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IN BUCHAREST**

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from Economic Downturn to Recovery”**

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PREFACE

It is generally accepted that Research must stay at the core of academic activity. The Institute for Business Administration in Bucharest defines the research as an important pillar of its mission, transforming scholarship into actionable knowledge. As a result, the faculty members view their research much more problem-driven and increasingly connected to the management challenges in the current complex business environment.

Beside other sources of information and knowledge for managers, the research results obtained by the academics play a crucial role in the business and society development. The faculty involved in the business education contributes with specific value added to the scientific results created through high-quality scholarship, built on high independence of perspectives and approaches, multi-disciplinary engagement, and validated through robust quality assurance processes.

The International Conference organized in partnership with Kennesaw State University represents a strong academic dimension added to the business education processes developed by the two Schools of Business. The 2010 International Conference, having the topic “Leading and Managing Change from Economic Downturn to Recovery”, reunites a set of papers addressing the key issues and best practices in dealing with the recovery after the crisis process. They reflect some unconventional responses to tough times that create an opening for managers who can meet the profitability challenges by reexamining and reshaping the whole business model.

These proceedings represent the papers selected by a blind peer review process and presented during the International Conference.

We would like to thank all those that supported our scientific event by submitting high quality contributions and, by this, expressing their commitment to serve the scientific and business community. It is to be mentioned here the encouragement, the support and the contributions coming from professor Marcel Duhăneanu, rector of The Institute for Business Administration in Bucharest and Dr. Barry J. Morris, Director of Cabinet Strategic Projects & Executive Director of the Institute for Global Initiatives from Kennesaw State University, as well as from both Romanian and American faculty teams involved in the two joined Executive MBA Programs. A special thank you is offered to our guests from other universities or business education entities that joined us and brought new and valuable dimensions to the debates.

We also owe a large thank you to the distinguished peer reviewers that objectively ensured the quality standards of the Conference by the selection of the retained papers.

A distinguished gratitude to the management of the Journal “Quality- Access to Success” edited by the Romanian Association for Quality Assurance (SRAC) - highly ranked by the National University Research Council (NURC) in Romania and included in EBSCO and SCOPUS Publishing data bases - that accepted to publish our selected papers in a special edition of this publication.

The editors

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INCENTIVES AND BARRIERS FOR FDI. THE ROMANIAN EXPERIENCE

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Abstract: *For the last 50 years, attracting FDI was one of the top priorities on the public policies menu for many countries, regardless of their development stage. For the future, the FDI will definitely remain an outstanding factor not only for employment or balance of payment reasons, but also for economic growth and sustainable development. Significant changes in business models may occur, such a slide from big quarterly profits to smaller, but sustainable in the long run returns. The FDI may ensure an important channel through such changes spread and generalized in a global economy. This paper has three objectives. Firstly, to present some lessons on FDI from Romania's experience from the last 20 years. Secondly, to present the perception of the ASEBUSS' students on the possible incentives and barriers for FDI. Thirdly, to suggest an approach for attracting FDI. For Romania, as new EU member, this aspect may be relevant as the country is now in an open competition with other 26 countries, when it comes to attract FDI.*

JEL Codes: E22, F21, F23, G24, M38, O57

Keywords: FDI

THE ROMANIAN LESSONS

In the first years of the 1990 decade, the volume of the FDI in the Romanian economy was practically irrelevant. This can be explained by many factors – from the isolation of the country from the Western economies to the delays in reforms, poor infrastructure, instability of the business environment and the uncertainty of its macroeconomic stability (Doltu, 2006). Only in 1997, the net value of FDI (inflows minus outflows) exceeded EUR 1 billion, and just starting with 2004, the level of the FDI became comparable with other countries in the region.

Because of its small volume of FDI the country's external equilibrium was always a serious concern. The small volume of external financing has aggravated Romania's twin deficit problem. In order to adjust the current account deficit to sustainable levels, Romania extensively used the devaluation option. Using the devaluation policy, Romania avoided an increase in unemployment, but with the cost of fixing inflation at high levels.

The period 1997-1999 can be characterized as the years of starting reforms, severe economic contraction and unstable institutional framework. Policies aimed at attracting FDI – based mainly on finding and granting generous fiscal incentives – often conflict with the Government stabilization task. Granting fiscal incentives threatened the fiscal balance and increased uncertainty

for businesses, also shrinking the maneuver space for macroeconomic policies.¹ (Croitoru, Doltu, Tarhoaca, 2000)

The lesson from these years is that foreign investors do not refuse fiscal incentives, but if they have to choose between these and the stability of the business environment, they choose the later.

Between 2000-2004, the country reaped the benefits from the previous reforms, and continued to develop its institutional framework as a major precondition to EU accession. The FDI inflows increased almost six times, from EUR 1.2 billion to EUR 6.6 billion, and the volume of FDIs exceeded EUR 15 billion in 2004, from EUR 6.9 billion in 2000. No special fiscal incentives for the FDIs were granted and no other instruments for positive discrimination have been used. Maintaining and consolidating the macroeconomic stability, achieved at the end of 1990 years, has been the main concern for the Government.

The increase of the FDIs' volume may be explained by the additional effect of the FDIs. Successful businesses of the first FDIs attracted others foreign investments. There is not a single pattern for this additionality. For instance, the French investors seemed to be more and more convinced to invest in Romania after one major French bank (Société Générale) bought a Romanian state owned bank and consolidated its presence in the local financial system. The Dutch investors, which for many years maintained the first position in the top of the foreign investments in Romania, seemed to be interested mainly in the banking and insurance industry. The Austrian investors, in a large number and volume, found business opportunities in various industries, other than financial or banking. Only later, they closely looked to the opportunities in the banking industry and became the most important player here.² The Italian and Greek investors followed a similar pattern – investments in the financial sector followed the successful businesses in other industries.

The lesson from these years is that macroeconomic stability is a critical precondition for attracting FDIs.

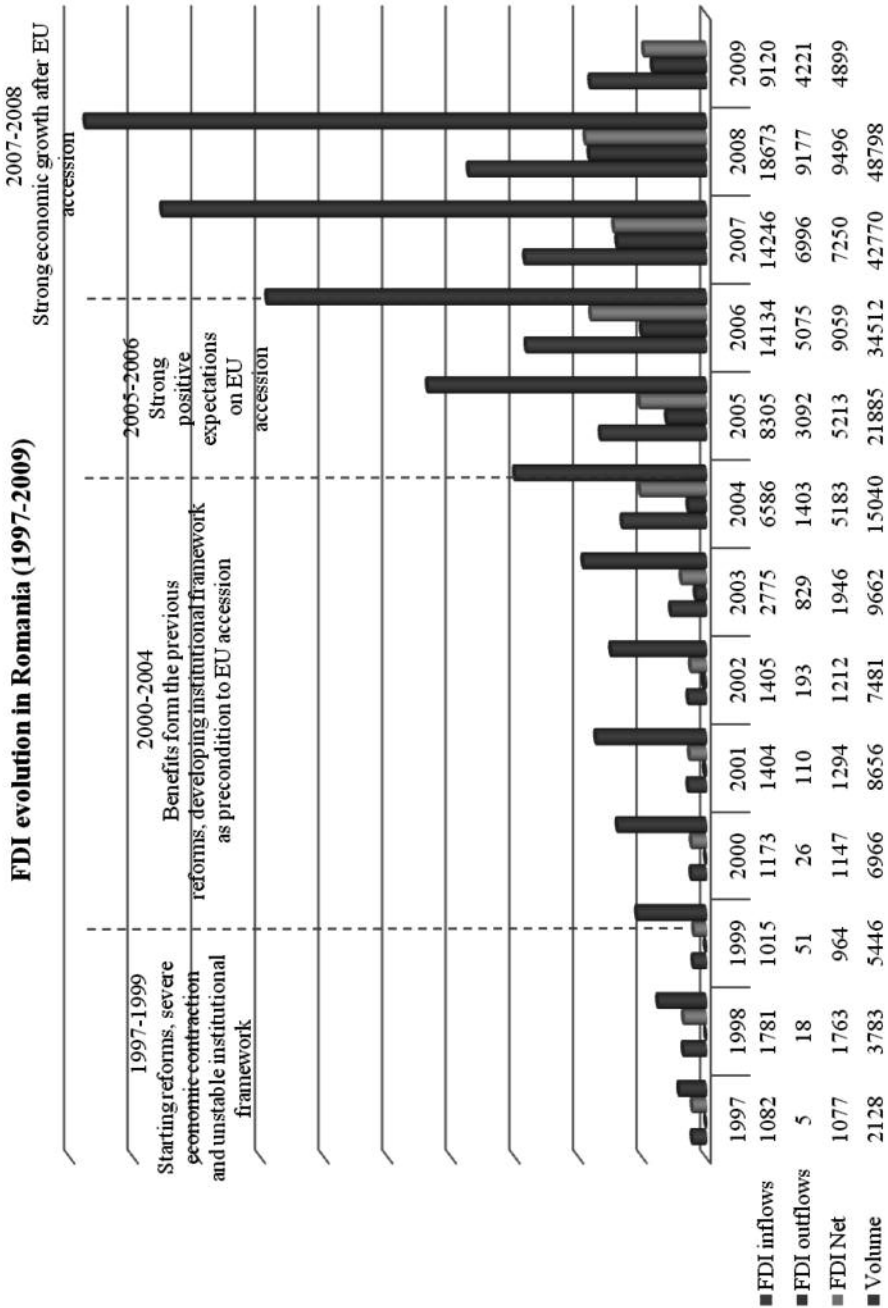
The years 2005 and 2006 were marked by increasing and consolidating the expectations that Romania will join the European Union. The economy continued to perform very well recording six years in a row of significant positive growth. The country itself transformed from a “no name” in the region or even the black sheep of the region in a serious candidate for EU accession and a champion of economic growth. If the IFC's conclusion in the late 1990s – the major transnational corporations consider a relatively small number of destinations for their investments, where the vast majority of countries remains outside their scope and focus – is still valid, we may say that the country finally entered on the “short list” as attractive destination (IFC, 1997). The FDI inflows increased to EUR 8.3 billion in 2005 and 14.1 billion in 2006, and the volume of FDIs reached EUR 21.9 billion in 2005 and EUR 34.5 billion in 2006.

The lesson from these years is that “brand awareness”, expectations for stability and future potential growth are important determinants for attracting FDIs.

The years 2007 and 2008 recorded strong economic growth, the EU accession confirming the positive expectations. Also, these years were years of “cheap money”/easy to get money at the global level. With money flowing around, Romania benefitted again from large FDIs inflows. For the Government, financing the increasing current account deficit was an easy task. The inflows of FDIs reached EUR 14 billion in 2007 and EUR 18 billion in 2008, while their value increased to EUR 42.8 billion in 2007 and EUR 48.8 billion in 2008. It was obviously that firms decide to invest, often based on insider knowledge of the locale and due to a long term relationship with the

destination country (Jovancevic and Sevic, 2006).

No special effort to attract FDIs was made by the authorities. Transforming the country from an unattractive destination for foreign investments in a champion of the region can be explained by the good track record and the country “brand awareness”.



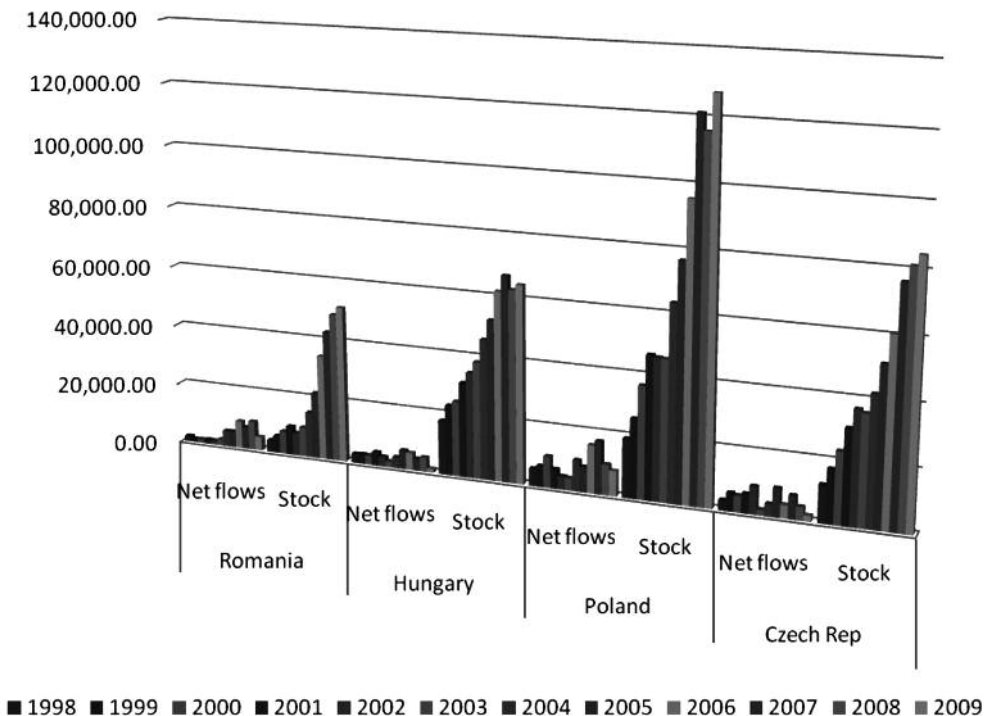
Source of data: The National Bank of Romania
 * Volume is not calculated as: Value of previous year + Net flows = Volume, but it is adjusted with exchange rate influences and accounting procedures.

In 2009, the previous success faded. The FDI inflows have decreased by almost a half from the previous year, up to EUR 9.1 billion. The market sentiment worsened on the background of the financial crisis that affected the world economy at the end of 2008. Expectations on the country's future stability turned negative even if the future potential growth remained good. Money became not so easy to get, in spite of the extraordinary monetary policy measures adopted among the G-20 countries.

The Romanian banking system, dominated by large foreign banks, ceased to be the "goose with golden eggs" for the mother banks. International efforts were necessary to prevent a potential reverse of the financial flows which in previous years sustained both the FDI inflows and the country's economic growth. A sharp depreciation of the local currency have been avoided, but at the cost of a sudden tightening of the fiscal policy and massive borrowing from international financial institutions on the background of a massive economic contraction.³ Romania's GDP has contracted by 7.5 percent in 2009 from the previous year. This development may confirm the link between FDI cycle and economic cycle (Reinhart and Reinhart, 2001).

The lesson from 2009 is that the government cannot indefinitely rely on FDI when the current account deficit reaches unsustainable levels. To a large extent, FDI are going hand in hand with the market sentiment which can be volatile.

FDIs in Central and Eastern Europe (1998-2009, EURmill.)



Source of data: The National Bank of Romania

		1998	1999	2000	2001	2002	2003
Romania	New flows	1,763.00	964.00	1,147.00	1,294.00	1,212.00	1,946.00
	Stock	3,876.90	5,647.80	7,472.30	9,462.40	7,482.00	9,662.00
Hungary	New flows	2,988.10	3,106.30	2,998.40	4,390.70	3,185.10	1,887.50
	Stock	17,759.50	23,041.20	24,578.20	31,045.10	34,574.70	38,328.70
Poland	New flows	5,676.00	6,824.00	10,334.00	6,372.00	4,371.00	4,067.00
	Stock	19,231.00	25,947.00	36,792.00	46,686.00	46,139.00	45,896.00
Czech Rep	New flows	3,317.00	5,933.00	5,404.00	6,296.00	9,012.00	1,863.00
	Stock	12,254.60	17,478.70	23,323.20	30,717.16	36,883.83	35,851.98

		2004	2005	2006	2007	2008	2009
Romania	New flows	5,183.00	5,213.00	9,059.00	7,250.00	9,496.00	4,556.00
	Stock	15,040.00	21,885.00	34,512.00	42,770.00	48,798.00	51,356.00
Hungary	New flows	3,633.30	6,172.10	5,609.00	3,956.40	4,752.40	1,251.30
	Stock	45,881.10	52,370.40	61,773.90	67,022.00	62,701.30	64,552.60
Poland	New flows	10,237.00	8,330.00	15,741.00	17,242.00	10,030.00	8,251.00
	Stock	63,601.00	76,785.00	95,554.00	121,280.00	115,961.00	127,312.00
Czech Rep	New flows	4,007.00	9,374.00	4,355.00	7,634.00	4,415.00	1,964.00
	Stock	42,034.95	51,424.37	60,620.50	76,337.76	81,301.70	84,614.90

Source of data: The National Bank of Romania

The observed lessons from Romania's experience are also confirmed by the FDIs development in other countries in the region, like Hungary, Poland or Czech Republic. All these three countries started the transformation process of their economies much earlier than Romania, at the very beginning of the 1990 years. They passed the following strong economic contraction, strengthened their institutional framework and stabilized their economies earlier than Romania. But they reaped the benefits of positive expectations on their accession to the EU and the economic growth followed by the FDIs enhanced presence. As a newcomer to the EU, on the one hand, Romania remains well behind these three countries in terms of the FDI stock. On the other hand, in terms of speed of attracting FDIs (2005-2008), on the background of a strong economic growth, Romania seems to be a good destination for the foreign investors. The economic contraction in 2009 – strongest in Romania compared with these three countries – is also followed by strong decrease in FDI net inflows, above the values recorded in the other comparable countries. The Romanian lesson from 2009 also seems to be confirmed by the experiences of the comparable countries.

ASEBUSS STUDENTS ON THE INCENTIVES AND BARRIERS FOR FDIs

We were interested to see the ASEBUSS students' perception on possible barriers and incentives for the FDI considering them as an educated public with a deep understanding of the

Romanian business environment. More, most of the ASEBUSS students are working or used to work for international companies. We didn't use a survey and we cannot consider the group surveyed as an appropriate sample for a complete study.⁴ Through this exercise, we simply tried to check, on a small group formed by educated and experienced people, the validity of the following assumption: the business environment in Romania is now more mature comparing with the years 1990 vis-à-vis the FDI's incentives. In other words, fiscal incentives for FDIs do not represent a long term solution for attracting foreign direct investments. Students with different professional background and various professional experience, coming from 13 different businesses (see Table 1) were asked to list on two columns incentives and barriers for FDIs.

By far, the largest number of mentioned incentives was related to market features, such as market size and its expected potential for future growth, the availability of skilled/cheap or easy to train workers, the country appurtenance to a disciplined economic environment (EU membership) and a promising regional expansion (See Table 2). These kinds of incentives represent 77 percent of the total incentives identified by students. By market features students considered a large set of characteristics including: the fast increase of the market, consumer's appetite, payment behavior, brand adaptation by local customers, openness to new, access to regional markets and low market concentration.

Various market features were mentioned 34 times and are considered the first most important categories of incentives. The employee's quality/price, their easiness to speak foreign languages, and the quality of local managers were mentioned 26 times, being the second most important incentive, while EU membership and access to regional markets were mentioned 26 times, being the third most important kind of incentive.

Table 1. The questioned students grouped by activity fields

Food industry	5
Pharma industry	5
IT, software	3
Trade (industrial products and retail)	3
Construction	2
Insurance	2
Environment technologies	2
Oil industry	1
Automotive, car spare parts	1
Advertising	1
Consultancy	1
Bricolage	1
Healthcare	1
Total	46

The fiscal incentives – the level of tax profit, various deductions, specific fiscal treatment on products, etc. – were mentioned just 7 times, which means 6.5 percent in the total identified incentives. A close number of answers referred to the access to business with the government, but because of its small size, we can interpret such incentive as not being considered relevant.

On the relatively small importance of the fiscal incentives, we might say that ASEBUSS students confirm one of the Romanian lessons on the FDIs, according to which the foreign investors do not refuse fiscal incentives, but if they have to choose between these and the stability of the business environment, they choose the later. We might also say that this is a sign of a massive change of the Romanian business environment comparing with the 1990 years, when the incentives for the FDIs were strictly by fiscal nature.

Other categories of incentives were barely mentioned by the students – absence of excessive market regulation, political stability, similarities with other known markets, security, no significant trade unions. The relatively low importance of such incentives may be explained by the fact that students are taking these conditions for granted (their daily businesses are conducted today in an EU country) rather than a minor importance of such conditions for the FDIs. Just on remark, the political stability is always statistically relevant, irrespective of what other factors say (Edwards, 1990).

The importance of incentives is not viewed differently across various businesses (see Table 3). Market conditions, the quality of labor force and EU membership remain the most important incentives for FDIs, while the other kind of incentives, including fiscal incentives, are not viewed as being relevant or having a critical importance.

Barriers for FDIs are viewed somehow differently depending on the type of business. Unfriendly regulations affect mainly activities that are mainly focused on private-private relationship, like the banking industry and telecom industry. Pharma industry and construction industry are more affected by barriers related to corruption – non ethical methods, lack of regulation or weak enforcement of existing regulation, high degree of centralization in the public administration.

Table 2. Incentives grouped by categories

Market size, market potential for growth (1)	34
Work force quality – price, foreign languages, local managers	26
EU membership	22
Fiscal (e.g. profit tax, deductions, specific tax on products)	7
Access to business with Government	5
Infrastructure potential development	3
Absence of excessive market regulations	3
Presence of multinational companies	1
Availability of raw materials/low price of raw materials	2
Political stability	1
Similarities with other known markets	1
Security	1
No significant trade unions	1
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This perception is typical for businesses strongly tied by the public resources, like the health system and public works. The same view is expressed by the food industry, which in Romania is a strictly regulated field. Usually the regulations reflect the rent seeking process in which various actors obtain from the authorities some specific regulations/standards aimed mainly at preventing any potential competition from rivals.

Unfriendly regulations, various market features, corruption and poor infrastructure are considered by far the most important barriers for FDIs. They represent 78 percent of the total barriers mentioned by students. If we would consider that corruption and unfriendly regulations go hand in hand, we can say that the institutional factors are much more relevant for FDIs compared with any other categories of barriers. Put it differently, the prevalence of non-ethical methods, lack of simple, stable and transparent regulations or weak enforcement of the existing regulation and the high degree of centralization in the public administration are more important for FDIs even than the size of the market, competition, customers' low income, financial culture, lack of trust from customers, high degree self consumption, prejudices, or uneducated customers. This perception also reflect that the Romanian environment is today more mature than ten years ago. The market is there, the necessary reforms were implemented, the future is somehow

Table 3. Incentives grouped by activities

	Banking	Telecom	Food	Pharma	IT	Trade	Constr.	Insurance	Environm	Others
Market size, market potential for growth	8	6	5	5	1	2	1	2	0	4
Labor force quality	7	6	3	1	1	2	1	1	0	4
EU membership	2	7	2	1	2	1	1	2	0	4
Fiscal	0	4	0	1	1	0	0	1	0	0
Access to business with Government	0	0	0	0	1	2	2	0	0	0
Infrastructure potential development	1	0	0	0	0	0	1	0	0	1
Absence of excessive regulations	0	3	0	0	0	0	0	0	0	0
Presence of multinational companies	1	0	0	0	0	0	0	0	0	0
Availability of raw materials	0	0	1	0	0	0	1	0	0	0
Political stability	1	0	0	0	0	0	0	0	0	0
Similarities with other known markets	0	0	0	0	0	0	0	0	0	1
Security	0	0	0	0	0	0	0	0	0	1
No significant trade unions	0	1	0	0	0	0	0	0	0	0

Table 4. Barriers grouped by activities

	Banking	Telecom	Food	Pharma	IT	Trade	Constr.	Insurance	Environm	Others
Unfriendly regulations	11	5	2	1	2	1	1	1	2	3
Market features (1)	7	3	3	2	1	2	1	1	0	4
Corruption (2)	0	3	3	3	0	1	2	1	1	2
Poor infrastructure	0	2	2	0	1	2	1	0	0	3
Increasing costs (3)	0	1	1	0	2	0	0	1	0	2
Quality of public policies	0	1	1	2	0	1	1	0	0	1
Fiscal (4)	1	0	0	0	0	0	1	0	1	2
Macroeconomic stability	1	0	0	0	0	0	1	0	0	0
Existing industrial capacity	0	0	0	0	0	0	0	0	0	1

(1) Size, competition, low income, financial culture, lack of trust from customers, self consumption, prejudices, uneducated customers

(2) Non ethical methods, lack of regulation/weak enforcement, high degree of centralization in the public administration

(3) Labor, lack of skilled workforce, real estate

(4) Absence of tax incentives, frequent changes, fiscal pressure

predictable, but another new dimension of the reform is expected and needed, i.e. the institutional reform.

The absence of fiscal incentives is not considered a significant barrier for the FDIs. Various fiscal aspects were mentioned just 5 times in a total of 102 various barriers. Not surprisingly, construction industry and environmental engineering are among the few businesses for which the fiscal incentives are considered useful, or, in other words, the lack of “special incentives” (by fiscal nature) represents a barrier for the FDIs.

Table 5. Barriers grouped by categories

Unfriendly regulations	29
Market features	24
Corruption	16
Poor infrastructure – transport, electricity	11
Increasing costs (labor, lack of skilled workforce, real estate)	7
Quality of public policies	7
Fiscal: absence of tax incentives, frequent changes	5
Macroeconomic stability	2
Existing industrial capacity	1
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ATTRACTING FDIs – THE ROMANIAN CASE

What may be worthy to be tried in an open competition with other countries, when it comes to attract FDIs? The country has changed from an unattractive destination for the FDIs to one of the “champions” of the region, once the country joined the European Union. In the context when it is obvious that the countries which are the biggest net exporters of FDIs are the biggest attractors of FDIs and the “fiscal competition” is not an option, the Government effort may be focused on two directions.

The first direction is to identify what the business environments consider as “important factors” in their decision to invest somewhere or to locate somewhere. The second direction is to find answers to the following question: What they have (the competitors) and we don’t have?

On the first direction, authorities may enhance the already existing advantages, such as the significant domestic market size and its potential for growth. By European standards, Romania is a big country with a numerous population. More, the Romanian consumers are open to new, and they have a remarkable propensity to consume. As long as the living standard in Romania is well below the EU average, the domestic market will get wider and deeper, hand in hand with the increase of personal income. More, the geographical location of the country allows the design of a regional approach. Businesses located in Romania could easily expand to the Eastern Europe, South-East Europe or Central Asia.⁵

Labour force quality is another existing advantage. Even if Romania is not anymore a country with cheap labor – comparing with other countries in the East, Asia or Central America – the workers can be relatively easy trained for specific jobs and can be relatively easy motivated. More, the language barrier is not so relevant, the younger generations being already trained and opened to use foreign languages.

The EU membership provides all the advantages in terms of rules and regulations, eliminates the risk of expropriation, guarantees the profit repatriation, and eliminates the risk of restricting capital transfers. Most of the multinational companies already have a local history, and similarities with other successful markets can be easily identified. There are no major frequent threats to the security – as in any other European countries – and the trade unions are not a major barrier for businesses.

On the second direction, the question “What they have (the competitors) and we don’t have.” Most of the answers can be identified from the perspective of an individual who may decide or not to work and live in a foreign country. How these factors can be relevant for a company who is looking to increase its profits by investing abroad? Relocation as well as decentralization are good ways to stay closer to the clients, but both require a lot of money. Costs associated with qualified personnel who must be deployed in order to establish a business somewhere are important for a company at least in the first years when the investment is made and not to many responsibilities functions can be transferred to the local staff.

A company must pay supplemental benefits to those sent to work abroad, in order to cover their opportunity cost and so to motivate them to accept such a challenge. And money is not everything. An expatriate must take care of its family while is abroad. The living conditions, the quality of schools where its children will attend and the language in which they’ll be educated, the availability of medical services, the insurance, the access to public utilities, the traffic regulations and the easiness of obtaining a driver license, the cultural environment, the availability of familiar products and brands, the entertainment conditions, the access to justice and its quality etc. The less developed and less friendly a country is the more costly is for companies to pay benefits in order to convince qualified workers and managers to accept to be relocated in a new environment.

Started from here, the authorities can understand the reforms that must be implemented not just in order to attract FDIs, but to allow their citizens to enjoy a better life. More schools where the curriculum is taught in languages with international circulation and opening the education system to the international developments will favor not just the expatriates’ children and the foreign companies which will save millions of dollars on tuitions, but also their own citizens and may stimulate the innovative behavior (Jovancevic and Sevic, 2006, Lall, 1997, Mowery and Oxley, 1995, Thiran and Yamawaki, 1995). Improving the quality of the public health system is not only to the benefits of “foreign investors”, but mainly for its own citizens. Improving the quality of public services, the quality of judicial system, enforcing the rules and the legislation will not just convince foreign investors to come, because they don’t have to pay huge benefits to their expatriates, but will be to the direct benefits of its own citizens.

The underdeveloped physical infrastructure (roads, bridges, airports, railroads, harbors) may be turned into opportunities for greenfield investments if barriers for these are identified and removed. Given its relative scarcity, the returns tend to be higher in projects addressing many existing bottlenecks. In such investments, the monetary return may constitute feasible vehicle for asset creation and finance (Canuto, 2010).

CONCLUDING REMARKS

Fiscal incentives may work in the short run to attract FDIs. In the long run, they proved to be costly not only for the budget, but also for businesses, generating fiscal instability (frequent changes in fiscal legislation), and rent seeking behavior.

To attract FDIs, the authorities should identify what the business environment considers as “important factors” in their decision to invest somewhere or to locate somewhere. Also, a second direction is to find answers to the following question: “What the competitor countries have and we don’t have?”. Finding answers to this question would allow the authorities to understand the reforms that must be implemented. These are necessary changes not just in order to attract FDIs, but to the direct benefits of its own citizens.

For the future years it is obviously that the FDIs will play a major role in the development of the Romanian economy. As long as the private saving remains low and the public saving is negative, the only relevant capital source for investment is the foreign investment. The market

potential is still there. The size of the Romanian domestic market is relevant, at least by European standards, and the regional potential is relevant. Romania is the seventh largest country in the EU, the need for development so to reduce discrepancies with the EU standards is part of the potential and hopefully the lessons from the past will be internalized and not repeated.

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¹ In 1999, Romania was on the verge of a financial crisis. The Government had to choose between a very restrictive fiscal policy and a default. In spite of the tough opposition of many foreign companies, the government cancelled the fiscal incentives previously granted for "big investors" -- companies that invested more than \$ 40 million. Finally, the foreign investors accepted that losing generous fiscal incentives is a better alternative compared to the costs associated with an environment of a country which fails to meet its external financial obligations.

² In 2005, Erste Bank bought the biggest state owned Romanian Bank (The Romanian Commercial Bank). Thus, Austrian investors became the most important players in the banking industry in Romania. Previously, Raiffeisen Bank bought another state owned Bank (Banca Agricola), in 2000, and Volksbank opened its businesses on the local market. These moves are obviously part of the regional expanding approach of the Austrian Banks and not necessarily a sudden increase of opportunities in Romania.

- ³ Romania's GDP has contracted by 7.5 percent in 2009 from the previous year. This severe contraction is explained by the reduction of the domestic demand which also explains the severe adjustment of the current account deficit which decreased from about 11.5 percent of the GDP in 2008 to about 5.5 percent of the GDP in 2009.
- ⁴ On the one hand, we are aware that not using an appropriate sample, conclusions may not be considered strong enough for having a general character. On the other hand, this exercise is at least helpful for academic/teaching reasons. The observed conclusions are in line with the mainstream findings and so we are encouraged to use mainstream specific literature for our students.
- ⁵ The barriers existing today, especially on expanding businesses to the East, are mainly by political nature, and these may change in the future. But the South-East Europe will probably become soon an attraction for businesses if the region will be encouraged to adopt the EU set of values. Croatia and Macedonia will probably become EU members, Bosnia and Herzegovina, Albania, Montenegro, Kosovo and Serbia could not be left idle in the process of economic development.

FLEXIBILITY AND HARMONY: ORGANIZATIONAL CULTURE IN A LEAN SIX SIGMA BUSINESS ENVIRONMENT

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Abstract: *The paper examines how organizational culture is related to quality practices associated with Six Sigma implementation. The example of a Six Sigma deployment in a telecommunication company in Romania during 2008-2009 exposes both the success and restraining factors shaping the organizational culture following an executive business decision to implement the Lean Six Sigma philosophy during times of economic turbulence.*

JEL Codes: M11, M14

Keywords: *Organizational Culture; Six Sigma; Quality Management*

INTRODUCTION

Motto: To improve is to change, to be perfect is to change often!
Winston Churchill

The term "Six Sigma" refers to 3.4 defects per 1 million opportunities. The concept behind Six Sigma is that if you can measure the number of defects produced from a process, you can systematically work to obliterate them.

Although the use of statistical tools to manage quality and performance dates back to the 1920s, Motorola was the first company to formally introduce the concept of Six Sigma in the mid-1980s to address quality issues in the organization. In the last five years, Six Sigma has evolved as a full-fledge management tool used by thousands of companies to reduce waste within an organization. For example, General Electric uses Six Sigma as a customer-focused, data-driven philosophy and methodology throughout the company, to systematically eliminate errors, with the objective of consistently providing customers with nearly perfect products and services through the flawless execution of key processes. General Electric employees are trained in the Six Sigma strategy, and the statistical tools and techniques of Six Sigma at all levels of the organization¹.

To succeed, Six Sigma, frequently referred to in the last few years as Lean Six Sigma, focuses on total customer satisfaction.² It is based on a problem solving framework commonly embodied in the acronym "DMAIC": Define what needs to be improved; Measure the current state against the desired state; Analyze the root causes of the gap in performance; Improve through brainstormed, selected and implemented solutions; and Control for long-term sustainability.

Six Sigma is built around *Customer's* expectations and requires a specific "infrastructure" to succeed. At the foundation of the infrastructure is the vision and values of the *Executive Leadership*. They endorse the Six Sigma *Champions* - key leaders within the organization who or-

ganize and lead the initialization, deployment and implementation of Six Sigma by selecting the specific projects and implementing the required strategies and tactics.

The Champions select several *Master Black Belts* who act as in-house experts for disseminating the Six Sigma methodology throughout the organization. They devote 100 percent of their time to Six Sigma - training and coaching Black Belts and Green Belts and communicating overall progress and status of projects within their areas or businesses. The *Black Belts* are individuals working under the tutelage of a Master Black Belt, applying the tools and knowledge of Six Sigma to specific projects. Typically, they devote 100 percent of their time to Six Sigma projects and lead customer-focused project teams using DMAIC methodology, change and project management skills, and analytical techniques to drive fact-based decision making. They have extensive training in statistics and problem-solving techniques, and provide additional training to as many as 100 *Green Belts* every year.

The *Green Belts* are employees who execute Six Sigma as a part of their overall jobs. They focus on a day-to-day basis the processes that comprise their work, with the expectation that they contribute to the success of Six Sigma techniques and lead small-scale improvement projects within their respective areas.

Multiple benefits are associated with the Six Sigma methodology:

- Six Sigma typically reduces costs. It is a business process that allows companies to dramatically improve their bottom line by designing and monitoring everyday business activities in ways that minimize waste and resources while increasing customer satisfaction;
- Over time, more and more Six Sigma projects focus on building revenue and growing the business. The potential size of this benefit is unlimited and may be many times larger than cost reduction savings;
- Six Sigma guides companies into making fewer mistakes in everything they do, eliminating lapses in quality at the earliest possible occurrence;
- Six Sigma does not merely detect and correct errors; it provides specific methods to recreate processes so that errors never arise in the first place;
- Six Sigma helps each employee to achieve his or her full potential and helps the organization benefit from their ideas, initiative, and energy. Getting the most out of human capital makes all the above benefits possible.

Six Sigma may lead to breakthrough changes in the organization, eventually by reshaping its organizational culture - the complex framework of attitudes, values, behavioral norms, and expectations shared by the organization members./R-1, page 546/

The organizational culture embodies characteristics such as innovation and risk taking, attention to detail, the value placed on people, team orientation, openness of available communication options, sensitivity to others and friendliness, emphasis on maintaining status quo as opposed to growth and change /R-1, R-5/. These characteristics are often changing under the influence of shifts in market conditions, new competitors, emerging technology, regulatory changes in public policies, mergers and acquisitions. Also, an executive decision to implement advanced operations and quality management strategies such as Reengineering, Total Quality Management, Six Sigma, often radically impact the organizational culture of a business.

This paper will analyze how a Six Sigma initiative at a telecommunication company in Romania is changing the organization's culture during turbulent economic conditions in 2008-2009.

SIX SIGMA AT TELCO S.A.

The telecommunication industry in Romania, while mature today with a penetration² of

over 100 percent, offers an excellent opportunity of exceeding 45% ROI coming primarily from significant revenues from a very large customer base with rather modest ARPU³. Secondly, the generous profit margin is rooted in the unparalleled cost levels on the Romanian telecom market as compared to those recorded in developed countries since they build upon lower labor and marketing costs, remaining sustainable long-term via a rather modest capital investment. Six Sigma is about improving profitability - each sigma shift (**Exhibit 1 - Simplified Sigma Conversion**) provides a 10 percent net income improvement, a 20 percent margin improvement, and a 10 to 30 percent capital reduction./R-2/ Therefore, the methodology has the power to attract telecommunications companies as an untapped source of process improvement and cost reduction.

Like many other telecommunication companies, Telco S.A.⁴ uses thousands of processes to create products and services for customers. Those processes can be industrial (involving advanced radio equipment, antennas, mobile switching centers, optic fiber network, billing systems, CRM systems and customer databases etc) or commercial (involving human intervention, such as new product development, supply chain and logistics, sales and after-sales, complaint management, processing payroll or customer orders etc). Telco S.A. has been interested in harvesting the capability of Six Sigma to create optimization goals for every process within an organization, allowing the organization to understand and incorporate new technologies and behaviors for improved process performance.

In 2008, Telco S.A. sold voice and data services – mobile, fixed, Internet. It was driven by its five core strategic objectives or “ambitions”: obtain revenue market leadership; exceed customer expectations; add value for customers through data services; continuously look for operational excellence; and build a high performance culture. A key element of the company’s strategy was the High Potential Development Program (HPDP) - a coherent endeavor initiated by the mother company and implemented in local operations, focusing on developing people at all levels in the organization. Development programs were in place to assist supervisors, managers and executives in living the company values: passionate customer focus; continuous improvement; excellence; and innovation, with clear correlation to the performance management system in place.

Telco S.A. began its journey to becoming a Six Sigma organization in 2008, and the company’s first Six Sigma projects were expected to be finalized by the end of 2009.

Six Champions initially endorsed the projects – all being part of the executive leadership team: Chief Marketing Officer, Chief Technology Officer, Chief Commercial Officer of Enterprise Unit, and Chief Commercial Officer of Consumer Unit. They did not follow any formal learning process regarding Six Sigma philosophy, but rather attended two rounds of presentations of the methodology by the Master Black Belts coming from the mother company. This was designed to facilitate their agreement on the main program areas to be the focus of the projects, the specific process improvement opportunities sought, and the prioritization of projects.

By April 2008, the Master Black Belts had trained more than 25 full-time Black Belts to take charge of over 100 larger or smaller scale improvement projects as identified and prioritized by the Telco’s executive leadership team. All Black Belts participated in the 2008-2009 HPDP, and used to have senior management positions, being one or two levels below the Champions. After appointment in the Six Sigma projects, their former line roles and responsibilities were taken over by functional peers; no promotions were made to replace their positions over the duration of the respective Six Sigma projects. The functional teams formerly managed by the Black Belts were told about developments via emails from the respective Champions. Moreover, meetings were held with the teams by the Black Belts’ functional peers in order to identify progress with their annual performance objectives, set expectations, and express concerns.

The Black Belts had been supported by 60 Green Belts, who dedicated 25 percent of their

job to deploy Six Sigma projects. The Green Belts were typically middle management employees - three levels at least under the Champions, but for some program areas, several seasoned professionals were contributing as Green Belts as well.

In 2009, only nine Black Belts were eventually leading 28 Six Sigma projects in the areas of: accelerating the product development process; improving CRM and data quality in the customer databases; optimizing network investments; improving services provided to enterprise/corporate customers; upgrading customer support and retention; increasing sales channel effectiveness; and improving supply chain efficiency (see **Table 1** for the Six Sigma projects in progress in 2008-2009). Up to €20 million were expected to materialize in savings by the end of 2009/2010 financial year⁵. Each Black Belt had to overview up to five projects - typically in the same program area. Depending on the project complexities and/or functions crossed by the process, as much as three to four Green Belts were supporting a single project (e.g., "Improve customer data quality at front line collection", "Improve IT quality control" etc).

Seventy percent of the projects were either deployed for improvement at departmental levels or cancelled. At least 20 projects were cancelled either due to the resignation of several Black Belts in 2009, or to poor project management in actually producing the savings or customer satisfaction improvements as expected by the respective process Champions. One Champion, the Chief Financial Officer, remained with no program areas and/or projects allocated to him, while another, the coordinator of the Six Sigma initiative on behalf of the Chief Executive Officer, left the company in February 2009 upon his contract end, refusing a renewal with local company, in order to work for Telco's mother company headquarters.

By February 2009, a project had continued to not having a Champion to take charge. "The vendor management process for content data services" was falling - by scope and time vested - in the areas of Procurement/Supply Chain teams reporting to the Chief Financial Officer. The people from Marketing Product Development and Network Technology teams felt they needed to get the formal appointment to lead the improvement endeavors with the purpose of a better control of the quality of vendor offerings. The experience over time had discouraged the selection of content data vendors based on lower price criterion exclusively, since the quality of the services rendered by the low-price vendors proved unsuccessful to meet Telco customers' expectations.

MAKING THE ORGANIZATIONAL CULTURE TO MATCH SIX SIGMA INITIATIVE

The analysis of the Six Sigma implementation at Telco S.A. has revealed ten factors that may influence - as stimulants or inhibitors - the reality of culture change associated with harvesting the benefits of Six Sigma philosophy:

1. Paramount for success is **the total commitment of the executive leadership team to deployment of Six Sigma** throughout the company, so that it builds a corporate culture of continuous improvement, recognizing that this would be a journey, not a one-time program. Imposing Six Sigma from the mother company is ineffective if local executive leadership team is not fully embracing but merely executing - a central decision. The moment of truth for the executive leadership team is to grasp facilitative opportunities for change, such as poor financial performance or customer complaints (which might attract media coverage likely to jeopardize company reputation), because employees would better perceive and understand the need for change. During the time interval 2008-2009, the financial crisis was just starting to show its teeth in November-December 2008, but the full force of the recession was underway in 2009.
2. **The executive leadership team is capable and progressive.** Leaders embarking in Six Sigma must take quality to a personal level in order to create lasting improvements. This

Table 1. Six Sigma Projects, Telco S.A.

Program Area	Prioritized Opportunity Area	Champion	Black Belt	Number of Green Belts	Champion Priority
Speed-up Product Development	Improve project prioritization process	CMO/CTO	A	1	1st priority
Speed-up Product Development	Define business and technical requirements	CMO/CTO	A	2	2nd priority
Speed-up Product Development	Improve product launch process	CCO CU	A	1	2nd priority
Speed-up Product Development	Improve IT quality control (TQM)	CMO/CTO	B	3	1st priority
Speed-up Product Development	Improve vendor management for content data services	Not Decided	B	Not Decided	Not Decided
Improve CRM and Customer Data Quality	Improve customer data quality at front-line collection	CMO/CTO	B	4	Not Decided
Optimize Network Investment Projects	Speed-up network site launch	CTO	C	1	1st priority
Optimize Network Investment Projects	Improve network contractor management	CTO	C	1	Not Decided
Optimize Network Investment Projects	Optimize radio network investment	CTO	D	1	1st priority
EU P process Improvement	Fixed voice and data end-to-end process	CCO EU	E	1	1st priority
EU Process Improvement	Support the sales channels for SME customer segment	CCO EU	F	1	1st priority
EU P process Improvement	Archiving process for contractual documents	CCO EU	F	1	2nd priority
EU Process Improvement	Improve services activation for Business customers	CCO EU	F	1	2nd priority
EU Process Improvement	Lead management processes	CCO EU	F	1	4th priority
Upgrade Customer Support and Customer Retention	Reduce root causes for customer calls	CCO CU	G	2	1st priority
Upgrade Customer Support and Customer Retention	Improve customer segmentation and SLAs	CCO CU	G	2	1st priority
Upgrade Customer Support and Customer Retention	Redesign and simplify IVR	CCO CU	G	2	1st priority
Upgrade Customer Support and Customer Retention	Improve complaint management processes	CCO CU	G	2	2nd priority
Increase Sales Channel Effectiveness	Improve customer retention processes	CCO CU	G	2	2nd priority
Increase Sales Channel Effectiveness	Redesign sales commission systems	CCO CU	H	1	1st priority
Increase Sales Channel Effectiveness	Improve services activation for Consumer customers	CCO CU	H	1	2nd priority
Increase Sales Channel Effectiveness	Improve Consumer postpaid contracting process	CCO CU	H	1	3rd priority
Increase Sales Channel Effectiveness	Improve partner channel sales processes	CCO CU	H	2	4th priority
Improve Supply Chain Efficiency	Telesales and online order processing and delivery processes	CCO CU	I	1	1st priority
Improve Supply Chain Efficiency	Reduce logistics cost per unit	CCO CU	I	1	1st priority
Improve Supply Chain Efficiency	Improve customer experience over the handset repair cycle	CCO CU	I	1	2nd priority
Improve Supply Chain Efficiency	Improve handset inventory management	CCO CU	I	2	3rd priority
Improve Supply Chain Efficiency	Improve handset portfolio selection	CCO CU	I	1	3rd priority

Legend:

CMO: Chief Marketing Officer

CTO: Chief Technical Officer

CCO: Chief Commercial Officer

CU: Consumer Unit

EU: Enterprise Unit

A-I: The nine Black Belts

is why any coherent leadership development program in place should focus on adding solid process management and change management skills to the skill sets of the pool of management people potentially taking charge as Black or Green Belts. Even more, the executive leaders may need to look to the external labor market to staffing the organization with professionals and managers already trained and possessing competencies in process management for reducing waste to achieve efficiency - which is Lean management, or in Six Sigma.

3. **Carry the principles of Lean Six Sigma right to the front line of the organization.** By involving diverse groups (e.g., customers, the sales force, people from different departments) in a discussion on how the company should operate after Six Sigma, a better understanding of each group's culture is likely to emerge, creating the opportunity to leverage creativity and innovation management.
4. Embracing Six Sigma means that **the roles of the managers, supervisors, and employees will change.** Effective handling of this transition to new roles could be a turning point, a threshold between success and failure. The new roles typically require a wider range of skills (including more interaction with customers and suppliers), greater challenges, increased responsibilities etc. The period of rolling-out Six Sigma projects is usually tense for the employees. They suffer from uncertainty and anxiety associated with taking on new tasks, and having to adjust their current work practices and job responsibilities, social networks, or career plans.
5. Implementing a **performance management system** that embeds the Six Sigma-related work of the people involved is one of the most important strategic mandates when making changes that involve people and leadership, processes and equipment. It will help the organization to respond appropriately to the challenges of achieving consistently high performance from the operations, and managing the complexity of the product lines.
6. Since the bulk of the responsibility for Six Sigma project stays with **Black Belts, their motivation** does matter for a successful Six Sigma endeavor. For instance, the reward and recognition mechanisms send a message to employees about the worth of the Black Belts to the organization and its Six Sigma endeavors. Telco S.A. ties 100% of annual bonus pay-out for the Black Belts, and 40% for Green Belts, to the intensity of their efforts and measurable progress toward Six Sigma quality in their operations, while the rest of the employee base is getting a 20 percent tied to thresholds of Six Sigma-related cost savings. Besides monetary compensation, several Black Belts were recognized through letters signed by both CEOs - of the Telco S.A.'s mother company and the local company. Morale and motivation are boosted when success is acknowledged. Verbal and written recognition is inexpensive and simple, whether done privately or in an open and public manner. An additional motivational tool would have been the promotion of Black Belts after leading several projects. Unfortunately, no member of Telco S.A.'s executive leadership team led as Black Belts or championed Six Sigma projects before 2008. Hence, none provided a live example of a successful top management career resulting from involvement in Six Sigma. Fully-fledged Six Sigma businesses are expected to have their ranks of general managers, directors and vice presidents filled with Six Sigma leaders, Black Belts, who have proven their worth to the organization and were rewarded accordingly. Unfortunately, level of motivation for several Black Belts of Telco S.A. was insufficiently fueled, and the lack of promotion perspectives and merit recognition were reasons to voluntarily leave the organization. Their resignations resulted in cancellation of several projects since no Black Belts were available to be deployed.

7. Failed starts with Six Sigma might hinder future prospects for deploying the methodology throughout an organization. Some projects might really work well, while others might not succeed. Therefore, **celebrating early successes** with a project is important in reinforcing success, and sense of achievement, and encouraging, recognition and rewarding creates an optimistic outlook on what the change efforts will bring.
8. Another important factor is to **learn from successes and failures**. Most Six Sigma-conscious CEOs view mistakes as tools for the personal growth of Champions and Black Belts, and for the organization as a whole. While Six Sigma is a great opportunity, the risks need to be estimated and understood as much as possible so that who and what would be involved are identified, especially when a new process is about to be implemented. Initial acceptance and enthusiasm when launching Six Sigma endeavors are mostly insufficient in carrying change forward. This is why successes and failures during implementation need to be reflected, formalized and institutionalized to change many processes or purposefully maintain continuity, by endorsing work practices and procedures, departmental structures, customer segmentations, chains of approval, quality function deployment etc.
9. For a positive impact on the organization, it is important to **identify the resources needed for the implementation**, creating a budget and expecting some people spend 100 percent of their working time performing process management. How many Black Belts and Green Belts will the organization need, and where will the company get them from? Training costs are another issue. A Six Sigma program coordinator appointed from the executive leadership team, and a steering committee help to facilitate start-up and governance of the Six Sigma deployment applied to various and multiple processes. At Telco S.A., while a coordinator overviewed the endeavor in 2008, after he left in 2009, the Champions have attempted to organize common meetings to synergize and learn together but quite infrequently.
10. **Communicate early and often**. Throughout Six Sigma projects, everyone should be completely open and honest about what is going on. This should involve not only top-down communication, but discussions within and between people at all levels. Ceremonies or special events to celebrate a Six Sigma launch and accomplishments convey meaning to people inside and outside the organization, sustaining the organizational culture and organization's vision, mission and values. E-mail communication is not enough to inform, inspire and engage people in the Six Sigma journey.

Six Sigma philosophy may lead to significant changes into companies' organizational culture by enhancing innovation spirit and mitigation of risk when taking decisions. Six Sigma imposes an in-depth attention given to way people work to serve the customers and liaise with peers and people from other teams and departments. The employees who more willingly embrace change are a core lever for a learning and adaptive organization that respond well to the steep challenges of today's economic climate.

CONCLUSIONS AND FINAL REMARKS

For organizational cultures characterized by working in silos, defensiveness, intense political power visible at work, unchallenged opinions, or being apathetic with respect to innovation management, Six Sigma can bring significant culture change. It challenges the accepted management beliefs and practices and mandates, above all else, the movement from often deeply held behaviors that do not deliver quality to completely different behaviors that guarantee it.

Six Sigma can be successful in situations where management is actively building a fact-based, open, transparent, and customer-focused environment. In order to get people involved in Six Sigma, the forward-thinking executives and senior managers leading the effort represent the key lever to “walk-the-talk” Six Sigma philosophy, and motivating people to implement its principles and embrace change at every level. To do so, a relevant component is recognizing and rewarding people for their involvement in the Six Sigma implementation - for their readiness and ability to work proactively, for the discipline that gives sustainability to high performance, and for their ability to conduct organized projects across functions, locations, and businesses. The success of a Six Sigma project can be secured by a capable and energetic Black Belt, a supportive Champion, clear goals, and discipline to the process.

To achieve Six Sigma goals, the company needs to ingrain the quality improvement efforts into a progressive corporate culture over an extended period of time, moving from a performance management system with traditional metrics to one that measures quality, and proactively prevents mistakes from recurring. Six Sigma shows companies how to get to the heart of problems by involving employees, challenging the status quo, streamlining and reengineering processes, to improve the bottom line and reduce costs, while securing customer satisfaction.

EXHIBIT 1 – Simplified Sigma Conversion /R-4/

If Yield is...	The DPMO ⁶ is...	The Sigma is...
30.9%	690,000	1.0
69.2%	308,000	2.0
93.3%	66,800	3.0
99.4%	6,210	4.0
99.98%	320	5.0
99.9997%	3.4	6.0

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¹ www.ge.com/sixsigma, July 2005

² Mobile phone penetration rate is a term generally used to describe the number of active mobile phone numbers (usually as a percentage) within a specific population.

³ ARPU is the abbreviation for Average Revenue per User (sometimes Average Revenue per Unit); represents the measure used primarily by consumer communications and networking companies, calculated by the total revenue divided by the number of subscribers.

⁴ The names of the company and its programs have been disguised to secure confidentiality.

⁵ The 2009/2010 financial year at Telco S.A. begins on the 1st of April 2009 and finishes at 31st of March 2010.

⁶ DPMO is the abbreviation for Defects per Million Opportunities.

DATA ANALYTICS IN A POST-RECESSION ERA: THE NEW REALITY

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Abstract: *The global economy appears to be entering a sustained recovery. But following an intensive downturn, there are clear signs that many traditional business models and practices prevalent in the pre-recession period are undergoing dramatic change. Examples include: limited access to financial capital; different approaches to attracting, motivating, evaluating and retaining talent; best practices for creating and sustaining customer loyalty; and alternate methods of product/service distribution. Many of these changes will likely endure throughout as well as beyond the recovery period. This creates a strong mandate for business leaders to re-evaluate their acquisition and utilization of decision-making data to ensure proper responses to dramatic shifts in customer preferences, evolving human capital requirements, and the need to manage financial solvency. This paper will explore the more significant areas of change impacting data analytics and business decision-making, including the need to obtain and utilize more data from more (and new) sources, to augment old assumptions based on favorable economic times with new ones incorporating difficult times, to more closely evaluate new resource constraint profiles, and to consider how fiscal irresponsibility of some countries is impacting global enterprise.*

JEL Codes: C80, L10, M00

Keywords: Market performance, performance metrics, data analytics, business process

INTRODUCTION

Recessionary cycles are not unprecedented, but there appears to be little debate that the global recession that began in 2008, and in 2010 is finally showing some signs of abatement, has been one of the most pervasive in recorded history, seriously impacting governments and virtually all business sectors throughout the world. Some governments have clearly had their very viability severely compromised, and many businesses simply have not survived the challenges.

Ubiquitous reports in the business media about the “global recession” over the last several years have been dominated by survival issues: how governments are struggling to maintain essential services in the face of unprecedented reductions in their revenue base; how businesses are attempting to maintain acceptable market share and customer service while

minimizing their cost of doing business; and how individuals are weathering protracted periods of unexpected unemployment and/or drastic losses in the value of their financial resources. These are indeed relevant challenges for all concerned, but there is another challenge looming: Are governments, businesses, and individuals prepared to thrive when the recession ends? Business models have been radically altered by the unique attributes of this past recession. For example banks, and other sources of working capital lend very differently than they have for centuries; individual and institutional sources of investment capital evaluate the merits of an investment very differently; workers have changed how they assess the attractiveness of a career with a current or prospective employer; and technology has completely changed how all businesses reach and serve their customers. The companies who adapt most efficiently to these macro shifts in a post-recession global economy – the “first movers” in business process innovation and change in their competitive space – will undoubtedly be the standouts in a recovery era. Expect to see a different lineup of leading companies in specific business sectors, including the emergence of new names and the outright departure of others.

In his seminal work, *Competitive Advantage: Creating and Sustaining Superior Performance* (Free Press, 1998), Michael E. Porter makes the case that “distinctive” or “core” competencies of an enterprise (resources and/or capabilities that drive a distinct cost or differentiation advantage) uniquely determine a company’s competitive position in its market, as well as its ability to sustain or improve upon it. Recessions do not intrinsically alter core competencies. But in many instances, recessions of the nature we are now emerging from do alter the degree to which the marketplace values them. To again quote Porter (“What is Strategy?” *Harvard Business Review*, Nov-Dec 1996), “A company can outperform rivals only if it can establish a difference that it can preserve. It must deliver greater value to customers or create comparable value at a lower cost, or do both.” It is essential for post-recession businesses to know how, if, and in what way(s), this value-based symbiosis between companies and their markets may have shifted because of the recession they endured.

Now is the time for businesses to re-evaluate how they will deploy their core competencies in a post-recession reality. And the absolute key to optimizing the outcomes from this re-evaluation process is data – data about the competitive environment in which the company chooses to compete, data about the segmented markets they choose to serve, and data about what their customers, vendors, employees, and other stakeholders value. It is quite possible that many aspects of the current processes of an existing enterprise – those that in fact are likely to have been key to “surviving” the most recent recession – are still quite capable of sustaining long-term competitive advantage, but now is not the time for complacency. A thorough review of the ongoing methods, procedures, and supporting systems for collecting, analyzing, and acting on information which is vital to decision-making will assure competitive excellence in the post-recession global economy.

AN ENTERPRISE BUSINESS PROCESS MODEL FOR RE-ASSESSING DATA ANALYTICS

The Macro View

Data analytics protocols in most companies are systemic, often impacting all areas of operations. Few operational and strategic decisions in fact are made without the support of information gathered routinely or on an as-needed basis. The most comprehensive way to assess how current data analytics protocols may need to be adjusted in a post-recession era is to examine a similarly comprehensive model of enterprise business processes (Figure 1) and assess the degree to which heretofore “givens” built into these protocols have in fact been altered.

In Figure 1, the left-to-right visual, often referred to as the enterprise “value chain,” embodies all business activities which define how an enterprise creates value for its markets.

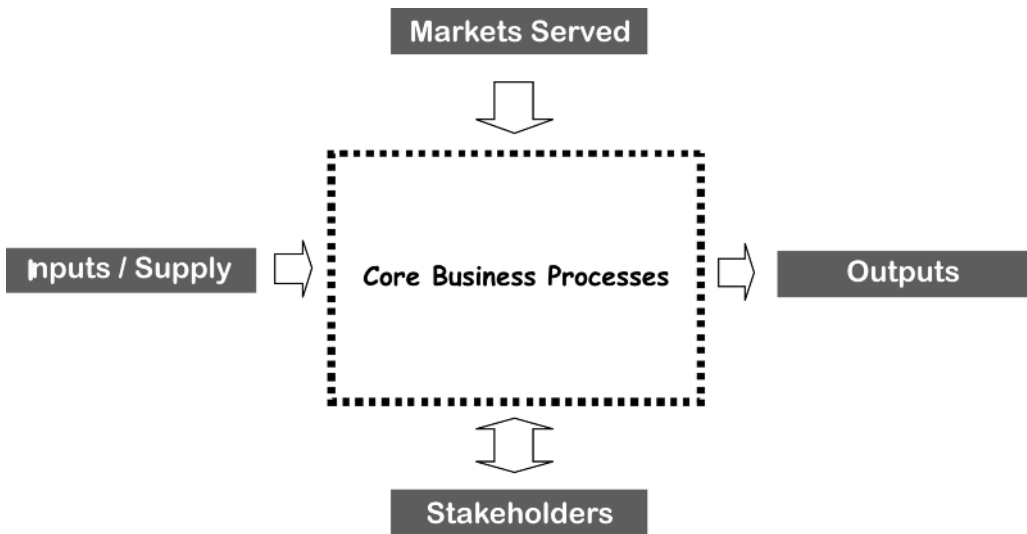


Figure 1 – An Enterprise Model of Business Processes

Resources are acquired, competencies of the enterprise are applied to these resources to produce value for customers, and value-added products/services are delivered to customers. Many of the details of these processes are elective (e.g., how raw materials are sourced, how sales are generated, how products/services are delivered, etc.).

The upper and lower business processes in Figure 1 embody the collective external influencing factors that constitute what may be regarded as an enterprise's "rules of engagement" (e.g., the various boundaries, limitations, and in some cases, regulations with which an enterprise must comply; the minimum standards of quality or performance of products which are expected by the universe of customers served; market-based price elasticity associated with mature markets, etc.) for competing in the chosen markets. The details of these processes are vital to maintaining actual or perceived value of the enterprise's competencies. Needless to say, the ability of an enterprise to simply deploy its core competencies is always superseded by its ability to meet the minimum requirements of the markets it intends to serve "with distinction" (Michael E. Porter, *Competitive Advantage*, Free Press, 1998).

VALUE CHAIN PROCESSES

To establish a proposed taxonomy for a post-recession view of data analytics, Value Chain processes have been further sub-divided into 12 process groupings as depicted in Figure 2.

Clearly, businesses that maintain the *status quo* with respect to data analytics which support decision-making embedded in any of these processes are the most vulnerable in a post-recession recovery. Following are some supporting examples of this type of risky complacency:

- Continuing to monitor financial performance metrics associated with recessionary lending agreements (e.g., liberal loan covenants focused on revenue/client retention).
- Ignoring the need to add new measures of employee satisfaction – or employee performance – to reflect shifts in alternative employment opportunities for a business's current workforce in a post-recession market.
- Assuming that a source of commodity supply will continue to be available at reasonable prices without monitoring the commodity's market conditions in recovery.
- Using the same methods for pre-testing new product acceptance.

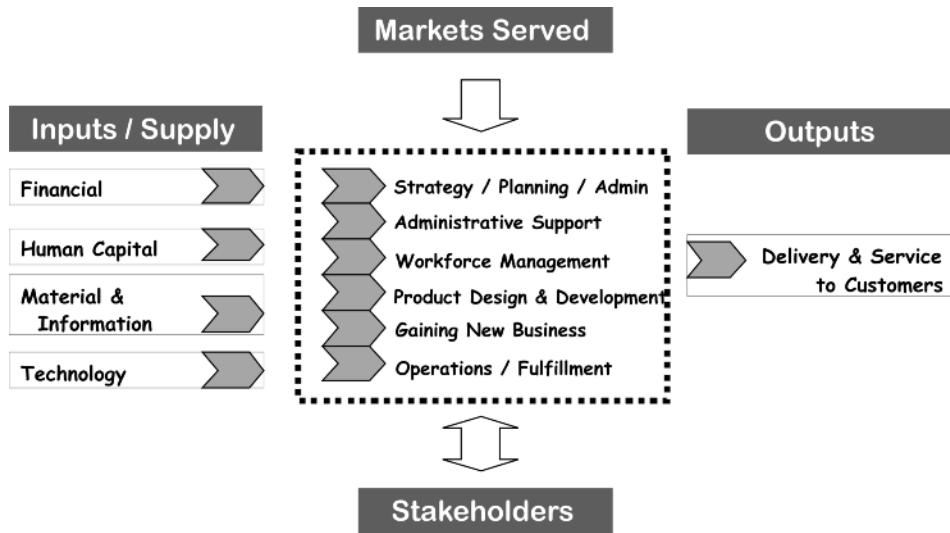


Figure 2 – Value Chain Processes

- Continuing to commingle product sales data without consideration of new options available to existing customers for product procurement (e.g., “destination shopping” vs. on-line purchase).
- Measuring marketing effectiveness on the presumption of a single channel of distribution.
- Measuring customer turnover without measuring the causal effects of the turnover (because historical turnover rates have been acceptable and mitigated by growth in market share).

Rules of Engagement Processes

As discussed earlier, whereas Value Chain processes embody the strategies and tactics sufficient to create and sustain competitive advantage in chosen markets, well-conceived Rules of Engagement processes are necessary for long-term survival in any competitive marketplace. Put simply, an enterprise incapable of meeting the non-negotiable requirements for competing in a marketplace (at any level), along with those imposed by critical stakeholder constituents, will ultimately cease to exist as a legitimate “player” in a marketplace. And of course, assurance of meeting these requirements can not be guaranteed if the right data are not being continuously measured, evaluated, and relied upon for action/change.

As with the Value Chain processes, Figure 3 proposes a sub-division of the Rules of Engagement processes into six groupings:

- 1) Regulatory and industry requirements (e.g., licensing, product quality standards, regulatory approval to launch new product, tax considerations, etc.).
- 2) Customer need specifications (e.g., physical product attributes, product price, accessibility, ease of operation, etc.).
- 3) Competitive drivers (e.g., presence of competitors in specific market segments, preemptive position of selected existing competitors, controlled source of raw material supply by certain competitors, etc.).
- 4) Enterprise owners’ expectations (e.g., ROI, communications, composition of board, etc.)
- 5) Customer expectations (e.g., product performance, warranties, after-sale service, etc.)
- 6) Employee expectations (e.g., profit sharing / opportunity for ownership, benefits, working conditions, etc.)

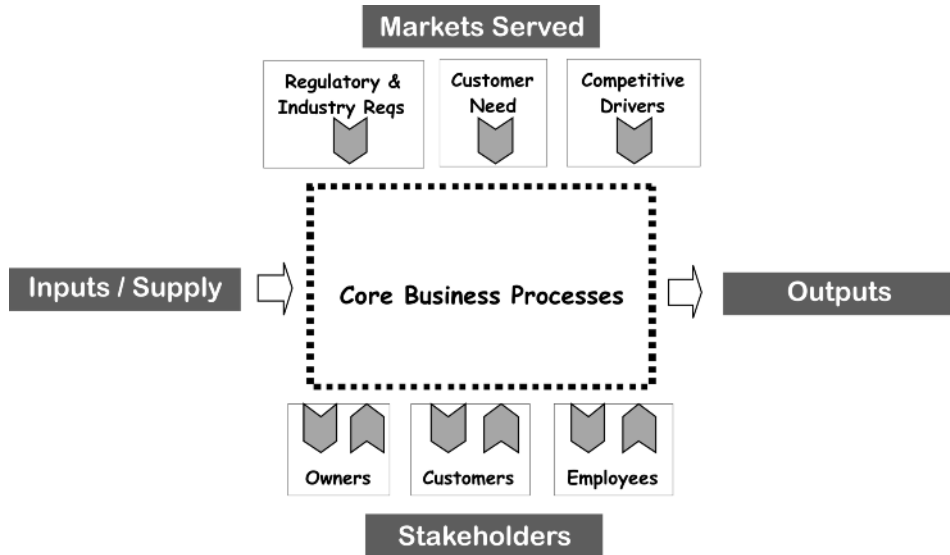


Figure 3 – Rules of Engagement Processes

Trends Supporting an Enterprise-Wide Reassessment of Data Analytics Protocols

Evidence is mounting in many sectors of the global economy that maintaining the status quo with respect to decision-support data, and with the systems and procedures used to collect and analyze this data, is a risky proposition in a post-recession economy. Markets have clearly undergone unprecedented change, rendering some heretofore reliable data irrelevant and, in some cases, misleading in the new era of recovery.

Boston Consulting Group (BCG) recently released their periodic study of consumer purchasing trends ("A New World Order of Consumption: Consumers in a Turbulent Recovery," BCG, June 28, 2010). Their most recent study covered 14 countries, including Brazil, China, India, Mexico and Russia, as well as the developed economies of Canada, the U.S., and six countries in Europe; over 12,000 consumers above the lowest quartile of personal income were surveyed. In their report, the firm reports eight powerful "shifts." Some were present to some extent before the economy weakened, and some naturally vary by country/region, but all have intensified during the downturn and are clearly lasting into the recovery:

- 1) Values are shifting as consumers rank home, stability, and the environment considerably higher than luxury and status.
- 2) A bargain-hunting mindset remains in full force – consumers are somewhat less likely to defer nonessential purchases but they remain more committed than ever to shopping around for the best deals.
- 3) Green products are still popular, but they need to demonstrate that they have economic as well as altruistic value.
- 4) Consumers willingness to spend still needs a good excuse.
- 5) Consumers remain more open to trying private labels and alternative channels (especially the Internet), *and they are sticking with them.*
- 6) Cocooning is on the rise – people are eating out less, entertaining at home more, and making repairs themselves.
- 7) Trust in institutions, especially banks, remains bruised with the news of big bonuses on the heel of bailouts.
- 8) U.S. consumers, in particular, are continuing to avoid big credit card balances and heavy debt.

In addition to the above consumer trends, there are other examples of change. For example, a pervasive shift in a major service sector, the ubiquitous systems integrator sector (large technology manufacturers and consultancies principally involved in new systems implementation) has emerged. Vendors are finding that to continue to thrive they “will have to move away from a project-to-project business model and nurture more long-term relationships with customers” (“Even Post-Recession, Integrators Will Face Rough Seas,” Steven Titch, March 24, 2010). This is major shift in a very large service sector that clearly could end up realigning the dominant players who choose to manage on a “business as usual” basis.

As a final example of the risks associated with complacency, business process outsourcing – which surged in the last decade principally because of its typical promise of “cost synergy” – is a clear example of how the recession has created unprecedented risk *and* opportunity. In a May 26, 2010 entry in the open blog site OutsourcingWorld.biz, it was reported that “with many under-resourced HR departments challenged to cope with the renewed need to staff-up in key business functions, Recruitment Process Outsourcing (RPO) is increasingly being viewed as a cost-effective way to add expertise, while retaining workforce flexibility.” This is a vivid example of a recessionary cause-and-effect phenomenon whereby some companies which downsized their HR departments due to recessionary factors (including stagnation of hiring and workforce reduction) are choosing to re-tool and re-build them more efficiently and effectively via RPO.

These are just a few examples of post-recession factors that give credence to the investment of time, talent, and organizational energy in a systematic and enterprise-wide review of data analytics protocols in an organization. In conducting these reviews, attention should be focused on:

- Outdated/obsolete measures (e.g., those associated with financial instruments, financial reporting requirements, contract modifications, etc.).
- Measures rendered irrelevant as processes shift back to pre-recession business models or are changed to reflect entirely new business models.
- Measures adopted during the recession with limited post-recession value.
- Measures whose data collection costs exceed the benefits derived.

CONCLUSIONS

The case for a comprehensive reassessment of data analytics protocols could not be more self-evident than in the post-recession era of 2010 and beyond. During the past two years, the recession has widely impacted businesses, governments, consumers, and indeed all stakeholders in the current global economy. With the hopeful emergence from the recession, organizations and individuals must be prepared to take advantage of new opportunities and avoid new obstacles. Improved decision-making and risk reduction through the use of data analytics have for several years been an essential strategy for the most successful organizations. But this past success needs to be re-examined in light of the new dynamics of the emerging global marketplace, in which previously relied upon data and processes have mostly changed, some quite significantly. Deploying a comprehensive, enterprise-wide business process approach to organizing and conducting reassessment is necessary to assure that critical change requirements are not overlooked and new sources of competitive advantage are pursued. In post-recession – more than ever before – organizations must diligently focus on measuring what matters.

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THE MANAGERIAL CHALLENGES IN COPING WITH THE RECOVERY PROCESS IN THE ROMANIAN BUSINESS ENVIRONMENT (II)

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Abstract: *The present paper tries to capture the perception of the Romanian managers about the most important challenges they are facing under the current economic conditions and the most effective actions in coping with the global financial crisis. The results of a survey designed by the authors and administered to a group of middle and top managers are analyzed in order to identify the main effective managerial decisions to be considered in coping with the crisis effects in the recovery process.*

JEL Codes: G01, L21, M21

Keywords: *financial crisis, real economy crisis, economic recovery, business decisions*

INTRODUCTION

The present paper is a continuation of the research reported last year in the International Conference of the Institute for Business Administration in Bucharest. If the previous paper was referring to the perception of the crisis and the detected symptoms of the crisis at managerial level, the current paper focuses on the perception of the managers about the most effective measures dealing with the recovery process.

The performance of the Romanian economy at the beginning of the crisis and in 2008 produced at the time the hope that Romania will be less affected or that the side effects will be quickly recovered. After a brutal decrease in GDP in 2009, at the beginning of 2010 the crisis is still present in the economy, but signs of a lessened intensity are starting to emerge, creating the premises for an economic rebound, as data offered by the National Institute of Statistics (INS) show. The indicators supporting the assessment are the rise in the share of services reflected in the GDP composition and the positive trend of industry, especially the manufacturing.

In the first quarter of the year 2010, the Romanian economy fell by 2.6% against the similar period of last year, to 96.7 billion RON (23.5 billion Euros). Industry was the only rising sector during this period, up by 4.2% against the similar period of 2009, while services and constructions each contributed 1.2% to the 2.6% GDP decline.

The industry increase, mainly that of the manufacturing industry was largely fuelled by external demand, with exports reaching 10.8 billion Euros in the first four months of the year, compared with 8.6 billion Euros in the similar period of last year. The trade deficit declined 10%, to 2.8 billion Euros.

The authors of this paper consider that surveying and analyzing the middle and top managers' effective practices to incorporate data on recovery process in the managerial decisions can provide important information on many levels: managerial, academic, social, pedagogical. The survey could be considered a mirror on the managers' experience in dealing with the crisis and on their efforts to find the most effective path to recovery. It is also a coagulated image of the perception of the management class on the support the private sector received from authorities in their fight with the crisis effects.

THE PURPOSE OF THE STUDY

In 2008, Romania was considered to be a Central European "tiger", based on its GDP growth rate (Dumitrescu, Firică, 2009).

Compared with other countries from the EEC, Romania seemed the one able to keep high the growth rate in GDP, despite the crisis evolution in the rest of the world.

The realities of the adjustment process in 2009 proved to be a brutal landing, with high pressure on the skills, knowledge and managerial abilities of the "managers" deciding in the public and business sectors of the country.

In the Institute for Business Administration in Bucharest surveying EMBA students' opinions and experience about the managerial practices in their companies is a frequently used method to detect best practices or trends specific to the Romanian environment. The debates around the results obtained by the survey offer a good opportunity for each participant to position him/ herself versus the main trend, to identify the divergent management lines and to analyze in an objective way the different policies at corporate level, in relation with the general business context.

The present paper aims:

- To survey and analyze the perception and experience of Romanian managers with respect to the most effective or ineffective measures in coping with the crisis at company level,
- To ascertain whether at national level existed a consistent set of measures to guide the business area to the recovery phase.

It is not in the intention of the authors to analyze the effectiveness or ineffectiveness of the measures taken by the Romanian managers under the current economic conditions or the anti-crisis policies proposed by the Romanian Government. Those aspects were already presented in other published scientific papers.¹

THE WORKING TOOL

The Survey was administered to the managers of the Executive MBA Program of the Institute of Business Administration in Bucharest from both year I and II, in April 2009.

The questionnaire administered contains in fact seven questions regarding the respondents' assessment of the most relevant managerial decisions, actions or behaviors as answers to the deep changes in the economic environment.

The questionnaire is anonymous, in English, of open-ended type, requiring 3 possible answers for each question, without a ranking. It also allowed the respondents to mention the industry of their business. Only four out of the seven questions of the survey are relevant to the current study.

The four questions analyzed in the survey are:

Q1: Which were the three most effective anti-crisis measures at the level of your company?

Q2: Which were the three less effective anti-crisis measures at the level of your company?

Q3: Which were the three most effective anti-crisis measures at national level?

Q4: Which were the three less effective anti-crisis measures at national level?

The questions were addressed in sequence to allow managers to reflect on the consistency in policies at corporate and national level.

THE RESPONDENTS

The questionnaire was presented as a volunteer task with the same objectives as this paper. The answer rate was 43% of the students present in the days of administration. We receive 51 valid questionnaires.

The industries represented by the respondents of the survey are shown in annex 1.

It is worth to mention that the industries with the highest contribution to the GDP in 2008 are represented by respondents in the sample. In our analysis, respondents coming from industries with 2% or less contribution in the structure of the GDP were considered combined (Pharmaceutical and Chemical industries, Engineering & Heavy industry and Extracting, Auto & Real Estate industries).

Table 1. The structure by category of resources of the Romanian GDP in 2009

Services	55.73%
Industry	26.36%
Agriculture	6.96%
Construction	10.95%

Source: Compiled by the authors from INS provisional data for 2009 (INS, 2010)

It is not possible to ascertain whether the sample is representative or not for the population of Romanian middle and top managers. However, we may notice two characteristics of the sample:

- The sample covers a wide range of industries that the respondents come from, and the main contributors in the structure of the GDP are well represented by our sample;
- The Executive MBA students were not selected in view of the survey, and the task was presented as optional.

Based on these elements, we consider that the results of our study could offer indications about the most commonly used measures in coping with the crisis at company level and the assessment of the managers about their impact. An important pillar of the study is the part where are captured the perception of the managers pertaining the measures taken at national level to move Romanian economy toward the recovery process.

RESULTS AND ANALYSIS

The open-ended scale the survey was conceived on elicits a wide variety of responses, so the respondents do not feel constrained to fit their perceptions into narrow, artificially created scales. However, it may be very difficult to summarize, combine or obtain associations among this type of results or to turn the findings in meaningful information categories. To reduce the variability of the subject matter we tried to structure the responses to elicit the same wide-ranging responses, but in more focused manner: the questions asked only "the three most important measures", inviting the respondent to make himself a first choice. Even so, it was difficult to determine the reliability of the analytic categories and we needed to introduce a new category, "Others", to capture the categories that had a very low frequency.

The aggregation of results and the definition of the analytic categories were done starting from key words and taxonomy analysis of the answers. Three dimensions were on focus: the frequency of the answers vs. total number of answers, their relevance by industry, and the comparison across the industries of the surveyed elements. The main analytical categories of

answers for each question in the survey are analyzed below and elements not captured in a trend are presented under the category, "other ", at the end of the paper (Annex 2).

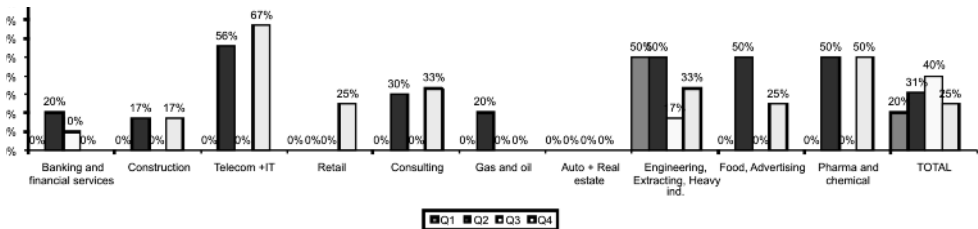
Another general observation is that the response rate was different for the four questions: 80% answered Q1, 69% answered Q2, 60% answered Q3, and 75% Q4. So the higher percentage of answers was noticed for Q1 and Q4 and the smaller for Q2 and Q3. We concluded that the managers are more comfortable to discuss about performance at company level and ineffective measures at national level and less comfortable to express themselves about the effective measures at national level or ineffective measures at company level.

Per industry the respondents from auto and real estate answered all questions.

It is interesting to see the non-answered questions per industry as reflected in the figure 1, below.

The highest percentage of non-answered questions is in the Telecom and IT industry for Q4 (67%).

Figura 1. Non answered questions

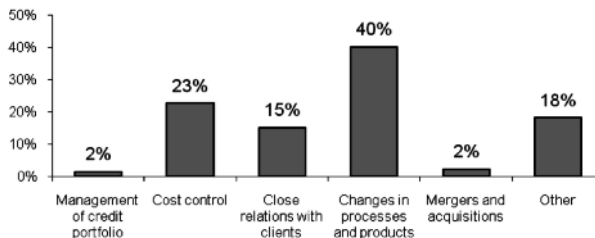


Q1: Which were the three most effective anti-crisis measures at the level of your company?

Five meaningful categories were detected in the answers (figure 2a):

- a. Management of credit portfolio;
- b. Cost control;
- c. Close relations with the clients;
- d. Changes in processes and products;
- e. Mergers and acquisitions.

Figura 2a Q1. Most effective measures coping with the crisis at company level

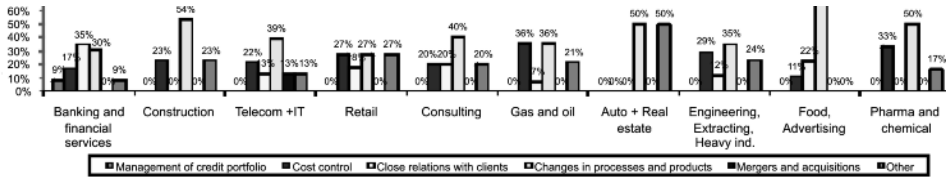


The most effective measures in coping with crisis have been identified as being the change in the processes and products and the cost control. It is to be mentioned that those measures are structural measures with potential positive effect in the recovery phase, with potential implications for a new competitive positioning of the Romanian economy.

At industry level the "mergers and acquisitions" is seen as an effective measure only by the IT&C industry and the management of credit portfolio by the banking and financial services

industry (figure 2b). “The changes in processes and products” is identified as an effective measure by all the industries. In terms of effectiveness, the categories of measures to cope with the financial crisis are pretty much the same, but the specific industry the respondent comes from influences the degree of preference for a certain category.

Figure 2b Q1. The most effective measures in coping with the crisis at company level by industries

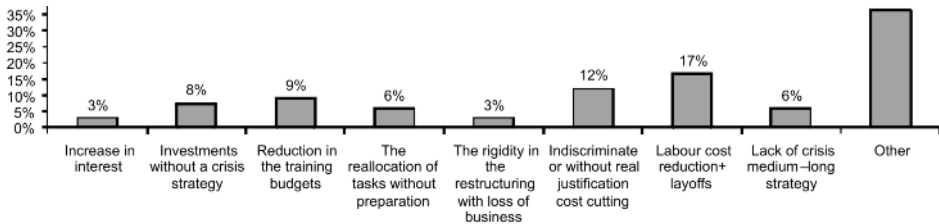


Q2: Which were the three less effective anti-crisis measures at the level of your company?

Eight categories of responses were identified (Figure 3a), just two of them having over 10% rate of response:

- a. Increase in interest;
- b. Investment without a crisis strategy;
- c. Reduction in the training budgets;
- d. The reallocation of tasks without preparation;
- e. The rigidity in the restructuring with loss of business;
- f. Indiscriminate or without real justification cost cutting;
- g. Labor cost reduction + layoffs;
- h. Lack of crisis medium-long term strategy.

Figure 3a Q2. The most ineffective measures to cope with the crisis at company level



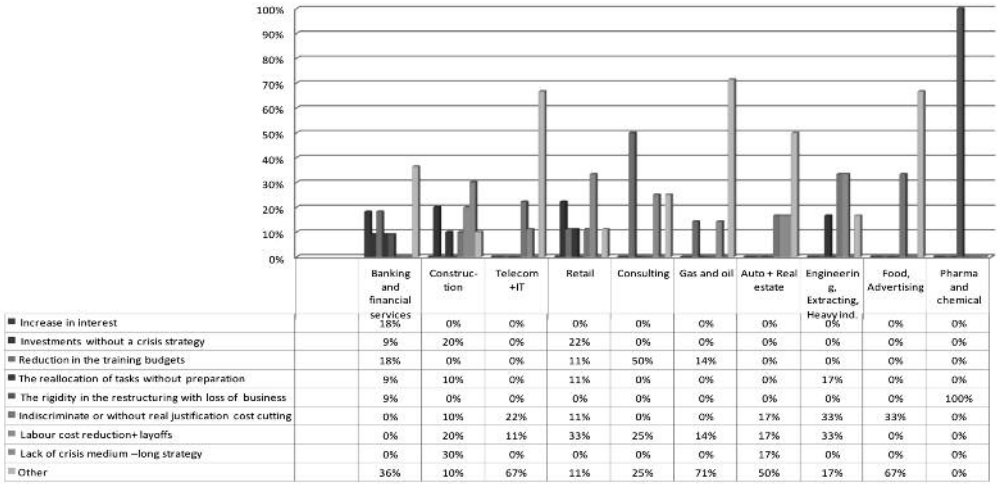
The dispersion of answers is reflected by a large percentage of answers grouped under “Other” presented in detail in the Annex 2.

The surveyed managers indicated as the most ineffective measure labor cost reduction and layoffs, as well as indiscriminate or without real justification cost cutting. It is to be mentioned that cost cutting has been identified as second most effective measure, but here the lack of justification of the measure, its implementation in a non critical way is clearly articulated.

At industry level it is interesting to see the preponderance of specific ineffective measures identified (figure 3b):

- in construction-lack of medium-long term strategy for management in crisis context,
- in retail labor cost reduction and layoff,
- in consulting reduction in training budgets,
- in pharma the rigidity in restructuring the business.

Figure 3b Q2. The most ineffective measures in coping with the crisis, at company level

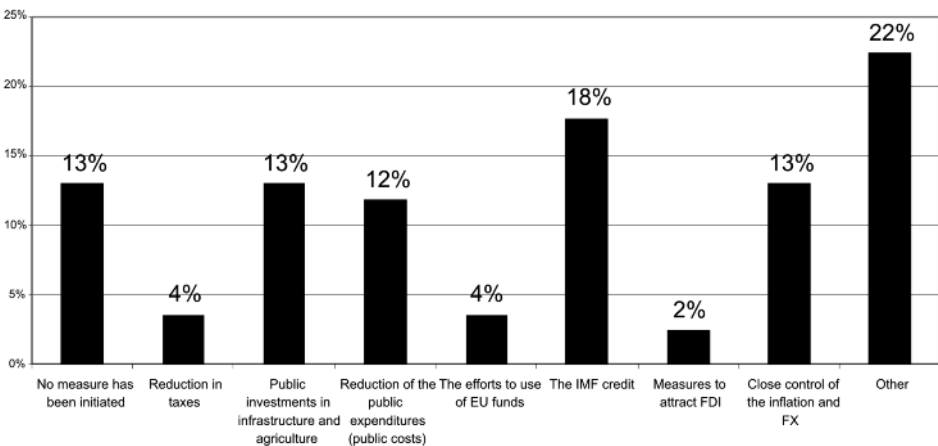


Q3: Which were the three most effective anti-crisis measures at national level?

Seven analytic categories were identified for this question (figure 4):

- a. Reduction in taxes;
- b. Public investments in infrastructure and agriculture;
- c. Reduction of the public expenditures (public costs);
- d. The efforts to use EU funds;
- e. The IMF credit;
- f. Measures to attract FDI;
- g. Close control of the inflation and FX.

Figure 4 Q3. The most effective measures at national level to cope with the crisis



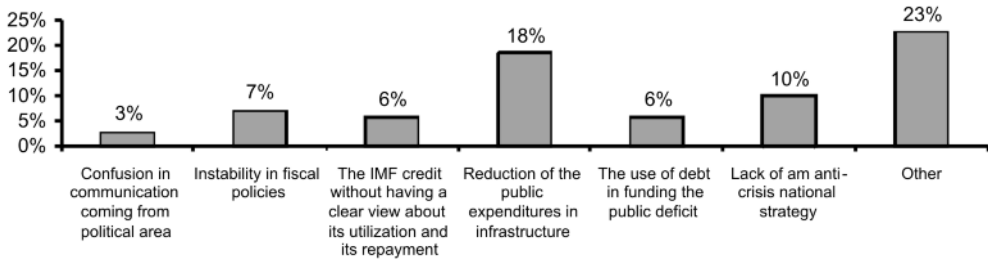
13% of the respondents considered that no effective measure has been initiated at national level. The measures at national level positively perceived are getting IMF credit, the public investments in infrastructure and the control of inflation and FX.

Q4: Which were the three less effective anti-crisis measures at national level?

Six analytic categories have been identified from the answers to this question (figure 5):

- a. Confusion in communication coming from political area;
- b. Instability in fiscal policies;
- c. The IMF credit without having a clear view about its utilization and repayment;
- d. The use of debt in funding the public deficit;
- e. Lack of an anti-crisis national strategy.

Figure 5 Q4. The most ineffective measures in coping with the crisis at national level



The most ineffective measures are to a certain extent complementing the effective measures identified, in our view strengthening the respondents' assessments. For example the highest percentage regarding the ineffective measures at national level relates to the second most effective measure – public expenditures in infrastructure. The same, the IMF credit is seen as ineffective only in the context of lack of strategy in its utilization and repayment. It is important to notice the perception of lack of national strategy about dealing with the crisis, the instability in fiscal policy and confusing messages coming from political area. The same, the surveyed managers identified as ineffective measure the funding of public deficit in large part by debt.

CONCLUSIONS

The surveyed managers identified a set of effective and ineffective measures in coping with the crisis at corporate and national level. The set of measures proposed depends on the industry the respondents come from.

At company level:

The most effective measures reveal a preoccupation for restructuring the internal processes and products; the less effective measures are cost cuts and great sensitivity regarding the human dimension of the process.

At national level:

IMF loan and the investment in infrastructure are seen positively; as ineffective measures are seen the cut of public expenses in infrastructure and the lack of an anti-crisis strategy.

The investments in infrastructure were highly asked by the business field. However, this study leads us to the conclusion that at national level inconsistent measures were suggested to guide the business area to the recovery phase.

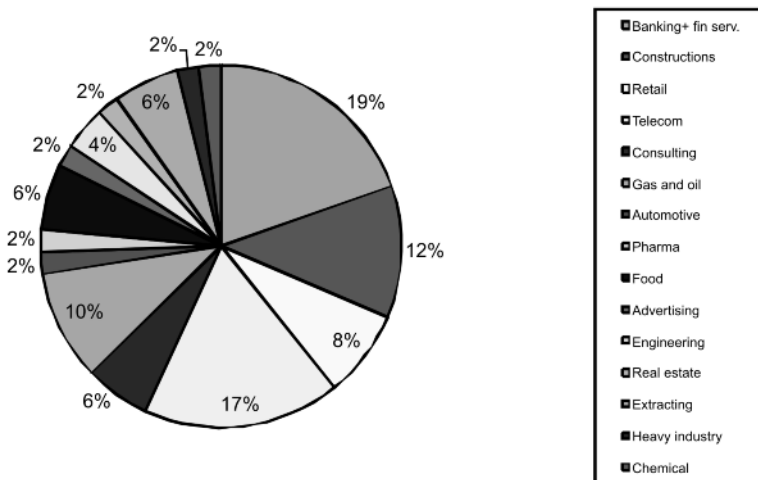
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ANNEX 1 - The structure of the EMBA program respondents by industry



ANNEX 2

Q1: Which are the three most effective measures in coping with the crisis until now at the level of your company?

Category - "Other"

Banking and financial services	Increase selling efforts, increase the quality of services.
Construction	Increase selling efforts, attention to human resources management, new leadership
Telecom+IT	Preserve cash, elaboration of alternative budgets.
Retail	Layoff the personnel, revision of the investment plan, better collection.
Consulting	Communication- clear message of CEO about the need of doing business differently, develop new strategies "Develop a culture of continuous improvement.
Gas and oil	Preserve cash, encourage new idea, efforts for developing the group spirit.
Auto + Real estate	Motivation of the personnel, revision of the investment plan, better collection.
Engineering, Extracting, Heavy ind.	Reallocation of performing persons from production to sales and marketing, identification of new financial sources, development of the business in the niche segment, focus on the big contracts or accounts of the competition not renewed.
Food advertising	xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
Pharma. and chemical	Reduction in supply time with 20% smaller than in 2008.

Q2: The most ineffective measures at your company level to cope with the crisis**Category - "Other"**

Banking and financial services	Forced collections; reduction in payment facilities; blocking the new hiring.
Construction	Labour cost reduction (2); lack of competition.
Telecom+IT	Some projects were blocked; outsourcing; reduction in the quality of services offered to clients; inflexibility vs. the clients; the sacrifice of the long term interest vs. short term benefits; reduction of some costs with marginal effect on total but big impact on employees.
Retail	Renegotiation of the contracts with suppliers.
Consulting	We have not increased the salaries for the administrative staff only for the productive personnel.
Gas and oil	None; insecurity climate about the jobs; more close relations with domestic clients; the decision not to reduce the human resources; efforts in projects with the state that is not observing the contract clauses.
Auto + Real estate	Forced sales; measures imposed by the group more or less adapted to Romanian market; some services given extra to the partners.
Engineering, Extracting, Heavy ind.	Delays in decisions implementation.
Food advertising	Keeping the margin; moral of the company affected.
Pharma. and chemical	Inventory management.

Q3: The most effective measures at national level to cope with the crisis**Category - "Other"**

Banking and financial services	Measures to encourage export.
Construction	Reduction salaries in public sector; lack of interdisciplinary analysis (economic, technologic, social).
Telecom+IT	Reevaluation of the payment terms with the contractors; the reductions in interest rate; support for SME.
Retail	Re-starting of the crediting activities; efforts to promote the country's image.
Consulting	The persistence of Mr. Isărescu in the position of Governor of NB; the law of unique system of salaries.
Gas and oil	Better collection of public revenues.
Auto + Real estate	Pressure on the banks to restart crediting the economy; the encouragements for domestic producers; subsidies.
Engineering, Extracting, Heavy ind.	Re-starting of the crediting activities; reduction in the interest rate; national champagnes to support the consumption; support for SME.
Food advertising	Reduction in the interest rate; decentralization.
Pharma. and chemical	—

Q4: The most ineffective measures at national level to cope with the crisis

Category – “Other”

Banking and financial services	Lack of reliable national macro indicators forecasted about economic perspective; closing some activities without clear proofs of the crisis impact; the decision not to disinvest in public patrimony.
Construction	Lack of political responsibility; the long delays in payments of contractors.
Telecom+IT	Growth of public expenses without correlation with revenues.
Retail	High interest rate; Inability to attract EU funds.
Consulting	The growth in public salaries and in pensions.
Gas and oil	Lack of legal frame stability.
Auto + Real estate	Lack of legal frame stability; growth of public salaries and pensions; more sever and detailed fiscal controls.
Engineering, Extracting, Heavy ind.	Lack of support for primary industries; too slow decisional process.
Food advertising	The political intrusion in administration; the growth in public salaries.
Pharma. and chemical	—

COLOURED PETRI NETS AND THE BUSINESS ENVIRONMENT

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Abstract: *This article presents a solution that can be taken and explored by business people in order to reduce the production costs and to improve the production flow, especially in this period of time of economic crisis. Any activity domain, especially those that are based on production processes, can improve substantially their production systems and therefore their incomings, if before they were develop full-scale, they were previously modeled and simulated. To achieve the system's modeling and simulation without getting costly investments, one can call for informatic softwares, and such software is offered by the CPN working group, along with the Coloured Petri Nets.*

JEL Codes: C51, C52, C61, C63.

Keywords: *colored Petri nets, location, transition, marking, step, modeling, simulation.*

INTRODUCTION

The German mathematician Carl Adam Petri has presented, in 1962, his thesis which brings forefront of the informatics world the classical theory of the Petri Nets, initiated to develop an appropriate mathematical method to study systems.

As computer science shows an accelerated development, and as the Petri Nets are part of this area, then their development is also growing.

At almost two decades after the emergence of Petri Nets, it was developed a new class of Petri Nets, called class of the Colored Petri Nets. This class derives from the classical theory of Petri Nets and more than that, it brings an additional very useful element, a dedicated programming language, so that a corresponding use of this language for the classroom Colored Petri Nets, can help obtaining a very useful tool in modeling, validation and simulation of the systems.

By using this software, whose license can be taken for free from the working group CPN, group that is part of team Aarhus University, any system can be modeled and simulated, so that when it's translated from the project form to a real scale, to be known almost all vital details about it, and by that reducing substantially its implementation time and costs of system developing, stringent requirements for a society in economic crisis.

It is well known that the systems analyzing and designing involves a variety of activities and the handling of a large volume of information. The ultimate goal is to develop an information system based on automated data acquisition system that's integrated. The computer system must be made on a detailed analysis of the system that's led and the system that leads.

The advanced methods of designing - programming are: the design "top-down", modular programming and structured programming. These advanced methods are necessary more and more in the process of designing. If the heuristic methods have as the first target the analysis of

the existing system, the advanced methods, as a supplement to the heuristic methods, help to achieve and complete the design, but all these methods can be successfully replaced by using the software provided by CPN.

THEORETICAL CONSIDERATIONS

Systems modeling and performances evaluation [10, 13], and the development methods of their design, generally, is carried out through various mathematical models and theoretical formalisms, in tight correlation with the systems class, depending on their properties detailing rate, and depending on the nature of the examined problems.

Among the most popular methods used in evaluating, modeling and simulation of systems, based on which every activity area can develop its system, but especially the information systems, the following can be nominated:

Partitioned method. [8] It is a method that involves the study of information flow and the other issues related to the knowledge of existing system, in every department of the economic organization. In the same time, along with the information flow, are studied the documents and forms which circulated in that compartment, making an analysis of their opportunity. The advantages are that the method does not require special experience from the analyst, and is allowed the study of information and information circuits related to all activities that happen in the compartment, avoiding omissions of information or informational links, and the biggest disadvantage of this method is that after the operation of collecting information from each department is done, it's necessary that the analyst works to synthesize and correlate it, in order to determine information flow between compartments.

The method of activities study [8, 9]. This method is based on studying the information flows connected to accomplishing an activity within the enterprise, in which compete more compartments. For example, the supply activity is related to supply-unfold department (external orders) and to production compartment (specific consumptions). The method allows determining more easily the flow of information between compartments, but requires synthesis skills from the analyst regarding the connections achievement between functional activities of the enterprise. Method of activities study requires more experience from the analyst than the partitioned method.

The outputs method [7, 8]. Method that's built on developing of a list of reports and final documents to be made in that organization, following that the flow of information, of intermediate documents, and the activities performed to achieve them, to be studied on the reversed wire of the flow, to the first documents, that have started their getting. The main advantage of this method is that is one of the fastest, and can indicate the fund information necessary to the new information system. It also allows the analyst to form an overview of enterprise information issues, but has the disadvantage that requires experienced analyst, if not in similar projects, at least to other systems design.

The stimuli method [7]. By this method can be traced reactions triggered by the documents entering the system. For example, a command (accepted by company) entering the system, involves calculating the execution time requirements, materials requirements, capacity coverage of production, etc. All this triggers an information flow between different compartments, flow that tracks all activities necessary to be satisfied starting to the acceptance moment of your orders until sending the product to the customer and receiving its value by bank. This method also allows the analyst to form an overview of the enterprise, but requires a lot of experience from him.

The current complexity of system projects is increasing and therefore requires sophisticated design and analysis system. Analysis and object oriented design offers methods to analysis, design and implement the systems into a compact manner. In contrast with structured analysis, the transition from design to deployment is more continuous. Traditionally, the object-

oriented techniques are used to specify fine granular structure, using for this their relationships and class.

In these conditions we present an example of modeling, validation, analysis and simulation of the systems through "Colored Petri Nets", it's advantage being that shows a tool which is accepted by computer and allows design the system, simulating and analyzing it, making it be easily implemented and interpreted, especially with low investment.

The following example requires the development some concepts and definitions.

Definition 1.1 [3] We call Petri Nets, abbreviated PN, triple $\Sigma = (S, T, F)$, where:

- $S \cup T \neq \emptyset$.
- $S \cap T = \emptyset$.
- $F \subseteq (S \times T) \cup (T \times S)$ so that $dom F \cup Im F = S \cup T$.

Elements crowd S are usually called locations. They can score a variable number of data.

Elements crowd T are called transitions. They represent elementary changes of the data distribution in the network location. The crowd F is called flow relation of the network.

Definition 1.2 [1, 2] We call Colored Petri Nets, CPN abbreviated, a mathematical object of form: $CPN = (S, T, A, \Sigma, V, C, G, E, I)$, where:

- The first three components will define the structure of a CP Net, as in Petri nets location-transition.
- Σ represents a family, non-empty, of a lot of colors, non-empty.
- V is a finite set of variables, for each being associated a lot of colors from:
 $\Sigma (\forall v \in V, Tip(v) \in \Sigma)$.
- C is a function, $C: S \rightarrow \Sigma$, called coloring function, which assigns for each location from S a set of colors from Σ .
- G is called a guard function, $G: T \rightarrow EXPB$, which assigns to each transition one logical expression with truth value- true or false-(so that for a transition $t \in T$, $Type(G(t)) = Bool$).
- E is a function $E: A \rightarrow EXP$, which assigns for each arc from A, one expression from EXP, so that for the $\forall a \in A$, the type of E(a) it is a multiset over the location colors $s \in S$, incidents with arc "a" (i.e. $Type E(a) = C(S)_{ms}$).
- "I" represent a function, called the function of initialization $I: S \rightarrow EXP$, which assigns to each locations $s \in S$, one expression from EXP, that is a multiset type over the set of location colors (so for any $s \in S$ „Type I I(s)=C(s)_{ms}).

Above was noted with EXP, the set of all expressions of multiset type and with EXPB, the set of all Boolean expressions, with Var(t), the set of variables associated with transition $t \in T$ and with PMS, the crowd for all non-negative multi-sets over P.

For the arc $\{a \in A\}$ we will note with $s(a)$ the location incidence for the arc "a" and with $t(a)$ the transition incidence for arc "a".

Definition 1.3 [1, 2] We call "marking" in a colored network a function $\mu: S \rightarrow \Sigma$, so that for any $s \in S$, $\mu(s) \in C(s)_{ms}$ (i.e. assigns each location $s \in S$, a multiset over the crowd of colors "s").

We will note with μ_0 the initial marking, which is obtained by evaluating the initialization expressions ($\forall \{s, c\} \in JE$ we have $\mu_0(s, c) = (I(s)(c), \forall s \in S)$).

We will note with M the set of all markings of a colored network.

Definition 1.4 [1, 2] We call "step" into a colored network a finite and non-empty multiset over binding crowd items BE.

We will note with Y the crowd of all steps of a network.

Definition 1.5 [1, 2] We say that the step Y is enabled at marking μ if and only if for any $s \in S$ we have $\mu(s) \geq \sum_{\{t, b\} \in Y} E(s, t)(b)$, where $E(s, t)(b)$ is the value obtained by evaluating the expression

$E(s,t)$ at the binding b .

If $(t, b) \in Y$ we say that the transition t is enabled at the marking μ for the binding b .

If $(t_1, b_1), (t_2, b_2) \in Y$ and $(t_1, b_1) \neq (t_2, b_2)$, we say that (t_1, b_1) and (t_2, b_2) are concurrently enabled.

A step that's allowed may occur and so are moved tokens from the locations of input in the locations of output of the transition that occurred. The number and colors of the tokens moved is determined by the expressions on the arcs, expressions evaluated to check the permission of the binding elements.

Definition 1.6 [1, 2] If the step Y is enabled at the marking μ it may occur by changing the marking μ in the marking μ' and defined by:

$$\forall s \in S: \mu'(s) = \left(\mu(s) - \sum_{(t,b) \in Y} E(s,t)(b) \right) + \sum_{(t,b) \in Y} E(t,s)(b)$$

We say that marking μ' is directly accessible by marking μ by producing the step Y and we will note this by $\mu[Y > \mu'$.

We note $\Delta Y(s) = \sum_{(t,b) \in Y} E(t,s)(b) - \sum_{(t,b) \in Y} E(s,t)(b)$, so that calculation of the new marking is made with formula $\forall s \in S: \mu'(s) = \mu(s) + \Delta Y(s)$.

Furthermore, concepts of finite sequence of occurrence, infinite sequence of appearance, accessibility by n -steps, accessibility, etc. are defined like those of networks location/transition.

We will note with $[\mu >$ the crowd of markings reachable from the initial marking .

Definition 1.7 [3] Modeling means solving fundamental and applied problems, processes of the systems and objects, developing new methods oriented for the use of computers and advancing research technology for various areas of science and technics.

Modeling has a special importance (theoretical, technical and for domestic economy) in solving problems of well defined specialties, which consist in advancing the qualitatively research of processes, complex systems and efficiency of works by using new Computing technologies.

We call simulation the action by which is simulate a real system and result of its production, the goal of this action being to find "something" about the actual functioning of the system.

We can say that simulation is more an art than a science. It can be considered a method to study the processes and phenomena that's achieved by replacing the real object of research. As a research method is quite old, physical models by similarity, then those built by analogy, replacing in many cases the actual research subject. A model assumes, generally, the representation of system as a lot of parts, interacting one with other. The model can be: a duplicate of system, a symbolic representation of system (i.e. mathematical) or the system itself.

Models are representations of reality. If they would be as difficult to handle as the reality, their use would not bring advantage. Therefore, generally, we build models more simple than reality, based on which we can predict and explain with high accuracy, complex phenomena. The explanation is that, although describing a phenomenon requires a big number of variables, usually few of them have an essential role.

MODEL DESCRIPTION - FINANCIAL AUDIT

The Audit [4, 5] generally means professional examination of information, so that we can express a responsible and independent opinion, by reference to a quality criterion (standard rule).

The Audit is a widely used term, originally meaning financial audit [4], to verify financial statements, the processes and transactions of a company. Currently term of Audit has an additional significance of Operational Audit [4] to improve company performance and Audit of Management [5] to do a trial on the management, or other type of Audit depending on the company's

needs, such as: Audit of Quality, Audit of Environmental, etc.

Financial Audit (Statutory) [4] includes a basic mission and related missions.

Primary mission is to certify financial statements and some specific checks provided by Law.

The business domain emphasizes the need for authorities to pursue a Fiscal strategy on medium term and long term, to focus their efforts to reduce the frequently legislative changes.

According to World Bank, the tax level, regulation and tax administration are key elements for business, in making an investment decision. Romania has developed tax system in the past 20 years, but reform is still incomplete, and this is reflected in the level of attractiveness for foreign investors and local business development.

Depending on the objectives of society in Romania are found following types of AUDIT:

- Internal audit [4, 5] - represent the form by which is examined:
 - the whole system of internal control and accounting system, identifies weaknesses of management system and internal control, their associated risks and makes proposals for improving these systems;
 - an agreement on operating with rules established by the company and leadership's decisions;
 - an efficient use, and protection of the financial, material and human resources, seize the cases of bad management, fraud, make proposals to prevent and eliminate the causes of those problems.
- EXTERNAL AUDIT [4, 5] is achieved by a Financial Auditor (statutory), appointed by the General Assembly of Shareholders (the Associates) as provided in Law no. 31/1990 re-published, Art. 160 [6], or a Contractual Auditor, a third part under contract with the company.

External audit represents a very important element for business, which makes the system underlying of this modeling to be an external audit system. For system description we use an algorithm that can be presented in four stages of work, algorithm on which will be modeled with the CPN and for which will be implemented only Phase I.

External audit can be conducted in four stages as it follows:

1. Planning and defining a method of audit.
2. Testing some control mechanisms and substantial testing operations.
3. Performing analytical procedures and the tests of details of balances.
4. Completion the audit, and make an audit report.

In the example presented for the modeling, the company which conducts the audit, FA abbreviated, makes an activity well determined by an algorithm. This algorithm can be represented as:

- Step 0. Start Phase I.
- Step 1. Pre-planning.
- Step 2. Obtaining the context information.
- Step 3. Obtain information on legal obligations of the client.
- Step 4. Performing preliminary analytic procedures.
- Step 5. Determining signification limit and estimating materiality and audit acceptable risk and the inherent risk.
- Step 6. Understanding the internal control and the estimation of control risk.
- Step 7. Making the general audit plan and the audit program.
- Step 8. Stop Phase I.

For solving this algorithm we use the Colored Petri Nets. Network configuration consists of locations, arcs and transitions, whose meanings are given below.

Network locations are:

- SSA – represent the location where reach companies requirements that request the audit.
- QSS – is the location where's formed, according to the first coming rule, the list of companies which submit documents for the audit.
- VDS – is the first location where the companies arrive, to present their documents for primary checking.
- SRD – represent the location where are the companies that have not submitted all necessary documents for the audit, being rejected.
- SVJ – is the location into arriving companies whose documents are corresponding up to this moment and whose documents are to be controlled in terms juridical.
- SPJ – location where are the companies that have presented documents, but face problems after they have been legally assessed.
- SCJ – is the location where companies whose documents corresponded until this stage and will be subjected to analytical procedures.
- SPA – location where are found companies with problems after the analytical evaluation.
- SAP – location where those companies whose documents have corresponded to this level of control will move.
- SPR – location which identifies the companies with acts that don't correspond to the signification limit, after conducting estimations of the audit acceptable risk and of inherent risk.
- SER – location where arrive companies whose documents correspond, after conducting estimations of the audit acceptable risk and of inherent risk.
- SFA –location where will arrive all companies of whose pre-planning was completed, and also the working times related required for each company to verify the documents.

Transitions are those actions by which the network move from one state to another, and in the configuration of this network are the following transitions:

- PrePla – pre-planning, which by its achievement, allows movement of the companies documents who have requested an audit, from location "QSS" to location "SSA" ,and from here into the location "VDS" for preliminary verification of documents.
- ObtInf – obtaining the information of context, which by its achievement, allows transferring the documents of the company that has presented them for the audit either into the location "SRD", where arrives companies which don't have corresponding documents, either in location "SVJ", where arrive those companies whose documents will be legally evaluated.
- ObJur – obtaining the information on the legal obligations of the client, transition which by it's achievement, allows transferring documents in location "SPJ" for those companies whose documents have legal problems, either in location "SCJ", whether the documents have corresponded at legal evaluation.
- ProAna - performing preliminary analytical procedures, which by it's achievement, allows transferring documents in location "APS", location where we find companies whose documents had problems in analytical assessment, or in location "SAP", where they will be documents of the companies that have corresponded after those evaluations.
- PrsEsr - determining the signification limit and estimating the acceptable audit risk and inherent risk, which by its achievement, allows transferring documents in location "SPR", for those companies whose documents faced problems on determining the signification limits, or in location "SER" for all other companies.
- IntPla - drawing up the general audit plan and the audit program for all companies whose

documents have corresponded the overall evaluations.

The arc makes connections between places and transitions, or between transitions and locations. The family sets of the colors is $F = \{DATA, INT, INT \times DATA, M, S, T, V\}$, where:

INT = int timed (timed integers), DATA = string (strings), $INT \times DATA = INT * DATA$,

$S = \{1, 2, \dots, 10\}$, $T = \{0, 1, \dots, 1000\}$ timed integers, $V = \{0, 1, \dots, 10\}$.

With the crowd of colors INT are colored the following locations: SSA, VDS, SVJ, SCJ, SAP, SER.

With the crowd of colors DATA are colored the following locations: SSA, QSS, VDS, SRD, SVJ, SPJ, SCJ, SPA, SAP, SPR, SER.

With the crowd of colors T is colored the location SFA.

We use the variables "m" and "p" type DATE, x of type S and y type V and variable of initialization stop = "****"; necessary for marking the end of companies list scheduled for audit.

In the shown example we consider that flow rates are calculated by a Poisson probability formula, so that the time is calculated exponentially, very close to reality.

We consider locations in the order given by the vector below:

{SSA, QSS, VDS, SRD, SVJ, SPJ, SCJ, SPA, SAP, SPR, SER, SFA}.

We start from the initial marking:

$$\mu_0 = \left((1, s_1) + (2, s_2) + (3, s_3) + (4, s_4) + (5, s_5) + (6, s_6) + (7, s_7) + (8, s_8) + (9, s_9) + (10, s_{10}) + (11, ****) + (12, ****), "", 0, "", 0, "", 0, "", 0, "", 0, 1 \right)$$

where 0 is the empty multiset, and "" represents the empty string.

Marking that highlights the request list of companies for the audit program, and also the states of all network at baseline.

THE EVOLUTION NETWORK

CPN-Tools timed component [3, 4] was used for drawing the Colored Petri Nets and stochastic timed, which modeled the system described above. By this procedure were obtained the Nets from Fig. 1.

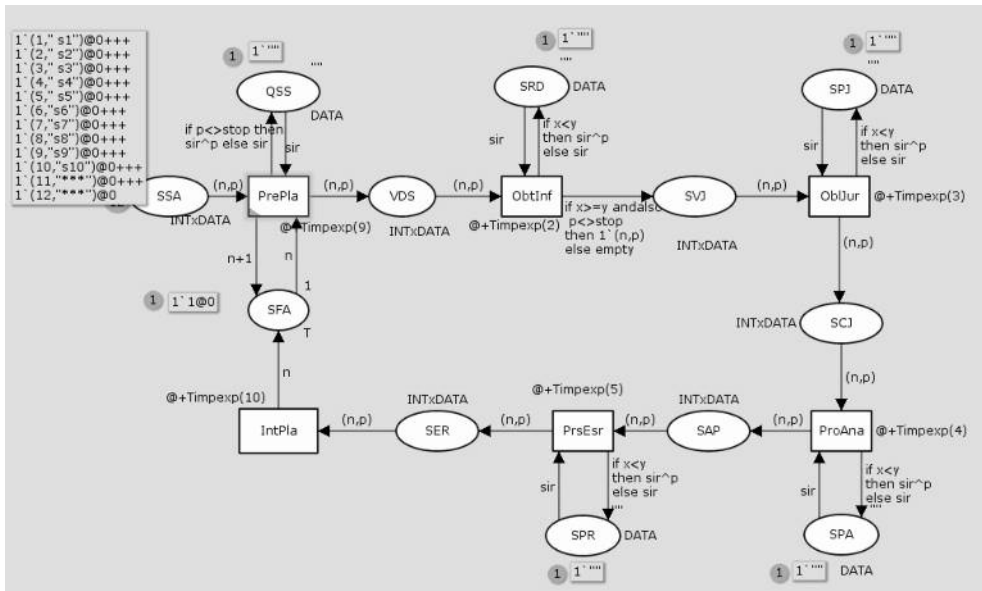


Figure 1

Reading this figure, we can describe the evolution of the network on this step of activity. Applications for making audit reach location "SSA", from here are taken and stored in location "QSS", forming a waiting list with the FCFS (first-come-first-served) policy. From this location, following a Poissonian flow with parameter $X = 9$ units time (UT), companies documents enter the stream and, according to a predefined time parameter for each stage of work, will be processed so that the analysis of network evolution is made on a vital components of society - which is time. Under existing procedures we know exactly at every moment in what stage are the documents from each company, and how much time was necessary for the evaluation, allowing us to intervene and reduce dead times, delays, or adjustment of other parameters, so that we make all activity efficient to maximum. For example we can follow the figure below:

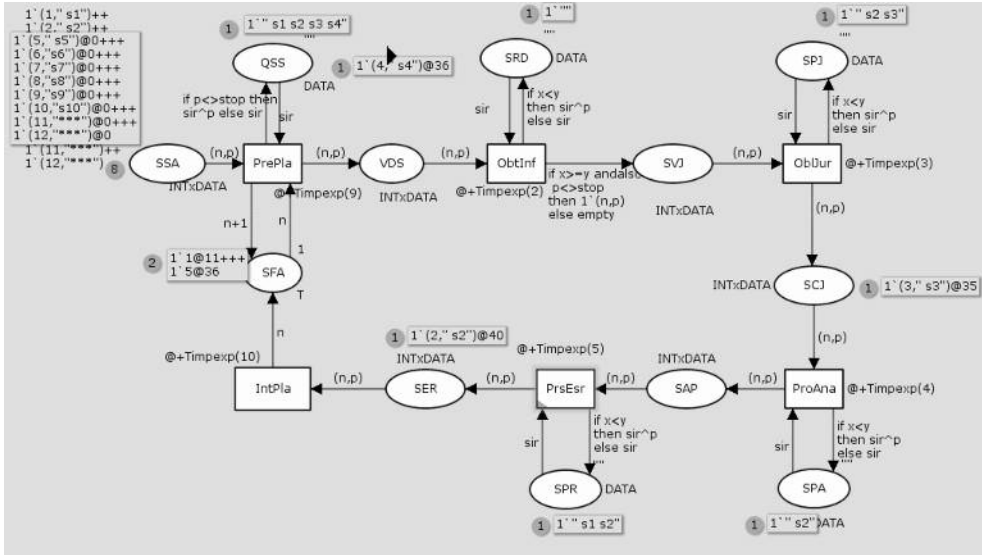


Figure 2

At this point, in the network evolution it can be seen that in the location "QSS" - documents are lodged for four companies, companies s_1, s_2, s_3, s_4 , whose documents have been taken for control. After the inspections were made, we can see that for companies s_2 and s_3 were found legal issues, companies from location "SPJ", also for company s_2 are found irregularities in documents and after performing analytical procedures, and also by the fact that companies s_1 and s_2 have encountered difficulties in determining the signification limits and estimating acceptable audit risk and inherent risk, until this moment of network's evolution, just society s_1 was fully evaluated and for which was drawn audit plan overall.

Finalizing the evolution of network is shown in the figure 3.

From here we can read and interpret data about each company when was completed the first stage of the audit "Planning and define a method of auditing".

With help of CPN-Tools, hierarchical component can be developed the following three stages of the audit:

2. Testing some control mechanisms and substantial testing operations.
3. Performing analytical procedures and the tests of details of balances.
4. Completion the audit, and make an audit report.

And so, those four major stages of the audit being finalized, they can be unified and their results can be presented in a general framework, which is covering the evolution of audit activity, allowing us to make a comparison with programming technique, "Divide and conquer",

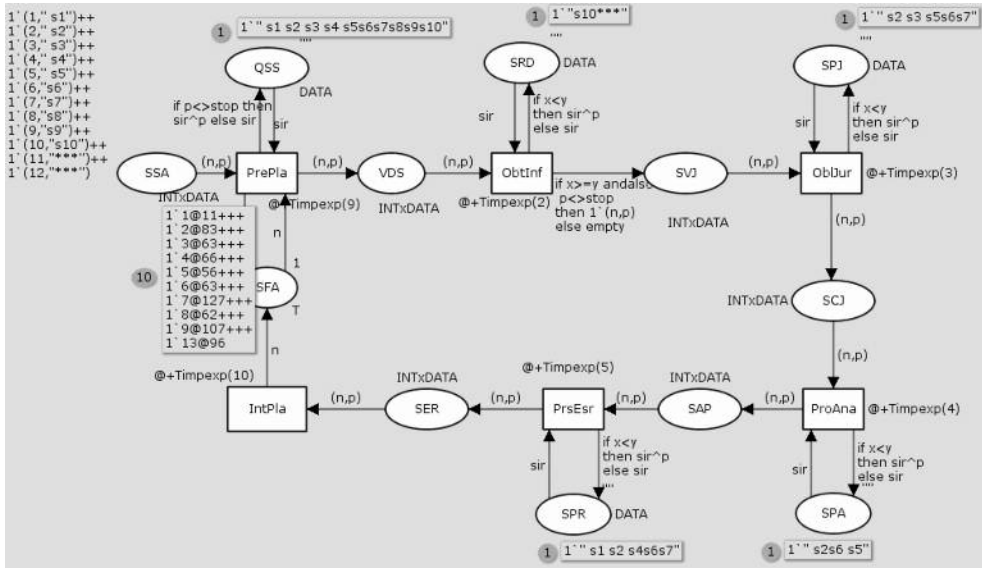


Figure 3

technique that's governed by possibility of dividing the problem in sub-problems, solving them and unifying all solutions into a single one, that makes activity easier to take place and at the same time with more efficiency.

CONCLUSIONS

It can be seen the necessity of correlating the economic domain with IT&C, so that it can be included into a well-tuned operating system, designed to prevent the effects of financial instability.

It can be easily seen that the simulation doesn't make decisions instead of a manager or governor, it just provides information and data, based on which the right decisions can be made. Simulation is correct only if data entry is accurate and it is as reliable as the analyst who created the simulation. Also, major involvement of the administrator in the process modeling, validation and simulation is very important for successful implementation of a model in making the decision.

The model presented highlights the power of modeling of the Colored Petri Nets stochastic timed, and multiple approach possibilities of a system which can be modeled, validated and simulated. This is the concrete way by which any real system can be studied, no matter how complex it is. Stochastic models are more realistic than those deterministic. Because most times, these models contain at least one variable described by a probability distribution, one turns to simulation to solve them.

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COMPETITION POLICY, ONE OF THE PILLARS OF THE ECONOMIC RECOVERY?

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Abstract: *The negative effects of the sub-prime mortgage lending affected not only the US, but also the European financial markets, due to the collateralized debt obligations' exposures, justifying the need for close European coordination of national aid measures. So far, EU competition policy and especially, state aid rules with the associated rescue measures have proved to play a major role in restoring financial stability and in supporting economic recovery. Despite the pressures for increased state intervention of some powerful EU Member States political leaders in order to support failing businesses, the years 2008 and 2009 witnessed that EC has successfully navigated its way through an unprecedented and extremely difficult period. The 2008 temporary framework of common principles issued by the European Commission in state aid field has been important in ensuring that state aid is appropriate for correcting market failures. Since the onset of the crisis, these additional state aid measures have helped avoiding the systemic risk, particularly in the banking sector. However, this temporary framework will remain in place until the end of 2010. Therefore, as EU Member States exit the crisis, these measures must be reduced and markets allowed to function normally again. Now it's maybe the right time to evaluate whether the EU policies and support measures for its most affected Member States and those enabling national governments to support their banking systems and real economy have started to restore confidence in both the financial markets and in the economy. This paper attempts to answer such particular questions by considering the substantive response of the European Commission, while contemplating what longer-term implications exist for competition and state aid policy and practice in the future. In other words, we try to see if the rules of the game will eventually change, and if the answer is yes, how will this happen. Thus, the first part of the paper deals with a review of the macroeconomic context at global, European and national level. In the second part, the focus is on the specific situation at EU level which calls for strengthened single market and economic and monetary union. For this, we draw attention on two major EU economic and financial recovery tools that could contribute to helping Europe emerge from the current financial and economic crisis better equipped for sustainable growth. Section three concludes and provides some policy options.*

JEL Codes: L4, L5

Keywords: economic recovery, financial crisis, public debt crisis, state aid policy, real economy

I. REVIEW OF THE ECONOMIC SITUATION AT GLOBAL, EUROPEAN AND NATIONAL LEVEL

The world economy may now be undergoing its most severe crisis since the Great Depression. The crisis provoked a rapid rise in public debts and deficits as governments had to intervene to rescue their financial system, while recording lower tax receipts and higher unemployment expenditures, and having to implement measures to support economic activity¹. Some specialists point to the threat of a second wave of the crisis: sovereign debt crises². In other words, governments were the solution to the crisis. Now, they are the problem.

Table 1. Main indicators

	Deficit 2009 (% of GDP)	Public debt 2009 (% of GDP)	Unemployment (%)
Bulgaria	3.9	14.8	8.7
France	7.5	77.6	10.1
Germany	3.3	73.2	7.3
Greece	13.6	115.1	10.2
Hungary	4.0	78.3	11.0
Italy	5.3	115.8	8.8
Latvia	9.0	36.1	22.3
Portugal	9.4	76.8	10.5
Spain	11.2	53.2	19.1
UK	11.5	68.1	7.8
Romania	7.2	29.3	8.3

Source: IMF and National Commission for Statistics

Historically, financial crises have been followed by a wave of governments' failure on their debt obligations³. According to the International Monetary Fund (IMF)⁴, global growth is expected at a rate of 4.2 percent this year, following a contraction of 0.6 percent in 2009, which was actually the first such fall in 60 years. For 2011, IMF is projecting world economic growth at 4.3 percent. However, the speed of the recovery is expected to differ across the globe. Recovery, on the one hand, is expected to be slow in advanced economies such as Japan, US and the Euro zone, where growth is being hindered mainly by persistent high unemployment rates. On the other hand, developing Asia and other emerging economies are expected to grow at a faster pace.

IMF also projects that by 2015 the proportion of public debt to GDP will reach 110% in the U.S., 250% in Japan and 91% in the UK, with comparable figures for most other large economies in Europe. This signals the threatening danger of a sovereign debt crisis impacting all major economies.

The situation is particularly worrying in the euro area where the economic policy framework is not satisfactory due to lack of coordination between national economic policies and the growing of economic disparities.

According to the IMF, the „*activity remains dependent on highly accommodative macro-economic policies and is subject to downside risks, as fiscal fragilities have come to the fore. In most advanced economies, fiscal and monetary policies should maintain a supportive thrust in 2010 to sustain growth and employment. But many of these economies also need to urgently adopt credible medium-term strategies to contain public debt and later bring it down to more prudent*

levels. *Financial sector repair and reform are additional high-priority requirements*"⁵. In conclusion, investors:

- worried that individual countries may default if they do not cut their deficits and that banks holding their debt will be affected. There is an opinion that Greece's debt crisis has been postponed rather than solved.
- concerned that, if several governments try to tighten fiscal policy at once, the global economy will take a hit.

II. MAJOR ECONOMIC AND FINANCIAL RECOVERY TOOLS AT EU LEVEL

Against this background of financial and economic turmoil at global, European and national level, we evaluate the specific situation at EU level which calls for strengthened single market and economic and monetary union. For this, we focus on two major tools that could contribute to helping EU emerge from the current financial and economic crisis, better equipped for sustainable growth. First, we shall refer to the EU policies and support measures for its Member States and second, to EU policy and support measures enabling Member States interventions into their financial sectors and real economy.

II.1. EU policies and support measures for its Member States

In an interconnected global economy, Europe started witnessing since the beginning of 2010 an increased share of the crisis. After the financial implosion that began with the collapse of Lehman Brothers in September 2008, a similar though far more dangerous phenomenon unfold in Europe, this time involving sovereign debt.

Greece is currently facing a major sovereign debt crisis. Greece accumulated high levels of debt during the decade before the crisis, when capital markets were highly liquid. As the crisis has extended, and capital markets have become more illiquid, Greece may no longer be able to roll over its maturing debt obligations. To avoid the default, the Greek government has introduced a variety of austerity measures and, on April 23, 2010, formally requested and subsequently received financial assistance from the other 15 Eurozone Member States and from the International Monetary Fund (IMF).

Other countries, such as Spain, Portugal and Ireland, seem to face the growing of the public debt at a fast pace and these signs trigger suspicions of potentially even worse problems than in Greece. For instance, the Spanish economy is five times larger than Greece's. That means that a potential failure of its economy would almost certainly trigger a systemic crisis across the euro zone and perhaps its collapse. Moreover, there is a growing consensus that what began in Greece and now captures the entire euro zone economy together with the public debt crisis in the UK will inevitably impact the U.S. economy's fragile recovery.

Both Greece's budget deficit and external debt level are well above those permitted by the rules governing the EU's Economic and Monetary Union (EMU). Specifically, the Maastricht Treaty and the EU's Stability and Growth Pact call for budget deficit ceilings of up to 3% of GDP and external debt ceilings of 60% of GDP. However, Greece is not the only country in EU exceeding these limits. Of the 27 EU Member States, 20 Member States including Romania currently exceed the deficit ceiling set out in the Maastricht Treaty and Stability and Growth Pact⁶.

Actually, in 2010, almost all EU Member States experienced large public deficits and large public debt increases. Further, the sovereign debt and liquidity crisis that arose in the Eurozone in the second quarter of 2010 has subsequently affected the value of the euro. The crisis has definitely revealed the extent of the interdependence between the economies within the euro area, namely in the financial area, rendering spill-over effects more likely.

As a follow-up, the European Council concluded at the end of March that the pursuit of the Europe 2020 objectives calls for a credible exit strategy as regards budgetary and monetary

policy on the one hand, and the direct support given by governments to economic sectors, in particular the financial sector, on the other. According to the Commission's Europe 2020 strategy⁷, Europe should follow these several exits by strengthening the coordination of economic policies, in particular within the euro area in order to ensure a successful global exit.

On 12 May the Commission proposed to reinforce decisively the economic governance in the European Union.⁸ The aim is to strengthen the functioning of the Stability and Growth Pact (SGP) and extend surveillance to macro-economic imbalances. The Communication proposes to align national budget and policy planning through the establishment of a "European Semester" for *economic policy coordination*, so that Member States would benefit from early coordination at European level as they prepare their national budgets and national reform programmes. Specific proposals include:

- Reinforcement of preventive budgetary surveillance - an early *peer review at EU level of the broad budgetary guidelines of each Member State*, before adoption of national budget. The approval of the Commission's proposals to reinforce Eurostat's mandate to audit national statistics is a prerequisite to ensure that the assessment is based on accurate data. For early action, the Commission proposes the possibility of imposing *interest-bearing deposits on Member States who make insufficient progress to their Medium-Term-Objectives in good economic times*, because of inadequate fiscal policies.
- Strengthened preventive action - the Commission encourages Member States to integrate in their national law the Treaty obligations on budgetary discipline, putting in place budgetary procedures that ensure compliance, for instance through legally binding instruments.
- Strengthened Excessive Deficit Procedure (EDP):
 - Speeding up procedures, in particular for those in repeated breach.
 - More attention to be given to the *debt criterion*: Member States with debt ratios above 60% of GDP should become subject to the EDP if the decline of debt in a given period falls short of an appropriate benchmark.
 - Broader and more timely use of the EU budget to ensure compliance with the SGP:
 - Suspension of the Cohesion Fund.
 - Member States *could be asked to redirect funds to improve the quality of their public finances, in particular reducing transfers and public consumption to favour investment*.

As to the situation in Romania, lack of mortgage loans with high risk led many to hope that Romania will not be affected by the crisis. However, as the credit crisis has spread to all the powerful financial centres of the world, trust between financial institutions has been lost. Many of them had to stop the credit lines of companies and thus the costs of production and investment have been affected immediately.

The official statistics show that the Romanian economy started to be affected by the crisis in the last three months of 2008. Dynamics of the budget deficit and public debt in Romania are presented in the table below:

Table 2. Budget deficit and public debt in Romania, 2000 - 2009

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Public debt (% of GDP)	22.5	25.7	24.9	21.5	18.7	15.8	12.4	12.6	21.78	29.29
Budget deficit (% of GDP)	-4.7	-3.5	-2.0	-1.5	-1.2	-1.2	-2.2	-2.5	-5.5	-7.2
Budget deficit (mln euros)	-1897.3	-1582.7	-973	-786.2	-744.3	-923.6	-2119.9	-3140.2	-7597.7	-8318.7

Source: Ministry of Finance of Romania and Eurostat

A pro-cyclical fiscal policy determined a significant increase in the budget deficit of Romania in the last two years. Thus, starting with the year 2008, Romania no longer meets the Maastricht criteria on the budget deficit. Romania's public debt increased in 2009 with almost 40 billion RON, reaching 29.29% of GDP, rising by nearly eight percentage points from the level recorded in late 2008 of 21.78% of GDP; however, it still has an acceptable level when compared, for instance, with Hungary (over 70%), or with Maastricht Treaty requirements (up to 60% of GDP).

Under these circumstances, the need for a loan from the international financial institutions has become a priority in Romania immediately after the preparation and adoption of the budget for the year 2009. *The International Monetary Fund* (IMF) approved in March 2009 a 24-month €12.9 billion Stand-by arrangement for Romania to support an economic program intended to cushion the effects of the sharp drop in capital inflows, while addressing the country's external and fiscal imbalances and strengthening the financial sector⁹.

The Stand-By Arrangement is combined with other multilateral financial support; thus, the total international financial support package will amount to €19.9 billion, with the *European Union* providing €5 billion, the *World Bank* €1 billion, and the *European Bank for Reconstruction and Development (EBRD)*, the *European Investment Bank (EIB)*, and the *International Finance Corporation (IFC)*, €1 billion¹⁰.

Moreover, the agreements with the international financial institutions set a target for the budget deficit of 6.8% of GDP this year (down from 7.2 % last year) and of less than 3% until 2012 (as to the extension of the deadline granted by EC to Romania in February 2010¹¹).

In order to correct the budget deficit slippage, substantial structural reforms for re-shaping the public sector and decreasing spending have been already initiated (unitary wage law, cut in wages by 25% and lay-offs in the public sector, and reorganization of state agencies, etc).

Yet, the Romanian economy's return to positive growth is delayed and somewhat weaker than originally anticipated by IMF. Further, after the burst of the public debt crisis in Greece, a specific banking sector risk arose especially for Romania, where Greek banks have invested heavily in recent years (owning 12% of the Romanian banking system). As a consequence, the IMF economic forecast expects GDP in 2010 to go down from 0.8% (as initially anticipated) to -0.5%, with chances to rebound in 2011.¹²

II.2. EU policies and support measures for the financial sector and for the real economy

State aid control as a tool to preserve a level playing field in the financial sector during and in the aftermath of the crisis

Competition policy and, in particular, State aid control has proved to be a key instrument in helping to stabilise markets after the outbreak of the crisis. Even if at the outset of the crisis, there was pressure on the Commission to put aside the State aid rules in the same way as Franklin D. Roosevelt put aside antitrust laws in the beginning of the New Deal, European Commission became quickly involved, through its powers to scrutinize State aid under the Treaty provisions on competition and gradually, the EU Member States' decision-makers accepted that there was a need to enforce common rules to avoid the disintegration of the internal market.

In order to assist Member States in taking urgent measures to preserve financial stability and to provide legal certainty, the Commission adopted - following the Lehman insolvency - several communications such as *Banking Communication* of 13 October 2008, *Recapitalisation Communication* of 8 December 2008, *Impaired assets Communication* of 25 February 2009, setting out how it would apply State aid rules to government measures aimed at supporting the banking sector in the context of the economic crisis.

These communications have provided guidance on how to make effective measures to preserve financial stability and how to deal with the risk of bank failures. Further, they aimed at

ensuring sustained lending to the real economy without creating undue distortions of competition. The main question is therefore whether the rescue packages adopted by Member States since October 2008 averted the meltdown of the financial system.

Thus, in the period between October 2008 and March 2010, the Commission took 161 decisions for the financial sector based on Article 107(3)(b) TFEU, allowing aid 'to remedy a serious disturbance in the economy of a Member State', a provision which had hardly ever been used before. Out of these, 78 decisions were made in relation to some 40 financial institutions and 83 decisions in relation to almost 40 state aid schemes (guarantee schemes, recapitalisation schemes, liquidity interventions, asset relief interventions)¹³.

The maximum volume of Commission-approved measures including schemes and *ad hoc* interventions set up by Member States in the wake of the financial crisis amount to € 4 131.1 bn. The breakdown into schemes and *ad hoc* cases is summarised in table 3 below.

Table 3: Breakdown of the Commission-approved measures

	Amount	% of EU-27 GDP
Schemes approved by the Commission:	€ 3181 billion	25
of which		
- guarantee schemes	€ 2747 billion	22
- recapitalisation measures	€ 338.2 billion	2.7
- asset relief interventions	€ 54 billion	0.4
- liquidity measures other than guarantee schemes	€ 41.9 billion	0.3
<i>Ad hoc</i> interventions in favour of individual financial institutions	€ 950.1 billion	7.6

Source: EC, *Report from the Commission state aid scoreboard - recent developments on crisis aid to the financial sector, spring 2010 update*

The scale and types of the state aid measures per Member State vary. Table 4 shows the financial crisis measures in the form of capital injections, guarantees, impaired asset relief and liquidity support approved until 31 March 2010.

Table 4. Financial crisis measures approved until 31 March 2010 (€ billion)

Member State	Guarantee schemes	Recapitalisation schemes	Liquidity intervention schemes	Asset relief intervention schemes	Individual cases
Belgium					274.5
Denmark	580*	13.4			6.3
Germany	400	80		x	107.6
Ireland	376			54	25.6
Greece	15	5	8		
Spain	200	99	30		
France	265	23.95			62.2
Italy	n.a.	20			
Cyprus	3				
Latvia	4.27				3.3
Luxembourg					7.32
Hungary	5.35	1.07	3.87	0.04	
Netherlands	200				56.2
Austria	75	15		x	0.5
Poland	4.62	4.62			
Portugal	16	4			0.5
Slovakia	2.8	0.66			
Slovenia	12		x		
Finland	50	4			n.a.
Sweden	156	4.71			0.5
United kingdom	381.87	62.79			405.6
Total EU 27	2746.9	338.2	41.9	54.0	950.1

Source: EC, *Report from the Commission state aid scoreboard - recent developments on crisis aid to the financial sector, spring 2010 update*

As table 4 shows, Romania did not make any decision to support its financial system because, until now, the Romanian banking system seemed to have been relatively well capitalized.

In other countries, the guarantee schemes have proven to be an appropriate and effective tool to address liquidity problems of banks faced with the threat of a systemic crisis¹⁴. The *EC Spring State aid Scoreboard* suggested that government guarantees for financial institutions are being used less and less since summer 2009 and that market conditions have stabilised considerably now, almost two years since the crisis materialised¹⁵. Given the signs of recovery in the financial markets, the focus is now on ensuring the long-term viability of the financial system. So, after having played a role in stabilising market conditions, State aid rules and policy will need to play a key role in the exit from the crisis.

As time passed, the Commission started to look at the medium term, at the way beneficiaries of the aid could start paying back the money borrowed and stand on their own feet. Hence, on August 14 2009, the Commission adopted a Communication on the return to viability and the assessment of restructuring measures in the financial sector in the current crisis under the State aid rules ("*Restructuring Communication*")¹⁶.

Further, on 2 December 2009, the Ecofin Council¹⁷ agreed on the need to design a strategy for phasing out support measures that, in principle, should start with the unwinding of the State guarantee schemes in order to encourage the exit of sound banks from State support and induce other banks to address their weaknesses.

The first step of this exit process based on the above principles has just been accomplished in May 2010 when the Commission announced¹⁸ the stricter terms on which schemes for government guarantees on bank liabilities can be maintained for the second half of 2010. Accordingly, as of July 2010, those few banks that use guaranteed funding will face an increase in the fees charged for State guarantees based on their creditworthiness.

If unwinding of short-term liquidity measures, such as some guarantee schemes might occur first, the disposal of equity and impaired assets are likely to take much longer. In any case, such phasing-out of support measures needs to be gradual, transparent and coordinated across Member States, so as to avoid negative spillover effects. At the same time, the process of unwinding and disengagement needs to be tailored to the individual circumstances of different Member States.

Up to 31 March 2010, the Commission has been dealing with close to 40 restructuring cases of which 13 cases have been closed by a final decision¹⁹. Note should be made that the Commission does not impose any specific restructuring measure from the outset and there is no specific business model that is rejected in principle. The benchmark of long-term viability may call for different solutions across banks, ranging from limited restructuring with no divestments to an orderly winding-down of unviable entities.

On the use and effectiveness of the Temporary Framework for the real economy

With the objective of reducing negative effects of the crisis in the real economy, the Commission put in place in January 2009 a temporary State aid framework (hereinafter referred to as 'Temporary Framework')²⁰, which is valid until the end of 2010 and provides Member States with additional possibilities to grant State aid on the same legal basis as for the crisis-related measures in the financial sector, i.e. Article 107 (3) (b) TFEU.

To further limit negative spill-over effects of the financial crisis to the real economy, the Commission amended the temporary framework in February 2009²¹. The amended framework takes into account different level of collateralisation (in particular for low rating categories) when

calculating the permissible guarantee premium. Rules were clarified for guarantees with underlying loans exceeding a maturity of 2 years. Further, in October 2009, the Commission adopted another amendment to the Framework, in order to allow for a separate compatible limited amount of aid of EUR 15,000 for farmers. Lastly, a technical modification of the Framework was introduced in December to further facilitate access to finance especially in Member States with low labour costs, by allowing to determine the maximum amount of an investment loan covered by a guarantee either on the basis of the total annual wage bill of the beneficiary or on the basis of the EU27 average labour costs²².

Aid under the Temporary Framework for Crisis Aid to the Real Economy can be granted under national laws or regulations which allow the granting of aid in the form of reduced premiums for State guarantees, reduced interest rates for loans, reduced interest rates for green investment loans and small amounts of compatible aid not exceeding €500,000 per company over a period of three years to categories of companies under certain conditions (aid schemes) and which have been approved by the Commission without individual approval.

After almost one year and a half since its adoption, it seems that the temporary framework has been welcomed by the EU Member States. The temporary framework has allowed Member States to support all sectors of the economy hit by the crisis, including the car industry²³. Particularly in the car industry, a number of Member States including France, United Kingdom, Germany, Belgium (Flemish region), and Romania have installed guarantee and/or subsidised loan schemes from which the car industry (as well as other industries) can benefit²⁴. For instance, a subsidised loan of EUR 1.5 billion was granted by Germany to Opel following the bankruptcy proceedings of its mother company General Motors²⁵, while France granted both Renault and PSA subsidised loans of EUR 3 billion²⁶. In addition, in June, the Commission approved a State guarantee on an EIB loan notified by Sweden for Volvo Cars²⁷.

As regards Romania, the European Commission authorised in November 2009 a supporting scheme for Ford Romania consisting in a 80% state guarantee that would enable its access to a 400 million Euros loan from the European Investment Bank. The aid supports the investment project envisaged by Ford at Craiova plant for the period 2008-2012.

Another state aid scheme available for SMEs and large enterprises in Romania till the end of 2010 in order to counter the crisis, relieve their access to credits and ensure the continuity in their activity is the scheme elaborated by EximBank in the form of state guarantees. Under this scheme, the applicants may benefit from a reduction of the guarantee bonus for a maximum period of 2 years from the date when the guarantee was granted. A 25% reduction is applicable to the SMEs while a 15% reduction is applicable to the large enterprises. The guarantees fund amounts to 450 million RON for the two years. The total budget of the scheme for the implementing period is 20.34 million RON, out of which 11.30 million RON were allocated for 2009.

Another measure relates to the granting of up to EUR 500,000 per company to cover investments and/or working capital over a period of two years. The objective behind this new aid measure is to provide financing, in most cases to SMEs which play a key role in safeguarding employment, swiftly and with a minimum of red tape. It is crucial to stress that this is not a new *de minimis* allowance of €500 000 or an increase of the *de minimis* threshold. The existing *de minimis* Regulation gives Member States the possibility of granting up to €200 000 to firms during a period of three fiscal years, without any notification obligation, if a number of conditions are fulfilled. In contrast, the new measure constitutes State aid and, accordingly, needed to be notified and approved by the European Commission.

It was initially estimated that almost 1000 undertakings will make use of this scheme but, so far, the scarce public resources at the disposal of Romanian Government made so far impossible the SMEs access to this state aid scheme.

Since the Temporary Framework is set to expire at the end of this year, the Commission is currently gathering information on the use of the Temporary Framework by Member States as well as the state of credit supply to creditworthy companies.

However, in the context of the sovereign-debt crisis, it becomes more obvious that the special regime introduced by EC for supporting real economy may be of real help for richer countries who are to a great extent enabled to promote national champions to the detriment of the industry in other parts of the EU where States have smaller resources. This finding grants credit to the concerns²⁸ which underlined that the budgetary constraints of many EU Member States impair the allocation of due resources for getting out of the crisis.

One should also remember that the "normal" State aid rules provide a large variety of possibilities for granting State aid in favour of SMEs, employment, research or environmental protection for example and maybe, this could be a good reason for putting an end to the Temporary Framework. But, there are also reasons to believe that in an abnormal situation like this, one cannot expect credit flows to operate as normal – so maybe the scheme and its duration should be extended.

CONCLUSIONS

The financial crisis followed by the first stages of a potential global sovereign public debt and liquidity crisis has shown that fiscal policy, public intervention and regulation remain necessary.

It is clear-cut that a large range of policy instruments were decisively, and massively, used to counteract the crisis. Fiscal policy had, where possible, an expansionary and counter-cyclical role; interest rates were lowered to historical minima while liquidity was provided to the financial sector in an unprecedented way. Governments granted massive support to banks, either through guarantees, recapitalization or through "cleaning" of balance sheets from impaired assets; at the same time, measures for supporting real economy were enabled through the temporary, and exceptional, framework for State aid. All these actions were, and still are, justified. But the main issue is that they cannot stay there permanently. High levels of public debt cannot be sustained indefinitely.

The success of EU policies and support measures for its Member States who have been severely hit by the crisis and in particular in the Euro zone remains uncertain. Greece, Italy, Portugal, Spain and others will face years of low growth, severe budget cuts and perhaps social unrest. We shall see in the near future whether Greece comes out of the European Monetary Union or it continues to stay in it but bailing it out in that case becomes implausible due to the strains put by various political forces. Apart from the insecure fate of the euro, one can not underestimate that the discussions over how to help it have not only worsened France and Germany's relationship but risk damaging a long-lasting EU.

As concerns the EU tools involving state aid policy and measures enabling interventions of its Member States to counteract the effects of the crisis in financial sector and in the real economy, the examples and figures above confirm that Commission's current decisional practice will neither enhance the likelihood of aid being granted nor jeopardise the long-standing principles and practice underlying the application of state aid rules in Europe. Indeed, it is to be hoped that an EU-wide competition policy including state aid rules and policy can contribute to the accomplishment of the long term objectives of the economy in Europe, as provided under the Europe 2020 strategy.

In other words, the main question to be answered is will the rules of the game change, and if yes, how will they change?

The answer is probably yes and no. There are three levels at least where the current

rules may be questionable. **The first one** is the company level. Here, **the existing rules will probably not change**. Competition Policy will continue to apply the same rules to make sure that companies compete with each other on an equal footing – on the basis of their products and prices – with no unfair advantages. Rules on state aid (in the European Union) will not be modified, despite their current relaxation, and will continue to stop governments trying to outdo each other in a costly race to subsidize their own companies.

The **second level** involves the financial sector. The crisis showed how a lack of effective regulation created incentives for excessive risk taking in order to obtain short-term high returns. On the other side, there was no regulation enabling the orderly winding up of banks (exit of inefficient non-viable players from the market), without endangering financial stability. Therefore, regulatory measures will probably be introduced in order to enhance sustainable competition in the financial sector, while avoiding in the same time the risks of overregulation. However, **these changes will affect the sectoral regulatory framework and will not involve competition policy tools, like merger or state aid control**.

The **third level** is the macroeconomic one involving the design and implementation of economic policies, mainly fiscal policy. As shown above, **changes will probably take place** and will aim to strengthen the functioning of the Stability and Growth Pact and extend surveillance to macro-economic imbalances.

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CREDIT & DEBT COLLECTION STRATEGY SUITE FOR FIRST-LINE CREDITORS TO OUTLIVE ECONOMIC DOWNTURN

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Abstract: *The paper recommends a strategic credit and debt collection strategy suite that allows the first-line creditors - financial such as banks and other financial lenders, and non-financial such as telecommunication and utility companies - to effectively cope with periods of economic turbulence and increased indebtedness of the individual or legal entity customers. The management toolkit can leverage the customers' ability and willingness to return loans or pay their bills, hence likely to improve the payment behavior in Romania in times of economic downturn.*

JEL Codes: D23, D24

Keywords: *Payment Behavior; Credit & Collection; Strategy Management*

INTRODUCTION

*Motto: Quick to borrow is always slow to pay.
Anonymous*

Back in 2008, Romania and its banking system had no idea of what the subprime crisis was about to create. Rumours were circulating but the banks were cashing-in their installments as usual: for sure the subprime was not going to hit Romania! Loan products offering was quite unsophisticated. Derivatives, for instance, were accessible only to large and well-known established corporates or large locals which understood the advantage of using these products. No one could foresee at that time that the recession starting to show its teeth at the end of 2008 was triggered by the subprime which at its turn was fueled, among other factors, by statistical models unrealistically linked to lending policies and market risk. U.S. banking system collapsed while Europe was about to re-think its medium to long term banking business strategies. Banks were about to create newly loan restructuring departments or the "work-out structures".

By the end of 2009, two million Romanians were blacklisted in the credit information databases of Romania, out of which at least one million were part of Preventel, the telecommunication shared blacklist functioning since 1998. 120,000 small and medium enterprises have ceased doing business in 2009. The loans overdue with more than 90 days amounted in 2009 to over one billion Euro, four times more than the level recorded for 2008. March 2010 have posted a value of amounts due at 5.2% from total loans taken by individuals and legal entities, with a higher deterioration rate for the local currency loans.

Across the board, banks, financial services, credit bureau organizations, telecommuni-

cations, utilities, collection specialists and bailiffs are reporting a radical change in payment behavior and collections landscape in Romania. Creditor companies wanting to re-coup outstanding debts have to implement adjustments that recognize the new patterns of consumer behavior in Romania.

FIRST-LINE CREDITORS AND THEIR CUSTOMERS' PAYMENT BEHAVIOR IN TIMES OF ECONOMIC DOWNTURN

Before going in-depth with the non-governmental credit and the payment behavior of the customers either individuals or legal entities – let's take a look at the most important macro-economic indicators in 2009 throughout March 2010 (**Exhibit 1 – Macroeconomics, Nowadays**). The inflation showed improvement in 2009 mainly due to the dramatic decrease in consumption. The exchange rates improved their trends right after the 2009 financial agreement with International Monetary Fund and European Commission was concluded. The immediate consequence was the strengthening of the local currency, consequently offering trust to the potential investors who decided to take advantage of the attractive interest rate levels (**Exhibit 2 – Deposits of Non-Governmental Residents**). Real GDP evolution shows clearly the moment recession affected the economy and, most importantly, highlights the fact that, unlike other countries, the economic downturn in Romania was not initiated within the banking system. The very slow decreasing pace between the lending and the saving rates shows a constant need of the banks to absorb the losses incurred by the recession and the increasing number of defaults, despite the constant decrease of the monetary policy rate and the increased amounts deposited by the population whose financial behavior changed from *spending to saving*.

For the major industries, the growth rates in terms of amounts borrowed remained flat (**Exhibit 3 – Crediting by Financial Institutions**). The most important fluctuations came from the public sector and services since the top industries¹ affected by crisis were Commerce with 65,262 companies ceasing activity in 2009, Constructions with 19,700, Manufacturing with 15,615, Real Estate with 13,500, Professional, scientific and technical activities with 10,854, and Hotels and restaurants with 7,027. Other industries under stress in 2009 by March 2010 were Wholesale and retail of vehicles and spare parts; Land transports; Warehousing; Advertising and market research; Human Resources services; Rental and leasing; Publishing and editing; Consultancy.

The losses incurred by the loans granted to legal entities stabilized in the last quarter of 2009 but showed a slight increase at the beginning of 2010. At the end of 2009, the losses represented 11.8% while at the beginning of 2010 they became 12.8% - mainly due to the constant decrease of total loans granted by the credit institutions. As for the individuals, the situation of past due amounts with more than 30 days followed same steep deterioration trend at the beginning of 2010. From total, the amounts due represented 4.2% in February 2010 as compared to 3.8% at the end of January 2010 and 3.4% at the end of 2009. All the above mentioned facts and figures determined the banks as the main financial credit institutions to initiate a series of actions meant to prevent huge losses, but in the same time to secure business continuity.

The non-financial creditors such as Telecommunication and Utility companies were also encountering a rough business perspective into collecting their bills issued to their subscribers within the contractual payment terms.

During the last decade, the global telecommunications industry has experienced growth and change on a massive scale. This has been brought about by increased global competition, accelerated pace of technology developments, market led demand for ever-more sophisticated communications and, last but not least, by the impact of the economic downturn and subscriber behavior. As markets have matured, the focus for sustainable growth has shifted to growing revenue from existing subscribers, along with the acquisition of new subscribers by tempting them away

from competitors, facilitated by the regulators' decisions imposing MNP² or adding challenges onto the roaming and termination fees. This has led to a reduction in margin, on a background of a relentless downward pressure on tariffs with increased and expensive bundling to remain competitive.

As the financial crisis today draws risk management into sharp focus for telecom operators as first-line creditors, the factors outlined above are now impacting all stages of the customer lifecycle, forcing operators to adopt strategies designed to optimize both revenue and margin through understanding the complex liaison between attracting new subscriber contracts, the management of revenue from the existing client base, while streamlining the management of the collections process.

At their turn, utilities - electricity, natural gas and water suppliers - as first-line creditors, are facing nowadays, a tough challenge in recovering money from certain groups of former customers who are in arrears. Amongst those are the growing groups of people who are struggling to pay their household bills. Especially during the economic downturn and financial crisis as we are currently experiencing, there is also, a new type of consumer - the "won't pay" - who persistently delay payments on outstanding household bills in the hope that the utility will eventually give up trying to recover its money. Paying back bank loans represents the utmost priority for the consumers, and utility bills are competing with telecom bills to be high on the customers' "shopping list". Similarly to telecom operators, utilities are increasingly focusing on reducing debt and operating costs. Best practice revenue management focuses not just on the debt collected, but on minimizing the cost incurred in collecting it. By implementing a system that targets a debtor individually, more of the monies owed are recovered and in a shorter timeframe, helping the utility improve its working capital situation as well as benefiting from reduced write-offs.

ADAPTIVE CREDIT MANAGEMENT OF FINANCIAL AND NON-FINANCIAL CREDITORS

By the end of March 2010, local currency loans showed a higher delinquency rate than the hard currency ones. The explanation comes from the level of the interest rates whose margins have always differed significantly between Romanian Lei (RON) and Euro, U.S. Dollar or Swiss Franc. Therefore, the high margins for the local currency loans put additional pressure on the repayment capacity of the borrowers by comparison with the hard currency loans where the margins and therefore, the total installment represent in some cases, half of the ones denominated in RON. The situation was even more difficult for the non-banking financial institutions which were not allowed to attract deposits and therefore, had applied pricing policies where margins were as high as 20 percent. The latter ones in particular totally relied on the repayment capacity of the borrowers in order to secure profit. Given the situation, all financial institutions had to review their lending policies, to create new structures in charge with work-out solutions or to focus on collecting the due amounts. Majority of the banks tightened their credit policies while the non-banking institutions have reduced their maximum loan amounts and intensified the collection calls starting with the first day after the installment due date.

As far as the *legal entities* taking a bank loan are concerned, a complex set of indicators - both qualitative and quantitative - may bring insight on the risk of non-payment at the credit vetting stage, but also in the collection stage.

Qualitative indicators are as follows:

Type of industry. If company is part of one of the industries in difficulty, banks may decline the loan request or take a very close look to the evolution of the annual sales turnover.

Existing customer base. The economic downturn put pressure not only on the borrower itself but also, on its traditional partners/customers who may have also, suffered losses or other

constraints. It is important for the bank to have a fair view on the demand/offer ratio and the ability to replace lost customers in connection with the industry it is part of.

Support from parent company. This factor is important nowadays due to the crisis globalization. If parent company holds well, we may assume that its branches will benefit of help if case.

Diversification and flexibility. Two of the most important qualitative factors, they become key success factors. While diversification looks at the capacity of a company to switch to other products and services, flexibility represents, in majority of cases, the willingness of the company's management and shareholders to acknowledge and act within a given situation. Both factors, if well harvested, may offer the right answers to the company's future in the market.

Shareholder's debt service. The economic downturn brought to life a "survival practice" of shareholders who, in order to get easier access to financing their companies, apply for loans themselves, as individuals. Some of them manage to save their companies, while others don't. The repayment behavior of the shareholders usually represents a good indicator of where the company is heading to.

Quantitative indicators to estimate credit worthiness of legal entities are:

Liquidity. If until now "cash" was a financial indicator like any other, the economic crisis determined the lenders to analyze in-depth the company's ability to generate cash. Cash management represents a good measure of the company's management professionalism.

Level of fix and variable costs into the sales turnover. Analyzing the cost structure of a company may not be a very easy task. Nevertheless, cost share into the sales turnover is a good indicator of how well the management is sizing and controlling the costs, especially the variable ones which are difficult to budget and keep under control.

Fluctuation of the annual sales turnover. Above 50 percent negative variation year-over-year highlights the fact that the company didn't manage to overcome the difficult economic period and has no real alternatives to survive.

EBIT margin. Reveals the negotiation skills of the company in relation to the suppliers and customers. Depends on the industry type but if at average, is lower than 5 percent, the level of costs have to be adjusted accordingly.

Days receivable/payable/inventory. The three indicators have become more important than ever. They show the bargaining power of the company in relation to the suppliers and customers and may trigger financing needs. They may also, represent the trigger for restructuring or rescheduling a commercial loan.

Collateral quality and fair value. If in the recent past, collateral quality did not represent a paramount aspect as long as the loan was covered, nowadays it is of outmost relevance. One thing is for a financial institution to finance a second hand equipment as compared to a brand new one, or to lend against a piece of land of no economic value versus a commercial real-estate located in a prime zone. Fair value measures the price at which an underlying asset may be sold on the free market. It obviously depends on the collateral quality and in most cases, it's based on historical transaction prices. Consequently, it needs to be settled with outmost accuracy by taking into account transaction values not older than six months.

When it comes to *individuals*, the type of relevant indicators to evaluate credit worthiness and risk of non-payment changes. Most important *qualitative indicators* are presented hereunder.

Employer's industry. As in the companies' case, the current economic situation determined the

financial lenders, to apply seamless treatment from risk point of view to all borrowers. Being a state-owned employee does not represent a guarantee anymore. Cross-checking employment status has become a common practice nowadays.

Type of labor contract. People hired with labor contract for well-defined periods of time are the first ones to be released in case of activity downsizing. Or their labor contracts are not extended for additional periods. Even if the labor contract covers the tenor of the loan, granting credits to individuals contracted on determined period has added additional risk.

Total income's composition. Two years ago, lenders were ready to accept any type of income as long as it was well documented. The current times have changed the lenders' views: income sources like dividends, management allowances or bonuses have become history. If not yet, they should.

Payment history requirements. The payment history policies have become stricter and many lenders changed their strategies by splitting the client base into "new-to-bank" and "existing".

Process of applicant verification. The customer's verification process usually covers two areas: proof of residence and employment. Not all the financial institutions were willing to increase their costs by performing all those check-ups. However, the increased number of fraudulent applicants has changed their approach.

In this matter, *quantitative indicators* are bringing useful insights:

Debt burden ratios. Couple of years ago, indebtedness reached levels as high as 75 percent of total monthly income. The recession taught us the prudence: the actual living expenses level forced borrowers and lenders, to accept a reality that was always in front of our eyes. Nowadays the debt burden ratio hardly exceeds 50 percent.

Collateral fair value. To the aspects presented in companies' case, we need to bring a situation in the spot lights. Before 2008, the market prices for apartments – either old or recently built, showed "cosmic" values and were exponentially increasing month after month. Lenders accepted the situation and fueled this real-estate pricing bubble looking at nothing else than market share and sales targets when granting credits to individuals.

Collateral evaluation. Not all the banks were ready and willing to spend on regular collateral evaluations, either because the market showed only increasing trends or the process was lengthy and costly. Some lenders – majority with foreign shareholder structure and previous experience – had put in place group policies forbidding the financing of real-estate developments, which helped them managing to survive the crisis both globally and locally. Nowadays evaluating real-estate collateral on a regular basis has become mandatory.

At their turn, the non-financial first-line creditors such as telecommunication and utility companies do not know the customer specifics beforehand. Necessarily, the knowledge of the local market and knowledge of the local customer's behavior are highly important not only in offering to the customer the right product or service at the right moment, but also, for the management of risk. The vetting stage of customers needs to be carefully managed so that connection to the mobile network or installation of utility pipeline/point of service will happen rapidly according to the customer's expectations and purchasing decision. Any signs from combined customer's demographics, affiliation to negative credit databases (such as Preventel), past payment behavior – especially during economic turbulence – need to be all encompassed into a business model of credit vetting capturing many of the qualitative and quantitative indicators abovementioned.

tioned. Typically, in telecom and utilities, large corporations do not represent the subject of any application or behavior scoring models, while the model to read the credit worthiness and risk of non-payment is processing the information from individuals and smaller enterprises' documents but not asking for any collateral. The result of such model would be to welcome the customer in the service network and customer base by extending the knowledge about him/her and attempting to cover part of assumed risk. For instance, the customer may be required to pay in advance an amount to the account of future invoices; if paid, his/her credit worthiness is recognized by being connected under a subscription contract./R-6/

The utility companies possess an enormous amount of valuable customer data tied up in their mainframe systems, standalone departmental software, or most likely for Romania, in paper files. Therefore, we consider that a key to competitive service delivery is customer knowledge, and the implementation of a more customer centric billing systems becomes critical. This technology can create a centralized repository for all data relating to each customer, linking the relevant meter, installation and account information with a customer's transactional history, preferences and relationships to other accounts. While these billing systems should significantly improve billing accuracy and levels of customer care, the opportunity from such a wealth of customer data to improve the speed and effectiveness of credit risk and collections decisions is often overlooked. The challenge therefore, for credit managers, regardless of the utility's billing infrastructure, is often in determining which data is useful, and then accessing and managing it, in a cost effective and meaningful fashion.

EFFECTIVE DEBT COLLECTION MANAGEMENT OF FINANCIAL AND NON-FINANCIAL CREDITORS

Financial lenders - banking or non-banking institutions - have to organize their portfolios and to identify those group of loans or borrowers whose performance may lead to increased losses or portfolio deterioration. In this respect, some steps are worth to be considered: *grouping* the clients (individuals and/or companies) by type of industry and risk, and sub-grouping by highest exposure products with the purpose of prioritizing treatment for customers within the industries under distress; *assessment* of the situation by both looking to early sign warnings e.g., reduced activity through bank accounts, press releases, accumulated dues towards state budget or non-standard delinquency indicators, and approaching clients to clarify how serious are the repayment problems and if this is permanent or temporary; and *advisory stage* when solutions are offered in a timely manner. Solutions may stay with balance transfer, debt consolidation, replacement of bulk repayment of principal with intermediary principal repayments, or of variable interest with a fixed one. If none of the proposals manage to avoid the work-out, then the restructuring process may offer some options:

- rescheduling - mostly applicable to legal entities, consists of recalculating the loan installment by including the unpaid due amounts into the loan outstanding. No fees or commissions are charged for this change and usually, tenor stays within the existing product tenor. Nevertheless, the grace periods (extensions) may have no other effects than prolonging the status-quo.
- rewrite - applicable to all borrowers, consists of arranging the existing outstanding under completely different terms and conditions in terms of interest, monthly payments, final maturity etc. No fees are charged for this change, but usually, tenor exceeds the standard product tenor.
- renegotiation - applicable to all borrowers, consists of reducing the existing loan outstanding through interest reduction and waived commissions, against a bulk or installment repayment. Renegotiation may take into account only getting back the principal or waiving part of the principal owed, while tenor stays within the standard product tenor.

During the restructuring process, lenders should: identify how serious the financial difficulty is; suggest companies to re-evaluate their fixed assets; evaluate alternative financing solutions e.g., discount of receivables - usually applicable to small and medium enterprises, discount of payables - usually applicable to large corporations, consumer/mortgage loans (for individuals) considering the base salary and only allowances guaranteed by the laws in force (if case), and employ in the model a close-to-reality level of living expenses.

Similar to financial first-line creditors, the telecommunications and utility companies were compelled by the economic downturn to pursue for a significant re-appraisal of the way in which they approach customer revenue collection. Because with little understanding of the customers, of their financial status or delinquency risk, telecom and especially, utility debt management tend towards a "one size fits all" approach. Tone and timing of reminders are frequently based on the length of time an account is delinquent. What is evident therefore, is that a more customer-focused approach to debt management is required. By early identifying high risk customers and customizing contact respectively, the speed and rate of collections can be significantly improved with a positive flow-through effect on the bottom line. While work-out path from financial creditors are not fully instrumental for commercial credit in telecom and utility industries, the content of dunning actions - calls, letters, collection timelines, credit limit monitoring etc. planned by a couple of telecom and utility companies are reflecting the restructuring options abovementioned. For instance, rescheduling is widely used to give customers more time to pay the utility bill - recent dunning letter campaigns of the water supply company servicing Bucharest area are offering to the customers with overdues, a supplementary 15-day period to effect payment, otherwise water supply and sewage service will be discontinued.

Rewrite has been employed by a telecom operator when launching a "Survival Offer" - to customers with two invoices overdue. The customers accepting it switch for a month or two, to a 3-Euro price plan, fully subsidized, and including a free 30 minute on-network usage, with the expectation toward the delinquent customers, to pay in full the outstanding debts over that grace period of time. The free monthly subscription tackled inability to pay any incremental amounts over outstanding debts, while more time and the free minutes covering basic communication needs became arguments for the customers to reduce their unwillingness to pay debts from telecom bills./R-7/

Renegotiation was employed by the same company to improve the payment behavior of customers at Christmas time when the family budgets should offer the cushion to the combined pressure of an economic downturn as experienced by Romanians starting in October-November 2008 and the winter holidays with their traditional celebration and spending. Within the "Happy Day" campaign, any customer being in touch over the call on 22 December with a collection specialist of the operator was offered a rebate to total bill value of 40 percent (individual consumer customers) or 30 percent (small and medium enterprises), should the customer would pay the remainder within 24 hours from the rebate acceptance over the call./R-8/

Employing modern collection software tools would give the opportunity to seamlessly interface with other enterprise systems - if present, to extract all relevant customer transactional and behavioral data, automate the exchange of collections-related data to and from a centralized customer data repository or, in the case of a more fragmented IT environment, consolidate all customer information and communications related to payment arrears. This ensures collections teams have the most up-to-date and relevant information upon which to derive collections strategies. This versatility facilitates the integration and relative weighting of both quantitative and qualitative risk variables and indicators, allowing credit professionals to determine their own business specific parameters for calculating behavior credit scores based on evolution of customers' payment behavior. As a result, telecommunications and utilities will be able

to more accurately: predict the likelihood of a customer defaulting; determine the probability of mildly delinquent accounts becoming heavily delinquent; and estimate what percentage of outstanding debt is likely to be repaid.

Specialist collection management toolkits will allow them to visualize, model and implement personalized, relevant strategies for each group, rather than treat everyone in the same manner. The collections could be more effectively managed through e.g., collections segmentation, a well designed disconnection and termination strategy, payment plans, wise visit timing of “at risk” populations. The credit and collections staff can assign collections priority and plan their workloads far more effectively with expected recovery balanced against cost to collect.

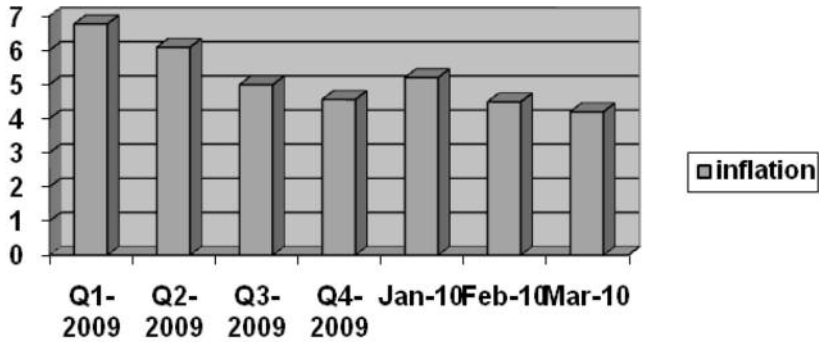
CONCLUSIONS AND FINAL REMARKS

No business model is perfect. We all need to learn from mistakes and try to follow-on valid conclusions from our endeavors. Banking system and other first-line creditors make no exception, be them locally or globally. We all have learned that money shouldn't buy anything irrespective of the risks involved. Moreover, advanced financial schemes and elaborated risk rating methodologies may not always keep up with the economic realities or automatically make creditors, responsible lenders.

Therefore, few final considerations are worth to be noted. The first-line creditors need to look at the “back-to-basics” concepts with respect to credit and customers: build a relationship based on trust and openness; participate with information to blacklists, including for companies and their shareholders/administrators; stay in touch with the customers; have a closer look to companies under 30 employees and individuals with negative payment history; build-up a strong antifraud team; where possible, encourage RON financing; ask for alternative documentation in order to cross-check customers' information - because, beyond all rules and regulations, *Lending Equals Trust*.

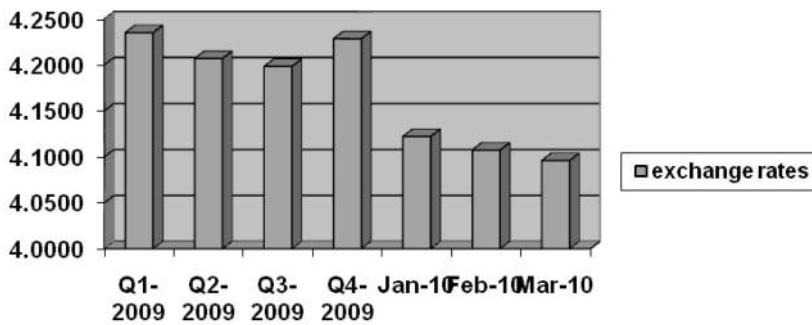
EXHIBIT 1 – Macroeconomics, Nowadays

Inflation Evolution, 2009 – Q1 2010*



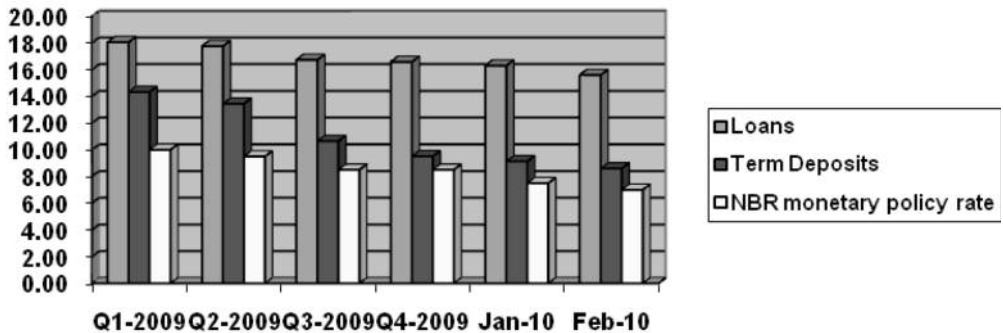
Source: National Bank of Romania (NBR)/R-2/
*end of period

RON/EUR Exchange Rate Evolution, Q1 2009 – Q1 2010*



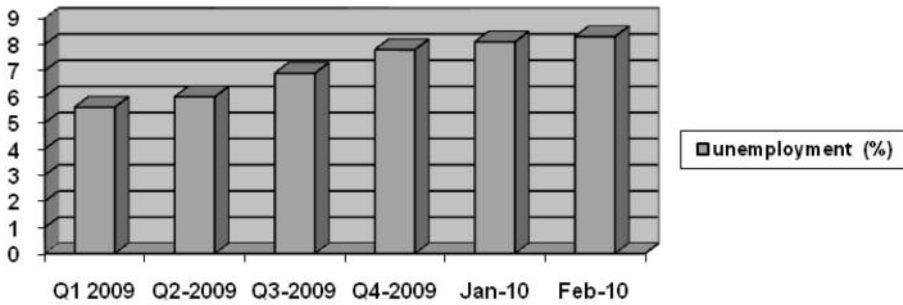
Source: NBR/R-2/
*end of period

**Interest Rates (% p.a.) Applied by Commercial Banks
(average values, except January and February 2010 where end of period values were taken)**



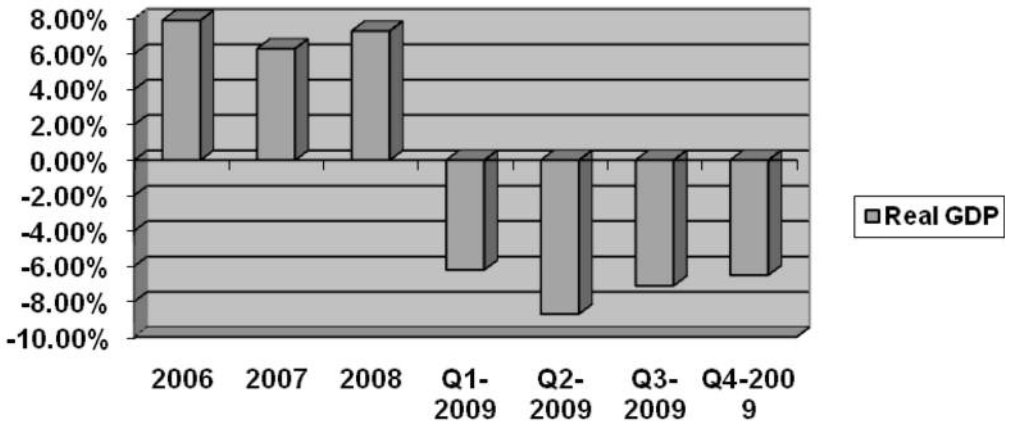
Source: NBR/R-2/

Unemployment Evolution



Source: NBR/R-2/

Real GDP Evolution



Source: NBR/R-2/

APPENDIX 2 – Deposits of Non-Governmental Residents

INDICATORS	31 Mar 2010 (Mio. RON)	Mar 2010/ Feb 2010 (%)	Mar 2010/ Mar 2009 (%)
Deposits – residents, non-governmental clients* (total)**	167,120.2	1.2	8.4
Deposits in RON - residents:	105,233.1	2.7	8.6
- population	62,055.0	0.9	8.4
- legal entities (financial and non-financial institutions)	43,178.1	5.4	9.0
Deposits in HARD CURRENCY - residents:	61,887.1	-1.4	8.2
- population	37,696.4	0.2	14.7
- legal entities (financial and non-financial institutions)	24,190.7	-3.8	-0.6

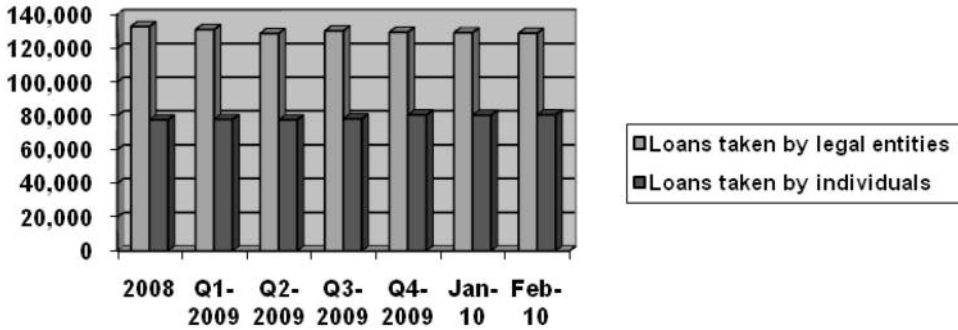
Source: NBR/R-2/

*intermediary results

**including current accounts, sight and term deposits, irrespective of their maturity

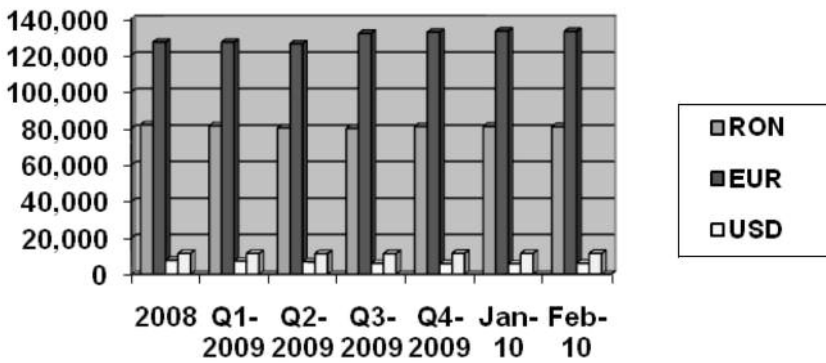
APPENDIX 3 – Crediting by Financial Institutions

Loans Granted by Financial Credit Institutions (Mio.RON)



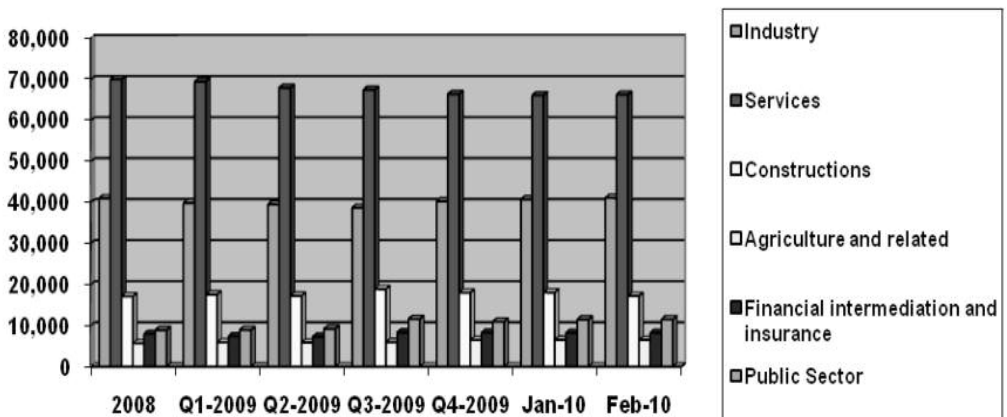
Source: NBR/R-2/

Structure of loans per currencies (Mio.RON)



Source: NBR/R-2/

Loans by Industry (Mio.RON)



Source: NBR/R-2/

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¹ Source: Trade Registry.

² MNP is the abbreviation to Mobile Number Portability; it is a service that allows one to take a cellphone number from one provider to another.