the way of communication and other criteria (Nica et al., 1994).

According to the responsibilities, the middle managers can be:

- "Major state" managers – with tasks regarding defining and implementing the general politics and strategies of the company;
- The sectoral managers – having as main task the coordination of an organizational subdivision (functional, positioning etc.);
- The project managers – responsible for the initiation and execution of some strategic development, reorganize, promoting of new products and services programs.

According to the specialization level, the middle managers can be:

- Universal managers – those who have a general managerial and a corporate managerial education;
- Specialized managers – in the vast domains of the activity of the company (sales, production, service, human resources etc.).

The attitude towards the company leads to three distinct types of middle managers:

- Loyal manager – first of all, preoccupied of the problems of the company; he wants to be promoted inside of the company or, at most, as representative of it;
- Interested manager – to whom the company is only an instrument, mean or environment for achieving the personal desires;
- Indifferent manager – is too little interested in achieving the organizational goals, being more preoccupied of maintaining his position within the company.

The attitude towards performance reveals the way the interest for the organization goals are similar with his own accomplishments.

- The concerned manager – for him the organizational performances are the most important; the individual achievements are seen from the institution point of view;

- The individualist manager – for him, the most important are the individual or his group performances; even if he benefits from positive appreciations, on a long-term the lack of correlation with the general goals of the company reveals a reduced contribution to the organizational performances;
- The neutral manager – denotes a lack of preoccupation for the increase of an already existing performance level.

According to the professional competence, we can distinguish between:

- The performing manager – his permanent preoccupation is to reach and to exceed the projected standards;
- The speculative manager – preoccupied mostly by the realization of a favourable image, based on previous achievements;
- The mediocre manager – is the disciplined manager, not implied in the strategically objectives of the company and he resumes to the correct achievement of the tasks received from the superiors;
- The incapable manager – not able to realize the goals of the company or of the division he is leading.

The attitude towards the superior manager has significant implications:

- – The cooperating manager – he sees the subordination relationship in his own terms, contributing in a constructive manner at the efficiency of the decisional act;
- – The sufficient manager – manifests an attitude of superiority and an implicit permanent contestation of the subordination towards the authority centre, the decisions are selectively undertaken, interpreted, commented, losing – in this way – from efficiency;
- – The obedient manager – he accepts the position of simple transmission belt; he takes from the top manager the possibility of a contribution at the second level, raising the question whether the decision to keep him in that position is rational.

Also, the attitude towards the subordinates is significant in defining the role and efficiency of the middle manager:

- The autocrat manager – is characterized by his dictatorial imposing style of his own considerations, methods and instruments, without taking into account the subordinates' opinions;
- The formalist manager – he summarizes the subordination relationship to its institutional predetermined points, without manifesting the flexibility of realizing a functional connection;

- The stimulative manager – based on his capacity to communicate and on the way he implies and motivates the subordinates;
- The passive managers – neglecting, manager without span, he prefers to decide sometimes without judgment based on the subordinates' initiatives or actions.

In practice, very rarely or even just by accident, we will find the pure type of the previously described categories, because the human factor is individual and complex and, not once, contradictory.

Because of these reasons, based on the results obtained from the questionnaires, we preferred to draw the profile of some middle managers whose representativeness is given by the frequency we find them in the leading structures and that synthesize an area of compatible characteristics (Constantinescu, 2003):

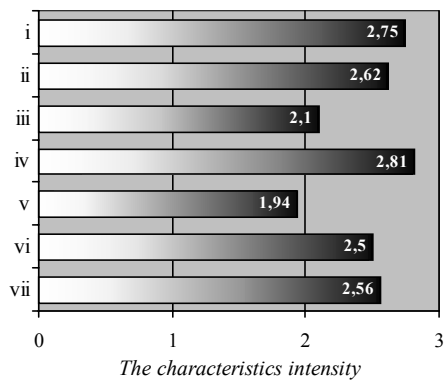
- Competency (i);
- Performing spirit (ii);
- Specialization (iii);
- Authority (iv);
- Respect towards subordinates (v);
- Loyalty (vi);
- Adaptability (vii).

The second, the potential successor, or command replacer, met under the name of prime-vice-president, executive vice-president or adjunct general director, has a double determination, according to the presence or the temporary no availability of the top manager; he is the link between the authority centre and the rest of the hierarchy, according to each case, he undertakes temporary or selective the top manager attributions, being the entitle person to replace him. Consequently, he is a potential candidate to the leader's position. The fact that he is maintained on the second position more than an usual period of time shows whether a managerial incapacity or significant behaviour problems.

The subordination relation towards the hierarchical chief is less emphatic than the subordinates his actual position generates and the perspective in the hierarchy, having a formative character.

The attitude towards subordinates is forming gradually, while the second stage is approaching the ending.

Being an universal manager, the second defines his attitude towards the company according to the promoting possibilities within or outside the company. A favorable perspective can be suggested by delegating some attributions in defining and implementing the strategies of the company. Otherwise, the professional valences are used on the project manager model, on the purpose of increasing the personal achievements portfolio.



Concertmaster or the substitute can be delegated-administrator, executive general director, general secretary or one of the vice-presidents of the company, even the human-resources manager. Knowing deeply the organization of the company, he coordinates the actual problems solving, being less implied in strategic decisions.

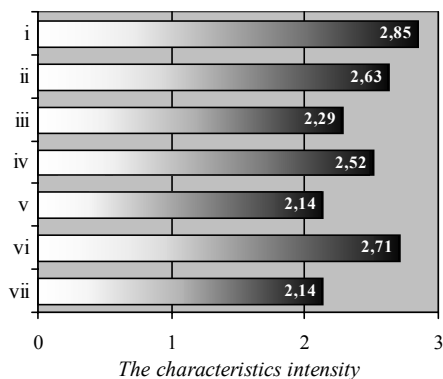
He is a factor of stability and equilibrium of the system, assuring – mainly – to maintain the reached performances and the existing structures.

Very useful in the conditions of a variable top management, in time he might become the centre of authority of an informal, acting as an inertial factor in the context of the chances of the management.

Usually, he is an adept of the explicit subordination relation towards the top-manager, the authority towards the rest of the hierarchy being executed more because of professional arguments, based on experience and length of service, than on formal arguments

The personal motivation has a complex character, regarding both the role recognition and individual contribution, and the results of the company. More, the formal and informal connections with the other members of the organization make him very sensitive to their satisfactions and frustrations, mainly when these are manifested at the group level (departmental or ad-hoc).

The lack of communication with the top of the hierarchy in the context of an inconsequence of the strategic decisions constitutes the most frequent premise to the evolution towards the bureaucracy manager.



The business administrator (the collaborator, the counsellor) can be, on a long-term, the most performing

and stable second line manager, generally having a complementary education with the top manager; his role is to put into practice the superior manager's ideas and to valorise in an efficient way his actions.

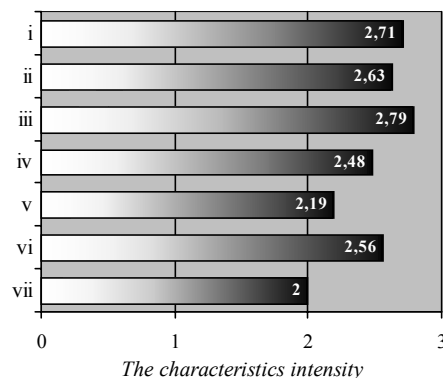
Similarly, through competency, equilibrium and interpersonal connections system of the concertmaster, he is different from him because of his permanent preoccupation and implication in the increase of the performances of the company.

He justifies the subordination towards the top-manager based on the priorities generated by the difference in the specialization and not in the differences in the competencies, considering himself more as a partner, than as an executor. He is not a direct competitor of that one, the eventual authority conflicts being generated because of ignoring his opinions in the strategic decision elaboration.

He has the same partnership relations towards the hieratical subordinates, being professionally and loyal to the company.

Regarding the personal motivation, he is reported to the general results of the company appreciated in a multi-criteria perspective.

The team captain (the project manager) manifests the highest flexibility in the organizational structures, being

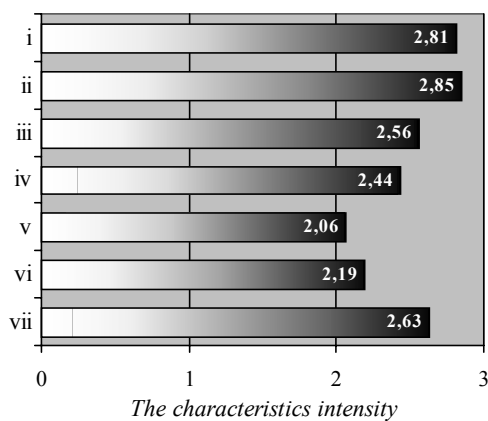


capable to lead a department, division or a program or project.

Adept of the principle that the performances of the company are determined priority by the sum of the performances of the component entities, he is firstly preoccupied by the capacity of realization of the standards of his own sub-system of his subordinates, being an individualist manager.

The loyalty towards the company is conditioned by his permanent motivation; in other case he is willing to value the achievements portfolio outside the system. A consistent and on a long term motivation can be the perspective of his permanency in the superior managers category or the possibility to gain this quality in a company associated with the group.

Being correct and cooperating with the superior manager, communication and the personal example are the most important in the relationships with the subordinates, managing with the same ability the whole connections system necessary for achieving the goals (formal – informal, permanent – temporary, administrative – functional etc.).



Much more significant than the simple illustration of the specific behavioral profiles of the top and middle managers can be the definition of *the optimal*, or at least acceptable, *tandem* reported to the role the two representatives of the managerial structures have in accomplishing the general objectives of each company⁽¹⁾.

Starting from the previously given information, a first approach might come from the maximization of the common score, obtained from the statistical research mentioned above.

	Entrepreneur	Commandant	Conductor	Administrator	Coach
	16,57	16,43	17,25	12,92	14,96
Second - 17,28	33,85	33,71	34,53	30,20	32,24
Concertmaster - 17,29	33,86	33,72	34,54	30,21	32,25
Business	33,93	33,79	34,61	30,28	32,32
Administrator - 17,36					
Team Captain (Project Manager) - 17,57	34,14	34,00	34,82	30,49	32,53

By accepting this hypothesis we should come to the conclusion that the most appropriate pair would be the one formed by the conductor style top-manager and a team captain (project manager) middle manager.

The cognitive valences of such a partnership cannot be ignored. The individual values are completed by the common effort of obtaining performance (specific to the conductor top-manager) and by the performing spirit based mainly on competency and the middle manager adaptability (team leader or project manager) to the standards imposed by the organizational leader. It is obvious that such a conclusion leads to some uncertainties:

- Prior accepting the idea that the most efficient managers, under a quantitative perspective, are the Concertmaster (from top-managers perspective), respectively the Team Captain (Project Manager), as measurement of middle-level manager;

- The attributes on which the qualities of the two categories of managers were evaluated to be maximum;
- A series of individual characteristics are not found in both categories of appreciations, this being the reason that some of the specifications of the two management categories can induce an overweighted proportion of those qualities.

Because of these reasons, we tried a revision of statistic results, starting from characteristics in both management categories, where we used a range of tools, like setting the same score to the interest for results, respectively for efficiency (specific for top-managers), as well as notions of efficacious spirit (specific for middle-managers). We considered the same way the attribute regarding the interest in the people (specific for top-managers) and the respect for the subordinates (specific for middle-managers).

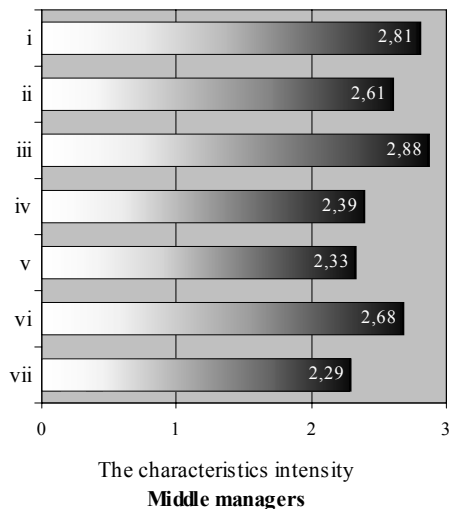
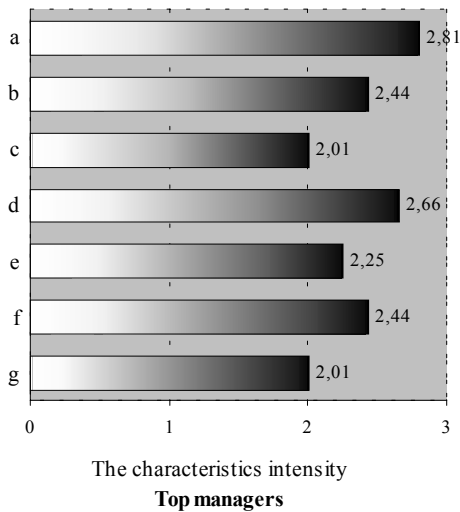
	Entrepreneur	Commandant	Conductor	Administrator	Coach
	12,16	11,73	12,54	9,86	10,9
Second - 10,80	22,96	22,53	23,34	20,66	21,70
Concertmaster - 10,64	22,80	22,37	23,18	20,50	21,54
Business	22,61	22,18	22,99	20,31	21,35
Administrator - 10,45					
Team Captain (Project Manager) - 11,01	23,17	22,74	23,55	20,87	21,91

The facts presented till now can be resumed with the specifications that the dominant position of the top-manager, Concertmaster type, continues to determine the classification and the discriminating localization of the same middle-manager (Team Captain, Project Manager) is not able to modify the classification.

More, we have to accept the fact that a series of management attributes, important in the context of the hierarchical position of the persons, were by-passed.

Because of these reasons, we consider that it would be necessary an extension of the initial study, starting from the statements of the in-field specialists, related to the

“ideal” profile of the two categories, based on the same characteristics we used on the profiles described above. Such an approach led to the following two standard profiles:



In this situation, the compatibility between the two manager categories can be determined with the following formula of squared standard deviation:

$$\min \sigma = \sqrt{\frac{\sum_i^n \left(\frac{x_i - x_s}{2} \right)^2}{n} + \frac{\sum_j^m (x_j - x_s)^2}{m}}$$

where:

\bar{x}_i is the mean of common characteristics of top-managers ($x_{i,t}$) and middle managers ($x_{i,m}$):

$$x_i = \frac{x_{i,t} + x_{i,m}}{2};$$

x_j are the characteristics specific for the two types of managers;

x_s is the standard characteristic of “ideal” manager.

The results are presented below:

	Entrepreneur	Commandant	Conductor	Administrator	Coach
Second	0,468	0,140	0,513	0,661	0,515
Concertmaster	0,418	0,199	0,446	0,676	0,470
Business Administrator	0,393	0,290	0,468	0,708	0,483
Team Captain (Project Manager)	0,433	0,229	0,481	0,686	0,448

It can be observed that we deal with adversity of management tandem, in which the specialization of the *Business Administrator* does not imply an authoritarian management system like the *Entrepreneur*, who makes a “team” also with an subordinate like *Concertmaster*, who’s loyalty to the company is appreciated by the leader, who is usually also the owner of the business he leads.

The most efficient combination seems to be the one between the *Commandant* and the *Second*, and this is not only because of the names (which were selected by the author mainly intuitive than on a quantitative measure), but mostly because of the complementary characteristics and also because of the closeness of the two models to the standard profiles.

Loyalty to organization and its authority makes the *Concertmaster* an important contributor to the *Conductor*, both recording above mean qualifications under the professional experience. Close to the *Conductor* in the terms of competence level is also the *Business Administrator*, whose authority is able to overcome the drawbacks of this top-manager.

The high level of standard deviation (for every middle-manager) confirms the inabilities of the *Administrator* as superior manager, even if the dimension of the characteristics specific for *Second*, respectively *Concertmaster*, indicates a certain level of compatibility with this profile.

Interesting is the tandem *Coach-Project Manager*, in which not the dominant characteristics of the last one (performance spirit, competence) justify the configuration of the management team, but the surplus of authority and the adaptability to the extreme challenges, made for compensating the approach way of the potential risks specific for organization leader.

The above considerations represent, mainly, an illustrative model of compatibility analysis between the two managers' categories, the author considering that a in-depth research in the field, at least in the following directions, is more than necessary:

- Realization of a statistic poll for defining the standard profiles of the two management categories discussed above, the examples presented here being obtained ad-hoc, with a small number of managers

being questioned in a meeting of Businessmen from Romania Association;

- The analysis of the possibility of creation of a hierarchy of characteristics of the managers' profiles and, eventually, setting some percentage (importance coefficients) associated to each characteristics;
- Rebuilding the statistic research on which the manager profiles used in this paper were created, for assuring the compatibility in time of the analyzed information.

Note

⁽¹⁾ A plastic approach of the subject, suggested by one of the leaders of management in business environment, separates the role of the two categories of managers, starting from the maximizing of the triangle area ($a = b$

$\times I/2$), assimilated to the organizational objectives. In such an approach, the role of top-manager is to develop the height parameter, where the role of middle-manager is to have as objective the lengthening of the base.

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The Regime of Contracts under Execution within the Insolvency Procedure



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Abstract. According to the Romanian law the debtor that faces financial difficulties of a certain extent can be the object of the insolvency procedure, regulated by Law no. 85/2006 concerning the insolvency procedure. Because the insolvent debtor is no longer trustworthy to its contractual partners and cannot execute the assumed obligations, there is a risk that these contracts cease, or the services that are incumbent on contractual parties are not executed. This is why, it is very important to know within the insolvency procedure and, especially during the judicial reorganization period, what will be the treatment of contracts concluded prior to the opening of this procedure and still not executed, the so-called “contracts under execution”. Also, after clarifying the concept of contract under execution, it is important to establish who has the right to opt between their continuation, or their cancellation. On the other hand, there are presented the special rules provided by Law no. 85/2006 for some categories of contracts concluded prior to the opening of the insolvency procedure, such as: labor, lease, commission contracts, master of netting agreement or contracts concluded *intuitu personae* or by a debtor that is the owner of a leased building, etc.

Key words: contracts under execution; judicial reorganization; option right; labor contract; lease contract; commission contract; master of netting agreement; contract concluded *intuitu personae* by an insolvent debtor by a debtor that is the owner of a leased building.



In Romanian law, the debtor – merchant or not –, when faced with financial difficulties of a certain extent, can be the object of the insolvency procedure, regulated by Law no. 85/2006 concerning the insolvency procedure⁽¹⁾.

Naturally, at the moment of opening the insolvency procedure, the debtor is already part of a multitude of contracts concluded prior to its opening, and still not entirely or substantially executed.

Because the insolvent debtor is no longer trustworthy to its contractual partners and cannot execute the assumed obligations according to common law obligations, there is

a risk that these contracts cease, or the services that are incumbent on contractual parties are not executed. Thus, the cessation of contracts concluded prior to opening the insolvency procedure can be made either through cancellation or annulment by one of the parties. On the contrary, the non-execution of obligations by the co-contracting party intervenes by way of invoking the exception of contract’s non-execution.

This is why, it is very important to know within the insolvency procedure what will be the treatment of contracts concluded prior to the opening of this procedure and still

not executed, the so-called “contracts under execution”. The knowledge of this judicial regime is important especially in case of judicial reorganization of the insolvent debtor, because according to the solution chosen, both parties (insolvent debtor and, respectively, its contractual partners) could have improved or have worsen their situation. Thus, if during the period of judicial reorganization the continuation of the contracts under execution is allowed, then the insolvent debtor has greater chances to recover and thus to execute the obligations assumed towards its contractual partners. If, however, the continuation of these contracts is not allowed, then the debtor’s recovery could not be possible and its partners could not obtain the fulfillment of their debt rights by way of execution in kind. On the other hand, it is true that some of the insolvent debtor’s co-contracting parties could be interested in ceasing their contractual relations with a partner whose situation is uncertain and who has not executed its contractual obligations.

Following, we will try to clarify the concept of contract under execution (1), who has the right to decide the future of these contracts (2) and what are the special rules stipulated by Law no. 85/2006 for some categories of contracts (3).

1. Contract under execution – conceptual delimitations

In order to explain the concept of contract under execution we have to refer to contracts with successive execution as well as to those with momentary execution under the condition that they have not been totally or substantially executed.

In this context, the words of art. 86 of Law no. 86/2006 refers to „*any contract, unexpired rentals or other long-term contracts, as long as these contracts will not have been totally or substantially executed by all the parties involved*”.

Thus, the legal text takes into account the category of contracts with successive execution, but we consider that contracts with momentary execution – *uno actu* – cannot be excluded either.

As a consequence, the contracts that were totally executed at the moment of the opening of the insolvency procedure and those substantially executed are obviously excluded from the application of the above-mentioned provision. By substantially executed contracts we understand those agreements that produced their essential and characteristic effects before the opening of the insolvency procedure although some obligations generated by the contract have not yet been executed.

Equally, the contracts repealed prior to the opening procedure either by cancellation or by annulment are

excluded from the application of the above-mentioned text. Obviously, these contracts cannot be considered under execution as they have already been ceased.

Insofar as contracts with momentary (*uno actu*) execution are concerned, they raise difficulties in establishing the obligations whose achievement makes the contract to be “under execution” and thus not executed, as well as the contracting party from which this non-execution has to come from. For this reason, the law expressly regulates the situation of certain contracts in terms of qualifying them as being under execution and in terms of exercising the right to choose between maintaining or denouncing it.

Unlike the solution adopted by the French jurisprudence⁽²⁾, art. 86 par. 4 of Law no. 86/2006 expressly stipulates that sale contract of a real estate with the reserve of ownership right in favour of the buyer until the full payment of the price is considered integrally executed by the vendor. Thus, this contract is not included in the category of contracts under execution and it is not the object of the option right regulated by art. 86 par. 1st. of the law.

In respect to this provision, it has to be mentioned that the legislator’s expression does not lack criticism as long as art. 86 par. 4 of the law refers to the vendor of a real estate who “retained the ownership right up to the full payment of the sale’s price”. As a consequence, from the legal provision cited we could understand that it is about the vendor who retained the proof document of the property right until the buyer has made the payment of the price. However, this situation does not produce any legal effects in regards to the qualification of the sale-purchasing contract as being under execution, because what is decisive for this assessment is the transfer of the ownership rights. As a consequence, alongside with other authors⁽³⁾, we consider that it is only the legislator’s inadvertence, which in fact took into account the sale-purchasing contracts of real estate where the property right is deferred until the payment of the price. Let us remember that, in this context, the sale-purchasing contract is a consensual act. Consequently, the transfer of the ownership right over the sold good is achieved by the simple agreement of the parties even if the good has not been handed over or the price has not been paid yet (art. 971 and art. 1295 civ.c). Or, within the sale-purchasing contracts of real estate with the reserve of the ownership right in favour of the vendor, the contracting parties agree, from the very moment their willing agreement was reached, to postpone the execution of their specific obligations until a future date (the transfer of the ownership right and the payment of the price, respectively). As a consequence, we have to understand that the deferral of the transfer of the ownership right from the vendor to the buyer affects only the execution of the

contract and not the validity of the operation itself. Moreover, the handing over of the document ascertaining the sale has no relevance on the transfer of the property right. In principle, the law imposes the writing of this document as a necessary formality in order to ensure the act's opposability towards third parties, and not to measure the validity of the parties' agreement⁽⁴⁾. This is how, through the effect of law, such a sale-purchasing contract is considered integrally executed at the opening procedure date so that it is excluded from the application of provisions of art. 86 par. 1 of Law no. 85/2006.

Unlike this situation, art. 87 of Law no. 85/2006 stipulates exactly the opposite solution for sale-purchasing contracts having as object movable goods.

As an example of contracts with successive execution, Law no. 85/2006 regulates the credit and supply contracts respectively.

Regarding the credit contracts, they are considered as being under execution if the amounts have not been fully given to the debtor before the opening of the procedure⁽⁵⁾. Moreover, according to art. 86 par. 3 of the law, during the observation period and with the co-contracting parties' agreement, the judicial administrator/liquidator will be able to maintain the credit contracts and to modify their clauses so that they ensure the equivalence of the future performances of the debtor. The modification of the credit contracts' clauses is made with the approval of the creditors' committee, which will ascertain whether they are to the benefit of the debtor as well as of the creditors.

If it is decided to maintain a contract that stipulates periodic payments from the debtor, the judicial administrator/liquidator will not be liable to make outstanding payments for the periods prior to the opening of the procedure. According to art. 86 par. 7 of the law, such payments can be recovered through claims against the debtor.

For supply contracts, art. 38 of Law no. 86/2006 imposes several derogations meant to facilitate the debtor's recovery. Thus, it is stipulated that, if the debtor is a captive consumer⁽⁶⁾, the suppliers of electricity, gas, etc. necessary to continue the debtor's activity, cannot change, refuse or temporarily interrupt the supply of these services to the debtor. These interdictions last during the observation and judicial reorganization procedure period, even if there are remaining payments. But, at the supplier's request, according to art. 104 of the law, the syndic judge can oblige the debtor to lodge a bank security of up to 30% of the cost of the services supplied and not paid after the opening of the procedure.

Also, in order to complete the picture of the judicial regime of contracts under execution it is interesting to see what will be the solution if such an agreement contains a "*de jure*" cancellation or annulment clause of the contract

for insolvency of any of the parties.

As a principle, the existence of such a clause gives the insolvent debtor's co-contracting party the right to request unconditioned annulment of the contract as the opening of the insolvency procedure signifies a non-execution of contractual obligations.

However, the majority of legislations opted for the solution of ongoing contract even taking the risk of added uncertainty in commercial relations. Thus, in order to enhance the debtor's chances of recovery, the annulment or the cancellation clauses are considered repealed and the contract continues even against the insolvent debtor's co-contracting party will.

For instance, the French legislation expressly excludes such clauses and declares them non-opposable against the administrator.⁽⁷⁾ However, Romanian law does not expressly stipulate the nullity of the annulment or cancellation clauses of the contract, in the case of opening the insolvency procedure. But, these clauses should be considered void because they break the imperative provisions of art. 86 of Law no. 85/2006.⁽⁸⁾

2. The right to opt between maintaining or denouncing contracts under execution

By exception from the common law of obligations, most of the modern legislations restrict the categories of persons who can claim the execution or the renunciation of a contract concluded with a partner becoming insolvent. This limitation is explained by the legislator's concern to favour the debtor's recovery. As a consequence, the co-contracting parties of an insolvent debtor cannot claim the annulment or the cancellation of the contract for infringement or non-execution of contractual obligations.

The Romanian law has itself similar provisions for this situation. Thus, according to art. 86 of Law no. 85/2006, the only person who has the right to appreciate whether a contract is or is not substantially executed, and to opt between maintaining or denouncing it, is the judicial administrator/liquidator. But based on to art. 21 par. 2 of the law, this option can be contested at the syndic judge.⁽⁹⁾

Also, according to the Romanian law the option right of the judicial administrator/liquidator does not have to be exerted within a specific time period and by observing a specific form. This is why, we have to admit that the option for maintaining a contract under execution can be either express or tacit (when it occurs from maintaining the contract's execution or from not declaring its denunciation).

However, the legislator does not favour the insolvent debtor only, but it equally attempts to protect its co-contracting parties. Thus, the debtor's co-contracting parties can summon the judicial administrator/liquidator

to opt between maintaining or denouncing the contract and this one has to respond within 30 days (art. 86 par.1st of the law). The non-observance of this response deadline is sanctioned by contract denunciation and consequently its execution cannot be ever claimed.

On the other hand, we will note that the option right of the administrator is not discretionary and it has to be exerted only within the limits imposed by law.

Indeed, unlike other legislations in the field, such as the French one, the Romanian law imposes the criterion according to which the administrator can opt between maintaining or denouncing the contracts under execution.

Thus, according to art. 86 par.1 of the law, the exercise of option right is aimed to maximize the value of the debtor's wealth. In other words, the importance of the contract for the continuation of the debtor's activity is assessed. Equally, financial issues have to be taken into account.

Thus, if it is opted to maintain the contract, the judicial administrator has to ensure that the debtor will be able to execute his existent or new obligations. If, however, the contract is denounced, the other party may bring an action for damages against the debtor. Under this latter hypothesis, the co-contracting party has the right to obtain damages compensation because the ceasing of the contract is the consequence of the guilty non-execution by the debtor. Moreover, damages have their origin in the contract concluded prior to the opening of insolvency procedure and denounced by the judicial administrator/liquidator (art. 86 par. 2 of Law no. 85/2006).

3. Special rules applied to some categories of contracts

Similarly to the majority of modern legislations, Law no. 85/2006 sets special rules for some categories of contracts under execution, which cannot be the object of the option right of the administrator/liquidator.

The most important exception from the regime of contracts under execution is represented by labor contracts. The reason of such an exception is the particular relation between employee and employer set by legislative provisions belonging to labor law and the legislator's intention to avoid that the law of collective procedures affects the employees' protection.

The Romanian law devotes derogatory rules from the regime of contracts under execution for the following categories of contracts:

a) Labor contracts

Unlike other legislations that expressly limit the administrator's right to annul the labor contracts⁽¹⁰⁾, Law no. 85/2006 only stipulates that they can be denounced if

the legal terms regarding the notice period are observed (art. 86 par. 5). Also, in case of bankruptcy, either in simplified or general procedure, law expressly allows the liquidator to annul the individual labor contracts of the debtor's employees without proceeding to the collective dismissal stipulated by the Labor Code. But the judicial liquidator has to observe, according to art. 86 par. 6 of Law no. 85/2006, the notice period of 15 working days⁽¹¹⁾.

b) Leasing contracts

If, within such contracts, the debtor has the quality of lessee, then the judicial administrator/ liquidator can denounce them only by observing the legal notice period (art. 86 alin.5 of Law no. 85/2006).

c) Contracts regarding movable goods in the process of delivery

Regarding these contracts, art. 87 of Law no. 85/2006 regulates the situation in which the vendor has reserved the property over the movable good sold to the debtor.

Thus, if the goods have not yet reached the debtor, and no other persons have acquired any right over it, the vendor can take them back under the condition of reimbursing the debtor for any pre-payment he has done.

If the vendor does not prevail himself of his right and accepts to deliver the goods he will record his debt regarding the price within the procedure.

If the judicial administrator/liquidator is the one opting for maintaining the contract and the goods' delivery, he will have to pay the seller its entire price.

d) Contracts included within a master of netting⁽¹²⁾ agreement that regards merchandises and value titles listed on the stock exchange

According to art. 88 of Law no. 85/2006, within such contracts, a bilateral setoff operation is made and the resulting difference has one of the following possible destinations. If it is a positive difference (creditor) – it is paid to the debtor by increasing his patrimony; if it is a negative difference, meaning an obligation of the debtor's patrimony, it will be recorded in the debts' table that will be paid within the procedure.

e) Commission contracts

If the debtor has the quality of a commission agent in such contracts, then according to art. 89 of Law no. 85/2006, the principal can opt between retrieving the merchandises or their representative titles or recording the debts representing their value within the procedure.

f) Contracts that allow the vindication of some of the goods owned by the debtor

Art. 90 par.1st of Law no. 85/2006 expressly regulates

the category of consignment contracts. The rules enforced by this legal provision can, however, be applied to any contract within which the debtor has goods that are other persons' property.

For such contracts, the simplest hypothesis is when the debtor possesses the good. In this case, the owner can retrieve the good unless the debtor has no guarantee right over it (such as a pledge or possessory lien right).⁽¹³⁾

If the debtor, however, does not have the possession of the good and cannot retrieve it from the present possessor, the owner has the right to record his debt within the procedure (art. 90 of the law).

g) Contracts where the debtor is the owner of a leased building

With regard to these contracts, art. 91 of the law allows their cancellation as a result of the opening of the insolvency procedure towards the lessee only if the rent is inferior to the one usually practiced on the market.

Moreover, by difference of the common rules regarding the lease, the judicial administrator/ liquidator has the right to refuse the carrying out of any services owed by the lessor to the lessee. Under this hypothesis, the lessee may choose between contract cancellation and its continuation. If the lessee chooses to cancel the contract and evacuate the building then he can go against the owner of the building and record his debt within the insolvency procedure. If, however, the lessee chooses to continue the leasing contract then he has the right to deduct the value of the services owed by the owner (lessor)

from the rent, without having the opportunity to record his debt within the procedure.

h) Contracts concluded intuitu personae by the debtor

Regarding this category of contracts, in theory, they could not be continued because through their specificity they refer to the debtor's obligation to supply some strictly personal or specialized services that cannot be substituted. However, the specialized legislation and practice do not have a unitary position in this respect. Thus, although their existence is recognized, the French legislation does not organize within the insolvency procedure a special regime for this category of contracts. Moreover, the French jurisprudence has constantly refused to recognize their regime.⁽¹⁴⁾

On the contrary, according to art. 92 of the Romanian law (Law no. 85/2006), the judicial administrator/ liquidator is allowed to denounce the contracts concluded *intuitu personae* by the debtor unless the creditor accepts that another person named by the administrator executes the obligation assumed by the debtor.

Finally, art. 93 of Law no. 85/2006 stipulates special rules for the case when the debtor is partner/shareholder of a company or member of a cooperative society or of a group of economic interest.

Under these hypotheses, the judicial administrator/ liquidator can opt between requesting the liquidation of debtor's rights in the company, cooperative society or group of economic interest, or to suggest, in agreement with the other partners, that the debtor be kept as shareholder.

Notes

⁽¹⁾ Published in the Romanian Official Monitor, Part I, no. 944/22.11.2006; for a brief presentation of the Law concerning the insolvency procedure, as well as concerning the succession of normative acts in terms of collective procedures in Romania after 1990, see C. Lefter, A.M. Lupulescu, The Closing of the Insolvency Procedure, in the Journal of Theoretical and Applied Economics, no. 12 (517), December 2007

⁽²⁾ It considers the sale-purchase contract with the reserve of the ownership right as a contract under execution because, at the date of the opening procedure, neither the transfer of the ownership right, nor the payment of the price were achieved –

in this respect, see for instance, Cass com. the decision on February 1st 2000, Dalloz 2000, p. 144.

⁽³⁾ See I.Adam, C.N. Savu, Legea procedurii insolvenței – Comentarii și explicații, Edition C.H. Beck, Bucharest, 2006, pp. 538-540.

⁽⁴⁾ As an exception, for sale-purchasing contracts having as object the land, the genuine form of the document is required by law for the validity of judicial act itself (*ad validitatem*).

⁽⁵⁾ Such a contract cannot be considered integrally or substantially executed as long as the characteristic performance is constituted by the remittance of the amount. In this respect the French case

law constantly agreed – see for instance Cass.com., the decision on April 13th 1999, in *Juris-classeur périodique* (JCP) E 1999, p. 738.

- (6) According to art.3 pct.32 of Law no. 85/2006 “by captive consumer it is understood the consumer who, for technical, economic or regulatory reasons cannot choose the supplier”.
- (7) Art. L 621-28 par.6 of French Commercial Code.
- (8) See also I.Turcu, *Tratat de insolvență*, Editura C.H.Beck, Bucharest, 2006, p. 451.
- (9) The mentioned text of law institutes the possibility for the debtor-natural person, for the special administrator of the debtor legal person, for any of the creditors as well as for any other interested person to contest against the measures taken by the judicial administrator/liquidator within 5 days’ period from the handing in of its report which comprises the contested measure.
- (10) For instance the French legislation according to art. L. 621-28 par. 7 of the French Commercial Code.
- (11) In this respect, in the Romanian law, the dismissal for reasons that are not connected to the person of the employee is regulated by art. 65-72 of Labor Code. Thus, according to the new form of art. 65, the dismissal for reasons that are not connected to the person of the employee is determined by the effective elimination (real and serious) of the place of employment occupied by him. Dismissal for reasons that are not connected to the person of the employee may be individual, when it affects less than five employees, or collective. Because collective dismissal is susceptible to affect a larger number of employees, the law imposes a series of obligations for the employer and a strict procedure. The collective dismissal procedure is provided

by art. 69-71 of the Labor Code and it basically assumes two steps. The first step concerns the employer’s information and his consultation with the unions and the employees’ representatives, while the second step takes place once the employer took the collective dismissal decision. This step concerns the notification of the collective procedure to the territorial labor inspectorate and to the territorial labor force employment agency – see for more details T. Ștefănescu, *Tratat de dreptul muncii*, Editura Wolters Kluwer, Bucharest, 2007, p. 366 and the following. After having performed this procedure, the employer can proceed with the collective dismissal procedure within 30 days. Also, according to art. 73 par. 1st of the Labor Code, the dismissed employee has the right to a notice period that cannot be shorter than 15 working days. As a consequence, it has to be considered that the text of art. 86 par. 5 of Law no. 85/2006 refers to the dismissal for reasons that are not connected to the person of the employee and affecting less than 5 employees. This dismissal takes place during the observation period or within the judicial reorganization. On the contrary, art. 86 par. 6 excepts collective dismissals within the bankruptcy procedure from the procedure stipulated by art. 69-71 of the Labor Code, but maintains the dismissed employee’s right to a notice period of 15 working days.

- (12) The “master of netting agreement” has the meaning given by art. 3 point. 34 of Law no. 85/2006.
- (13) See I. Turcu, quoted, p. 459.
- (14) Y. Guyon, *Droit des affaires. Entreprises en difficulté – Redressement judiciaire – Faillite*, vol.2, 4th edition, Editura Economica, Paris, 1993, p. 234.

Major Trends in the Development of the Marketing Information System



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Abstract. *Marketing data base is a very useful instrument through which you can use the marketing information from the internal system of the firm and any other information from the outside environment in order to reach the marketing objectives and functions.*

The development of a modern marketing information system using the systems of the unique data bases offer the possibility of stocking and using of an incredible volume of marketing information of numerical nature, text, graphic, sounds, voice and video images, simple and easy to access through automatic procedures delivered by the host systems of data bases administration (SGBD), locally or at distance.

Key words: marketing information system; internal and external environment; informational data flows.



Introduction

In order to work efficiently with the data bases of marketing, you must dispose of relevant, current, available and truthful information necessary for the consolidation of the marketing decisions.

In the development of the marketing information system, one of the most important and difficult stages is the critical analysis of the informational system of marketing with the identification of the informational sources, of the informational flows and links and the projection of the new informational system by defining the specific software instruments which may create and update continuously the data bases with pertinent, truthful and available information and which may serve optimally the requirements of the management informational system of marketing.

The lack of a performant marketing information system and an updated at the level of modern instruments offered by the technology of information, of the multimedia technology and of communications determine several times the specialists to declare themselves unsatisfied of the available information, either they do not have access or they do not know where to find the most important information within the enterprise or in the external environment of marketing, they obtain too much information that they cannot use and too little that is truly necessary for them, they obtain information too late or they doubt of its correctness. The organisation of data in unique data bases offers the possibility of reducing the redundancy and the bureaucratic character of the

information processing, minimize the cost of data processing, offer the consult of the same sources of information by all the members of the group and the almost instantaneous access to the information that made the object of the data bases updating, reducing the time of response, ensures stocking support of a volume practically unlimited of information and offers facilities of fast re-finding and selection following multiple, heterogeneous and creative criteria, ensures high protection and safety to the information.

1. The informational requirements and the instruments used

The management of many enterprises was not yet adapted to the informational requirements in nowadays, which may allow them to carry out some efficient activities of marketing. The need of marketing information is more acute as ever, following some tendencies manifested at the market level (Kotler, 1997, p. 174) by passing:

- *From a local marketing to a global one* as the enterprises extend their markets and area of action;
- *From the client's needs to his/her desires.* As the incomes of the buyers increase, the offer of to the competitors is richer, they become more and more cautious in the selection of the bought goods.
- *From the competition in the price sphere to the competition non-based on price.* As the sellers use more and more brands, the differentiation of products, the advertisement and the sales promotion, they need information with respect to these instruments of marketing;
- *From the hardware voluminous and rudimentary components to the new informational technologies.* During the last years, we have witnessed the apparition of the computer, of the micro-films, cable television, Xeroxes, faxes, radio cassettes, video apparatus, video disks and other products which have revolutionized the informational process.

The marketing activity of a modern enterprise is closely related to the information came from the *internal and external environment*, which represents the main source of information of the data bases of marketing.

The environment where the enterprises function holds a great quantity of valuable information (see figure 1). Most often, this information do not end in the possession of the marketing specialists in due time, which makes that the taken decisions to have a higher degree of risk and incertitude.

Depending on the environments with which the firm interacts frequently, the information has a value characterised through: specificity, truthfulness, freshness, availability, etc. The information practically comes from

three environments: macro-environment, micro-environment and internal environment or the enterprise itself.

The performances of the enterprises' informational systems of marketing depend on the manner of which it manages to use this information. If the data offered by the macro-environment are only general, the other two environments offer information of great value to the marketing department, which may be used in taking some decisions and elaborating some strategies.

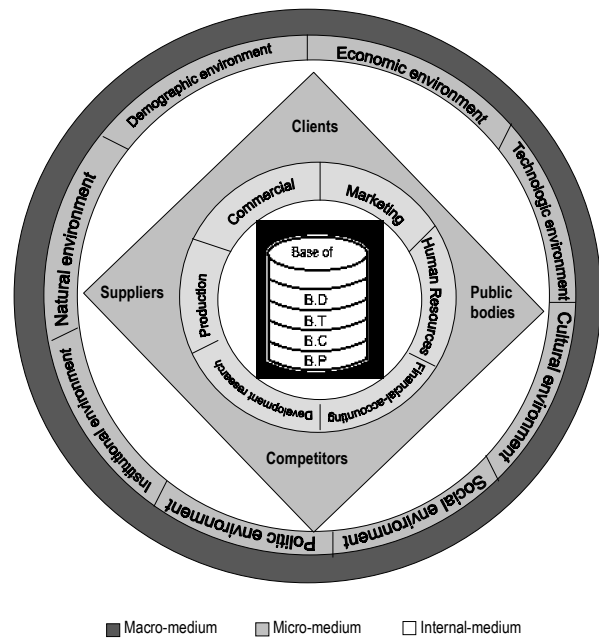


Figure 1. In-flow data source in the marketing data bases

The data sources and the informational flows afferent to a data base of marketing may be structured as it follows (see figure 2):

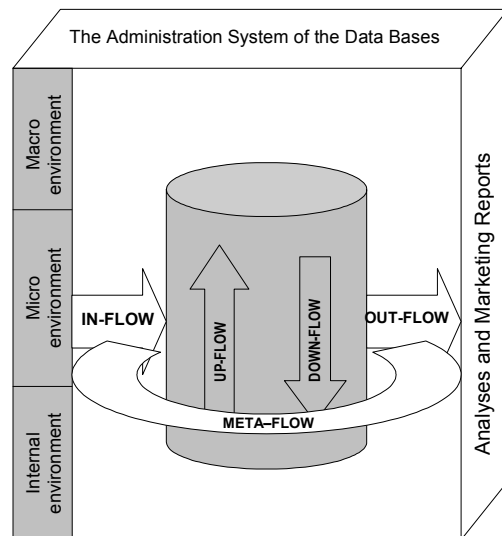


Figure 2. The informational flows afferent to the data base

- *The in-flow* represents the entrance and integration source in data bases.

For the data came from the transactional applications, it is firstly raised the issue of generating, selection, extract and introduction of these in the data base.

The localisation of the information on the environment components and the establishment of the specific sources of obtaining them involves the evaluation of the information with respect to their relevance for a certain application developed on the respective data base.

- *the digital form* used in the computational systems where the information is represented under the form of a sequence of binary values (informational systems of administration, automatic system of processing the administration orders of the sales, of telemarketing, automatic systems of marketing researches, data bases of the suppliers, of the clients, competitors, data bases of the firms, public data bases, knowledge bases, etc.).
- *The up-flow* is represented by the multitude of processes through which is added informational value to the data.
- *The down-flow* ensures the optimisation of the access to the structure of the data base.
- *The out-flow* represents the multitudes of data exits towards the users.
- *The meta-flow*

2. The structure of the marketing data bases

The in-data from the internal and external marketing environment (sales, supplies, orders, cashings, payments, clients, suppliers, competitors, products, prices etc.) are organised in distributed, relational and orientated towards the object data bases. The tables represent the objects of the data base which stock the data. A table consists of *fields*, which are columns to which is attributed a name, each of them containing a data type and a well-mentioned dimension. The multitude of fields forms *the structure* of the data base. The content of the data base is formed of the multitude of *records*, represented by the table's lines.

A standard structure of a marketing data base must allow the administration of all the data that refer to: products/services, prices, distribution, promotion, suppliers, buyers/clients, the sale forces, to the processes of supply, stocking, stocking, sale, invoicing, etc.

The representative data tables contained in a standard structure of a marketing data base, organised at the internal level, are:

■ The table Product/Service

- products, sorting range, brands, physico-chemical and quality attributes and characteristics, packaging;
- the structure of the products' line, the change of the product;
- prices, discounts offered, grouped sales, promotional prices;

- rival products, competitive products, the acceptance degree, the potential of the new product.

■ The table Prices

- the costs, the formation means of the final prices, the differentiation of prices on products lines;
- strategies of prices, seasonal or specific discounts, offered reductions.

■ The table Buyer/Client

- the identification data (address, telephone number, e-mail);
- the acquisition date, the source, quantity, price of sale, bought products;
- the history of buyings and payments (products, quantities, means of payment, changes referring to products, the quantities and frequency of the orders, retards of payments, returns);
- data referring to the contracts for sale (telephones, the direct force of sale, retail dealers, distributors, the banking accounts, the destination address of the buyers, etc.);
- the groups of influence or the decision persons;
- the action domain of the client: local, zone, national level;
- the profile of the annual expenses, motivations and compartmental, segmentary inclinations;
- the client's profile (geodemographic, incomes level, offered facilities, financial data referring to credits, the number of employees, evaluation score of the frequency and values of the acquisitions, grouping and segmentation);
- history of the business contracts (data, type of contract: by phone, by correspondence, personal, results obtained);
- history of the offer demands, the plans referring to the future acquisitions;
- the product use (how the individual products or the products of the rivals are used);
- profile of the satisfaction level of the client;
- preferred methods of contact;
- the distribution channel which is allocated to the client (representative, branch, dealer, etc.).

■ The table Suppliers

- the identification data (address, telephone/fax number, e-mail, person of contact, banking accounts);
- offers of products (sorting range, reference data, attributes, characteristics, facilities);
- the order and the means of honouring it (number, date, products, price, quantity, frequency, time of honouring, franco relation, delivery conditions, arrival date);
- the history of supplies and payments (products, quantities, means of payment, the persons of contact, retards of deliveries, returns, etc.);

- the supplier profile (geodemography, specialisations, financial data, number of employees, grouping and segmentation).
- **The table of the sale forces**
 - name, code, address, other data of classification;
 - history of the sales volume (quantity and value);
 - the area and the allocated clients;
 - the sold products;
 - the received commissions;
 - the sale shares, ordering on categories and the levels of incomes or other statistic data referring to the registered performances.

The same data may also be found in the tables that refer to the dealers, distributors, manufacturers etc.

3. Techniques of accessing the marketing data bases

The access to data is performed over the marketing data base through *query and updating*. The query (re-finding) is complex and involves: visualisation, consultancy, editing out-situations (reports, lists, punctual re-findings), turning over. The update involves the three operations: adding, modification, and erasure of the records from the data collections.

The access to data is realised through orders from the manipulation language of data (LMD) or through specialised query languages which may be included in LMD or may exist as such, depending on the SGBD used. The specialised languages appeared due to the extension of the range of data bases users and involve facilities of

query/ re-finding, simple and friendly, closed to the human manner of work and thinking. The most popular, representative and the only standardized language from the domain of data bases is the *structures query language*. The SQL language ensures direct, “live” access to the data existent in the marketing data bases and is determined of the SGBD used, of the organisation and stocking manner of data, of the folders’ capacity, of the hardware necessities and of the possibility of being integrated in the informational system of the enterprise.

The most facilities of access to the data bases are offered by the administration systems of the data bases completely relational – SGBDR.

Projected initially for the processing of the on-line transactions such as booking of tickets or processing the orders, these systems may perform hundreds of updating on minute, activities realised simultaneously of several operators. The main advantage of the relational systems is that they give the possibility of integrating all the information referring to orders, marketing, sales in a single data base, independently of the nature of the data used.

These systems are expensive, require performant hardware equipments (servers endowed with RISC processors or even mainframe) and there is a strong connection between the structure of the data base, its dimension and the hardware platform.

Depending on the model of logical organisation of the data in BD, of the used SGBD and respectively the hardware and software platforms from the marketing informational systems, a variety of access types to the marketing data base may be identified.

The access types to the marketing data base

Table 1

Type tool	Basic question	Example of question	Example of answer
Query and reporting (SQL)	What happened?	What were the sales for a certain product?	The monthly reports of sales on product.
Analytic processing on-line (OLAP)	What happened and why?	Classify the sales on months, products and chains of stores. To what extent would influence the profit the increase with 10% of the sales in the districts from Moldova?	Monthly sales on products and ordering stores, top, etc. Estimations of the profit.
Informational systems	What I should know at present?	Which is the evolution of the sales on significant clients? What influences the sales of the product X in Bucharest?	Concise reports for decision.
Data mining	What is interesting? What could happen?		Predictive models with factors of influence.

4. The technology client/server

The *technology client/server* is closely related to the technology of the distributed data bases and of the computer networks use.

The architecture client/server is an assembly of three main components: a server, a client and a network which

connects the client computer to the server in order to collaborate for the accomplishment of the tasks.

The client requires to the server query (interrogation) and updating (transactions) services of the data from the data base and receives from this the results.

The server ensures the connection/disconnection of the client to the data base, the access to the stocked data and the protection of the data base.

The technology client/server ensures:

- the development of applications which require *data located on different computers*, in different geographical points. These data may be in compatible formats or in incompatible formats. In the conditions when the majority of the firms have branches, subsidiaries in several points of a country or in several countries, applications as the above ones are very frequent;
- the development of some *interactive applications*, adapted to the demands of the users. They shall use the applications accessing the data from mainframes as easily as the data from the working stations (personal computer PC).
- *the access to the stocked, processed and re-found data volume* of great complexity. These things are indivisible for the user and the presentation form of the results may be understood by all the categories of users.

In conclusion, the purpose of the architecture client/server is to allow the development of the complex applications, which deals with a great volume of data, accessible to all the categories of users, from different computers, situated locally or at distance.

The model client/server allows the repartition of the processings and of the data in the assembly of the marketing informational system, ensuring the optimal exploitation of the hardware resources and its re-dimensioning caused the multiplication, sometimes anarchical, within the enterprises. The technology client/server is therefore synonym with the reasoning of the informational systems but also with the integration of the heterogeneous informational resources existent in enterprises.

The use of the client-server model brings a series of *advantages*:

- offers the possibility to a global system of information;
- ensures the repartition of the calculation power within the informational system, the integration of the existing technologies in the enterprise with the newly bought ones;
- ensures the modularity and the flexibility of the software and hardware components;
- allows the acquirement of an individual high productivity because each user may have access to the information from the marketing data base;
- the required information are obtained in a very short time;
- allows the break of the organisational barriers and their data bases are distributed in several local networks;
- due to the availabilities of access to distance, a user at distance may access the information from the central data base or the distributed local bases;

- increases the adaptability and the enterprise reaction to the changes produced in the environment.

On the grounds of the technology client-server, *the middleware products* occurred and developed, bringing efficient and economic solutions in enterprises, for inoperability issues between informational applications, networks, operation systems and databases.

The middleware instrument is the software component of the system which ensures the connexion between the server Web (from Intranet or Internet) and a marketing data base. Examples of software instruments of middleware type: Oracle WebServer for Oracle, WebSQL for Sybase, EDA/SQL for Focus etc. A middleware instrument responds to the calibration necessities of the systems of information as close as possible to the demands of use.

The most spread middleware product in the world is EDA/SQL (Enterprise Data Access/SQL) realised by Information Builders. To Information Builders, the 20 years of experience in the domain of the support systems of assisting the decisions using the Focus product determined the research teams to project some tools through which may offer the users access to the most varied data bases, from a more and more powerful and performant PC. Therefore, EDA/SQL allows the connection of any application SQL with over 60 data bases, resident on 35 different systems of operation, through 14 different protocols of communication

The enterprises, using a middleware product, integrate a component (tool) in the informational systems, component which ensures the administration of the difficult problems of the *inoperability*. Using EDA/SQL, the enterprises find an answer to the necessity of integrating the new technologies, but also the desire to preserve the current informational context.

The enterprises dispose of an informational park relatively heterogeneous and the working posts are “isolated” from an informational point of view, preventing therefore the entire realisation of the anticipated productivity gains. With EDA/SQL, this barrier is immediately cancelled because the product establishes a strong and transparent connection between any EDA/SQL (Structured Query Language, language used in query, the updating of the data bases) application and the assembly of the informational applications.

The technology client/server allowed the possibility of “informational chaining” of the enterprise. This progress is translated physically through the presence of the computer on all the desks, in all the departments, branches or on site at the sale forces by cabling the majority work posts and by constituting the network which offers the necessary support for the consultancy of the marketing data bases both inside and outside the enterprise.

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Implementation Opportunities of Green Accounting for Activity-Based Costing (ABC) in Romania

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Abstract. *This article refers to implementation opportunities of green accounting for the Activity-Based Costing method. It shows why we choose Activity-Based Costing method and what must be done in this way. Green accounting observes the specific principles of the Activity-Based Costing method. It also represents the advantages and disadvantages of the green accounting into an enterprise in case of Activity-Based Costing implementation. The paper describes the stages we must follow in case of implementation of green accounting alongside Activity-Based Costing method into an enterprise.*

Key words: Green accounting; Activity-Based Costing; implementation steps; environmental cost drivers; environmental activities.

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For defining green accounting or environmental accounting, several aspects have been considered, such as insurance, taxes, regulations and external financial information.

Green accounting or environmental accounting is interlinked with two basic functions of management accounting: planning and data collection, reporting. In the case of planning, green accounting uses prevision analysis to measure future impacts on environment, such as target costing or life cycle method. In the second case, environmental data collection and its reporting to management is based on an efficient analysis of data for substantiating decisions.

Starting from the above-mentioned considerations, the object of green accounting consists mainly in the identification and measuring of raw material costs and

environmentally specific activities and the use of this information for drawing up reports and internal analyses necessary to the company management for making environmental decisions.

The aim of green accounting is the acknowledgement and attempt to identify ways of diminishing the negative effects of activities and systems on the environment.

Observing the basic principles of Activity-Based Costing method (ABC), green accounting completes the terminology and dictionary of terms used by the ABC method. Consequently, terms such as: activity cost driver, process cost driver, direct costs, activity cost, cost object, activity-based management, performance management, value chain, etc. are completed by other terms such as: activity-based costing system, environment cost calculation, environment management system, full

environment cost calculation, green (environmental) accounting, investment management, product life cycle analysis, product life cycle calculation, logistics, pollution prevention, private costs, activity added value, etc.

In conceiving the above-mentioned terms, we have searched for a language that is common for users of activity-based costing method, as well as for other user categories. This language helps to facilitate understanding of new terms or notions used by green accounting for purposes of communication and respecting internal policies.

Why has ABC method (Activity-Base Costing) been chosen?

The answer is very simple. Green accounting which observes ABC method principles helps measure saving costs as a result of reducing raw materials cost during the recycling or reusing period. As a consequence, ABC or ABM method provide that understanding approach and those target areas for considering the opportunities of designing costs of the main environmental activities.

The environmental cost design represents the concept that refers to the design of an environmental target cost-oriented product or constraints, such as the design terms of de-assembling a product.

Recycling design refers to the product design concept that emphasizes the facility of de-assembling and recycling, as well as the end of a product's useful life cycle.

The usefulness and advantages of activity-based costing method can be revealed by green accounting. The application of the ABC method principles is recommended for prompting environment improvement results.

What should be done in this direction?

The things are very simple. The ABC method proceeds to allocate costs to processes and further on to activities. At the activity level, environmental elements must be added. The ABM method uses information provided by the ABC method for making decisions and we must add environmental information for making much more accurate and efficient long term decisions.

So, the ABC method becomes a very efficient tool of management accounting that identifies the real production costs and offers an impetus for improving ongoing processes in the enterprise or even re-engineering that is not necessarily based on traditional accounting systems (which don't reveal the environment costs).

Examining full costing and cost drivers, we can try two versions: cost reduction and abstraction of environment cost drivers. Green accounting favors the abstraction of environment cost drivers, thus avoiding the high full costs and losses as rejections, waste product.

The attempt of green accounting to classify the value yielding or non-value yielding environmental activities is very difficult, if it does not take into account the following suggestions:

- the existing need for clarifying the nature of certain environmental activities and establishing their "client" (e.g. training staff in preventing environmental pollution);
- output measuring must be related to the environmental strategic objectives;
- the use of older documentations or special terms must be done with caution, because the new language used by green accounting can be constructed and understood starting from already existing terms.

Before launching the implementation of green accounting, every manager should ask himself:

How can we adapt a traditional management accounting method or even a more advanced method to green accounting?

How do I begin the implementation? How do I reach the object of implementation?

The answers to the above questions can be synthesized in the itinerary which must be followed for implementing green accounting. The itinerary consists of the following stages:

Stage one. Setting up the objectives of green accounting.

Here is a set of questions asked by company management.

Question one. What is the main objective of green accounting?

Answer: There is no single objective. Among the possible objectives, we can list: identifying, collecting, calculating and analyzing material and energy-related costs; internal reporting and using information about environmental costs; providing other cost-related information in the decision process, with a view to adopting efficient decisions and contributing to environment protection.

Question two. Why did we decide on green accounting?

Answer: The advantages offered by green accounting represent the strong points for its selection.

Question three. What are the advantages and disadvantages of green accounting?

Answer:

Advantages: adopting decisions about the financial performance of the organization and green accounting, providing useful information for reaching cost minimization targets (especially environment) and negative impact on environment, presenting data about costs necessary for estimating the financial impact of such initiatives as:

- *pollution preventing;*
- *designing environment and green accounting improvement;*
- *projection, costs, estimating life cycle in the environment;*
- *product circulation administration from environmental prospective;*
- *supply process from environmental perspective;*
- *the product or producer's liability;*
- *environment-centered management systems;*
- *assessing, testing and reporting performances of environmental activities;*
- *reporting of these performances;*
- *information source for other routine managerial activities such as: product and process design, cost distribution and control, capital budgeting, supply process, price policies, performance evaluation.*

Disadvantages: the implementation of green accounting doesn't represent a guaranty for obtaining financial performance or environment-related performances.

Question four. What are the changes brought about by green accounting at company level?

Answer: Considering the fact that the enterprise is already using the Activity-Based Costing method (ABC) and green accounting respects its specific principles, the changes will not be significant. The problem is to correctly identify environmental costs and to use specific cost drivers for calculating correct production costs and obtaining accurate information necessary for company management.

Question five. Are the final users of the information satisfied by the accuracy of the data provided by green accounting?

Answer: Considering the calculation mode by proper allocation of environmental costs (for each activity) on products using specific environment cost drivers, the obtained information reflects a much more realistic cost. This cost can be used in the environment indicators analysis.

After the company management validates the answers to these questions, they will proceed for the elaboration and communication of an action plan (green accounting project) which is lead by the GA project team. This project will involve the entire enterprise, from workers to management.

Stage two. Setting up the GA project team and project running.

The GA project team (GA – Green Accounting) will be appointed by the company management and will be made up of specialists from the management accounting department and environment specialists. The team project will be made up of five members and a project chief.

Initially, the team will analyze the following matters:

1. Identifying the significant influences of the enterprise on the environment

At this point, the following issues will be carefully analyzed:

- The identification of the enterprise location characteristics from the point of view of its interaction with the environment (identifying highly polluting sources with negative impact on the environment, characteristics of environment performances, etc.);
- The identification the possibilities of implementing green accounting within the enterprise, and consequently an environment management with the certification of the areas that must be improved.

2. Determining the forms of impact on the environment

The following elements of environment analysis can be considered: products, services, activities, processes and technologies. The chart below presents both the environment analysis elements and the identified forms of impact, including action taken as a result of the environment analysis:

Environment analysis elements	Forms of impact on the environment - by means of:	Action taken as a result of the environment analysis
Products Services Activities	<ul style="list-style-type: none"> - discharged rivers; - used underground waters discharged by sewage; - gas emissions in the atmosphere; - vibration noises; - abnormal situations; - other pollution factors. 	<ul style="list-style-type: none"> - controlling impact on the environment; - adapting to legal requirements, according to the legislation in the filed.
Technology	<ul style="list-style-type: none"> - quantity, product nature, its environmental sensitivity; - created/natural/possible incidents and/or accidents; 	<ul style="list-style-type: none"> - controlling the impact on the environment; - current situation; - product's life cycle; - studying product-related ecological aspects and the corresponding interest rate of the clients; - adapting to legal requirements, according to the legislation in the filed.

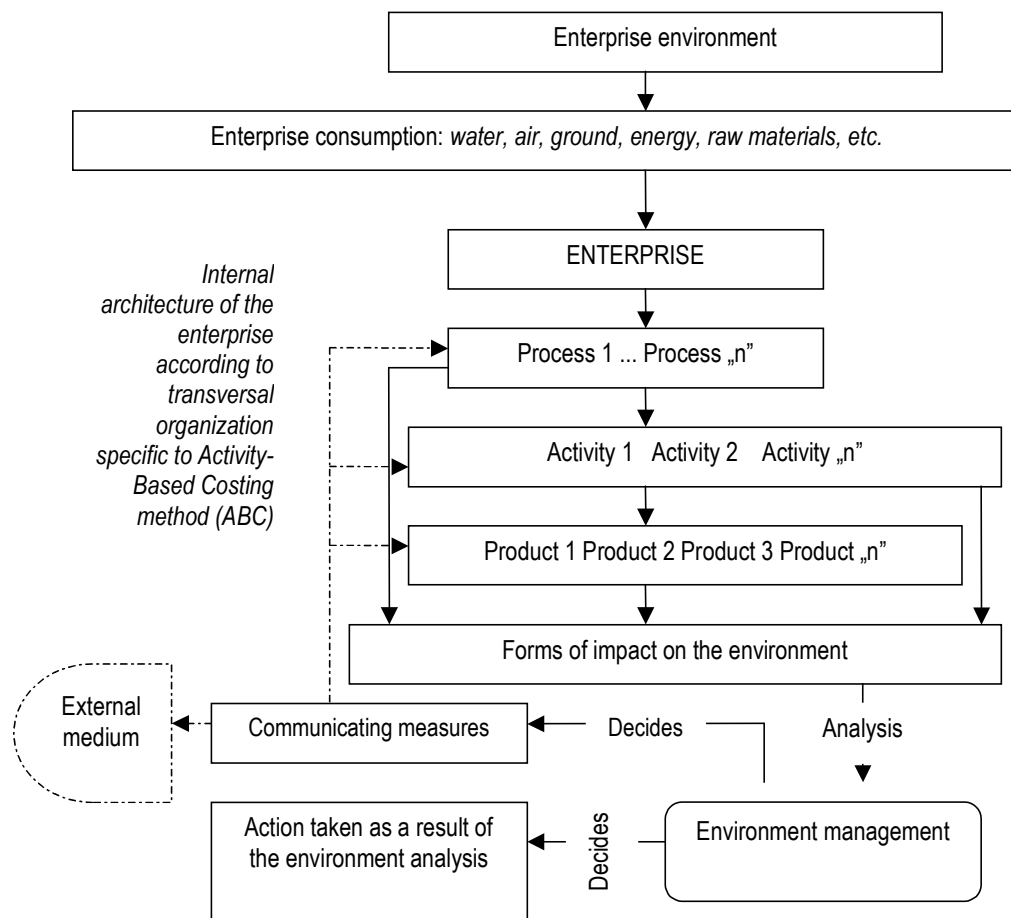


Figure 1. The environmental analysis according to ABC method

3. Definition of the environmental costs

International literature emphasizes several approaches of defining environmental costs. The United States Environmental Protection Agency argues that the definition of environmental costs depends on the degree

in which the enterprise intends to use the respective information.

The United Nations Division for Sustainable Development describes environmental costs as environmental protection costs (emission treatment and

pollution prevention), including waste material costs or investment cost and wasted labor. In this context, waste refers to production inefficiency (added value or non material output).

The next step will consist of questioning the departments or functional services grouped according to processes, and within the processes, the specific environmental activities. A selection technique will be used, meant to reduce the excessive number of specific environmental activities, even a regrouping of these activities into processes. The particularization level of the operations into specific environmental activities must be neither too strengthened, nor too spaced out. Based on questionnaires collected from the enterprise workers, the centralized information will be analyzed by the GA team project. Based on this data, a preliminary dictionary of the most important environment-specific activities will be prepared.

Also information will be collected about allocation units of environment-specific costs (environmental cost drivers). In 1998, Schaltegger and Muller proposed four allocations keys of environmental costs: emission or wastage volume, emission toxicity or wastage treatment (waste products), the impact on environment of treated emissions' volume, the relatively different emissions costs.

At this stage, a list of specific environmental activities could be prepared, as well as other types of documents which the ABC method can provide.

Stage three. Identification of possible difficulties encountered after covering the two stages and seeking future opportunities

In connection with the two aspects, a parallel report will be prepared, focusing on the following matters:

Aspect no. 1. If the two stages proceeded according to plan and no problems occurred.

The action-response: the remaining stages will be covered until the successful implementation of green accounting. Next, the prioritized objectives for the changes necessary to green accounting implementation will be selected. All established objectives will be put

into actions meant to achieve the desired changes into the internal environmental of the enterprise: the determination of lower manufacturing costs for products, services provided, etc.

Aspect no 2. If problems occurred after the two stages.

The action-response: the deviations causes are searched. Every stage is carefully analyzed and the causes which lead to the problems are tracked down, using different specific diagnosis methods.

This stage is very important, because it represents the point which can lead us to an either successful or failed implementation of the green accounting. We must decide if we continue the green accounting implementation, quit or re-orient to another method. Proposals can be put forth for changing the existent accounting system, especially if the enterprise uses a traditional cost calculation system, less flexible to current changes.

Stage four. Testing the accurate implementation mode of the green accounting

This is done using the information provided by the implementation process. With this occasion, the impact of every initiative, action or project will be tested, by means of cost accounting saved as a result of applying or not applying green accounting, earnings gained by means of a correct application of activity administration principles specific to activity-based costing method (ABC).

Depending on this stage, certain changes will be made. These changes can be different in nature, such as: ecological design of products, environmental cost planning, changing the employees' attitude on environmental issues, team co-operation by changing outlooks and ideas on the efficient running of ecological activities, etc.

Continuous communication and training of both employees and employers represent key factors in ensuring the successful implementation of the green accounting project. The company management must understand the importance and advantages of an increased focus on the environment.

Notes

- ⁽¹⁾ Vezi USEPA (United States Environmental Protection Agency) – Agenția de Protecția Mediului Înconjurător a Statelor Unite ale Americii.
- ⁽²⁾ Vezi UNDS (United Nations Division for Sustainable Development) – Departamentul Națiunilor Unite pentru Susținerea Dezvoltării.

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