„BABEŞ-BOLYAI" UNIVERSITY
CLUJ-NAPOCA
ECONOMICAL SCIENCE AND BUSSINES MANAGEMENT FACULTY

DOCTORATE THESIS
-SUMMARY-

THE ELABORATION OF AN ECONOMIC AND FINANCIAL EVALUATION MODEL FOR THE ROMANIAN COMPANIES IN THE INFORMATION TECHNOLOGY FIELD

Scientific coordinator:
Prof. univ. dr. Ioan BĂTRÂNCEA

Doctorand:
Andrei MOSCVICIOV

Cluj-Napoca
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The Economical Science
And Business Management Faculty

To: Mr (Ms.) :_____

_____

We are announcing you that on the date of 13.05.2011, starting at 17:30 pm, in the room no. 118 at The Economical Science and Business Management Faculty, address: Cluj-Napoca, str. Teodor Mihali nr.58 – 60, Mr. **Moscviciov Andrei** will sustain, in an open meeting, the following Doctorate Thesis**:** "THE ELABORATION OF AN ECONOMIC AND FINANICAL EVALUATION MODEL FOR THE ROMANIAN COMPANIES IN THE INFORMATION TECHNOLOGY FIELD"**, in order to obtain the scientific title: „**Doctor in Finance**"**

The Board of Examiners for sustaining the Doctorate Thesis is composed by the following:

President	**Prof.univ.dr. Dumitru Matiș**
Doctorate Coordinator	**Prof.univ.dr. Ioan Bătrâncea**
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	Prof.univ.dr. Vasile Cocriș
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With this occasion, we are forwarding you the Doctorate Thesis Summary and we invite you to participate to the Doctorate Thesis open meeting.

DEAN,
Prof.univ.dr.Andrei Marga

CONTENTS

INTRODUCTION

Motto:

„The economic analysis uses the general principles of <<Cause – effect>> in order to establish the phenomenon movement and transformation range".

Infor

matics as a useful aid for management and research

The modern contemporary economics, in its whole is strongly pronounced by the technological progress which presents an unprecedented exponential dynamic as its characteristic. Science and research which themselves are beneficiaries of communication and modeling vectors, they create a dynamic that allows an almost instant application in the economic environment.

The traditional scientific domains experience a division development, current research compelling the appearance of interdisciplinary studies strictly focused on intimate sequences of the subject matter.

Economy itself experiences modifications influenced by technologies, interactions and effects, therefore the micro economic level study of the new economical fields becomes vital to their integration in the world-wide economic relations.

The contemporary world-wide economy as a whole is strongly affected by an unprecedented exponential dynamic in the technological progress.

The appearance of the first electronic computers thanks to the Cip technology is instantly followed by generations and generations of computers, today's microcomputers becoming a trivial daily presence.

The hardware industry has a parallel development with the software industry producing applications for all the social economic spheres.

In a few decades informatics itself experiences an extremely dynamic development, its branch division producing some strictly specialized fields. An important branch of this industry is regarding the software productions, with its multitude of operating languages, applications and systems.

The Internet represents more than just a new technology, it is a civilization change. It is a technological revolution that makes accessible an infinite number of products and services which were previously unreachable.

Thanks to the Worldwide Web networks, one of the first Net applications (dated only 1990) economic and scientific life has amplified considerably, and information exchange facilitates a new reference level for humanity (the same way that the printing press discovery in the XV century has facilitated the start of the renascence). In this regard we have only one certainty: we are at the beginning of this revolution and therefore we are unable to measure its amplitude.

According to some contemporary works, for the past 20 years we have been witnessing an extraordinary development of the business environment, thanks to the financial globalization and to information technology's continuously increasing impact. These two phenomenons are deeply linked: the financial globalization feeds of the technological innovation which in turn is accelerated by the abundance of capitals.

The economic and financial standing evaluation of the informatics industry companies in the competitive markets represents a direction that the microeconomic field research is taking. This assumes and demands the use of some highly rigorous scientific investigation methods meant to illustrate as accurately as possible the economic and financial standing of companies. Only based on these we can elaborate next, a series of long term strategies for channeling a certain conduct of the economic entity, intended to harmonize the general development inclinations. The emphasizing of the factors that contributed to the economic processes and phenomenon evolution represents a central objective of the company management reflected directly into the development of business portfolios for the companies. This can be achieved by using certain procedures which on one hand are meant to mirror the factors that affect the economic phenomenon, and on the other meant for emphasizing the contribution extent of these factors to the modification of the studied phenomenon.

The issue of the financial analysis of the IT field entities, represented and keeps representing a current subject that is discussed often and that is highly disputed in the economic literature within the country and abroad.

THE GROUNDS AND IMPORTANCE OF RESEARCH

For any investor, may it be majority minority or just a speculative one, the financial reporting of the economic entity, has crucial role in taking decisions regarding keeping the management team in place, changing it, acquiring new stock or selling the stock owned by the particular economic entity.

For this main reason we estimate that the financial state of affairs reported by the economic entity and audited in accordance with the lawful provisions must bring about a number of quality attributes and we mention the following: correctness of the declared data, correlation of information included in different declarations, the importance of the information encompassed by the financial reports, the compliance with the financial declaration standards, so that this financial product will generate a correct and reasonable image presenting what has happened with the capital entrusted to the managers.

In the present study I tried to emphasize and build **an economic-financial analysis model** for the businesses in the IT industry in which I would highlight three characteristics: *the evolution and structural transformations* produced within the financial standing structures; *the financial performance* and *bankruptcy risk* reflected in the rating of the *IT field* businesses. The analysis implied the investigation of the financial state of affairs through a number of consecutive financial exercises.

In order to build a personal analysis model and specific to the IT field, I studied over 2180 IT businesses in Romania (within the range of small and midsize businesses), *the finality of this model is nothing but a sensing tool for any manager in this field*.

This topic was chosen for I consider it a subject of great interest for researchers as well as for practitioners. The companies and banks bankruptcies prediction, or the prediction of municipality or government incapability of paying off the contractual liabilities, is of wide interest.

The conducted research took scoped the functional IT field entities in Romania within the last 5 years.

For building the model I considered that a financial analysis of the activity of such entities was necessary, analysis based on the balance sheet static data as well as on the dynamic data from the profit and loss account and on the cash flow condition.

The starting point was the entities' informational system that ensures the informational resource for the financial analysis and for the building of certain rating models; I continued

with the pertaining aspects of the financial reporting within the economic entities which in our opinion represents the central core of financial data; then we focused our study on the standing and financial performance within a selected range of Romanian IT companies, and at the end we built two rating models using on one hand the professional reasoning and on the other the multiple discriminative analysis method (MDA).

In conducting the procedures I relied on microeconomic specific research methodologies such as: induction, deduction, analysis, synthesis, conceptualization, comparison, the rating method, the indicators method, the multiple discriminative analysis method (MDA) and the regression method.

The management of the economic entities must be based on realistic information from the financial analysis of the economic activity. All the management related activities, all the operations taking place, are made with the goal of obtaining the highly desirable profit that brings life to companies.

In order to conduct the investigation and analysis in this field of study, we extracted from the Ministry of Finance database the 2180 economic entities in the IT field. For performing the interpretation of the statistical data we commenced by eliminating those entities that ceased their activity within the analyzed timeframe, so we ended up with 2178 companies. Within these entities the ones that didn't present continuity in their economic activity were eliminated so that the financial results of the statistical interpretation will not be affected. The 778 counted remaining entities were grouped in 5 areas of activity, namely IT consultancy, software editing, commerce, equipment production, and other activities

The objectives of the conducted research can be embodied as follows: the buildup of certain financing tables based on capital flow and cash flow; the emphasizing of the similarities and differentiations between different financing tables; the conceptualization and implementation of certain computation models for the cash flow in order to find the cause that led to the cash flow variation; the emphasizing of the importance of the situation and financial performance analysis within the conceptualized analysis model; the establishing of *optimal financial security brackets* for the financial rates computed for the IT industry in Romania, given the fact that the specialty literature makes very little reference to this issue, and lending institutions establish the rates based on their own reference brackets.

In the same time I created an aggregated rating system comprised of three dimensions: a rating model based on specific indicators in the regard of the entities performance and condition; a model encompassing ratings from certain banks in Romania and a credit scoring model.

For reaching the projected goals in this research, the economic-financial specific

methodology was used as well as statistical methods and bank methods for measuring the rating of entities within the selected sample.

The methodology used for research consists of applying analysis specific procedures, as in vertical analysis, horizontal analysis and rating method as well as using statistical methods like parameters computation and connection analysis. Throughout the work we used alternative terms well known in the financial literature and practice, in our country and abroad, respectively ***enterprise, company, economic entity and Commerce Company.***

After considering the research objectives, the following thesis structure was established: introduction, four chapters, conclusions and suggestions, bibliography.

The introduction disputes the necessity of the researched subject, its need, its importance and the depth of study. The research objectives are originated; the field and object of study are presented.

The present work is structured in four parts within which we took on the following aspects: **the informational system – the starting point in building a an analytical system in the IT industry; financial reporting in the economic entity; the condition and financial performance of the entity – component of the analytical system in the IT industry and the economic entity rating regarded as the final goal of the analitical system.**

Chapter I – THE INFORMAŢIONAL SYSTEM – STARTING POINT IN BUILDING AN ANALYSIS MODEL IN THE IT INDUSTRY- studies the main aspects of the informational system and its functions in providing information that is necessary to the economic entity analysis. In this circumstance we showed the importance of the decision making system as well as the role of the financial-accountancy component within the economic entity informational system.

In the specialty literature a variety of opinions can be found regarding how to define the informational system of the economic entity.

Some authors consider that the informational system can be identified with the database that can be accessed through the computer, others prefer to define the informational system as the multitude of information that flows through a system, while other authors consider the system data entry, the information resulting from the data processing and the flow of such information from the originator to the user, to equally represent the informational system.

In our opinion, defining the informational system based on its economic activity overall function is a sine-qua-non condition for the correct appreciation of informational issues and general managerial issues.

Therefore, the informational system consists of assets, methods and human resources used to ensure the flow of activities specific to the informational process:

- **The recording;**
- **The reporting;**
- **The processing;**
- **The sorting;**
- **The storing of any kind of information.**

The outcome of the opinions expressed in several specialty works, is that **an *informational system* is comprised of a collecting data module, a processing data module, which is meant to transform primary data into information, a data storing module and a module for reporting the results towards different users.**

Not lastly, we consider that the economic informational system entails a series of processes such as gathering, processing and systematization of information, in order to develop the entity's economic and financial decisions, taking into consideration the real cash flow and material flow that takes place within the entity.

The elaboration of an analysis model certainly has to start with getting to know the informational flow within the entities in the studied field.

Then the analysis has to focus on the quality of the information broadcasted by this system in order to eliminate the possible superpositions or redundancies that could make difficult the understanding of the informational flow of the economic entity.

The managerial and financial decision taking systems themselves must represent the focal point of the financial analysis system conceptualization and modeling for the IT industry.

We also consider that the decision making system has to rely in the first place on the central component of the informational system, namely the financial-accountancy system, which is the main provider of information and data needed by the economic entity's internal and external users. Within this central component, the main role in developing an economic-financial analysis model is held by the financial reporting system.

Chapter II – FINANCIAL REPORTING WITHIN THE ECONOMIC ENTITIES – INFORMATIONAL DATABASE FOR THE ANALYSIS MODEL presents the necessity and importance of financial reporting as an ingredient of the informational system, emphasizing the three instances for regarding the financial information: the standing, the performance and the modification of the financial standing. Minding this, we

created a financial reporting system presentation for the economic entities in Romania in the context of matching the national standards with the European directives and the International Standards for Financial Reporting.

On this occasion we emphasized financial reporting options within the three stages of the accountancy system reform, the deficiencies encountered in financial reporting until the equalization from the year 2001, being envisioned through the financial analysis of economic entities.

We developed the research on the grounds of the reporting system, underlining the information connection type provided for the financial statements users.

Among the financial report users that receive and analyze companies' financial information, we have the managers, the employees, the directors, the clients, the suppliers, the current owners or potential owners, the current renters or potential renters, the brokers, the regulatory authorities, the attorneys, the economists, the syndicates, the financial consultants and financial analysts.

Some of these users like the managers and certain types of regulatory agencies may have access to specialized financial reports within their own specific fields of interest.

The others must rely on the financial reports for general use, which the companies issue periodically.

The financial reports for general use include the balance sheet, the profit and loss account, reports regarding shareholders capital modifications or cumulated revenue reports, cash flow reports and all the other additional notes linked to such statements.

Financial reporting provides useful information to the investors, creditors, as well as to all the others who are willing to invest, credit, or take similar decisions.

The information must help the users in estimating the volume, the timing and the possible fluctuation in the cash flow intake and outtake.

On the other hand, the internal information is governed by a different rule. In its case it must be known whom it will be addressed to, what is to be comprised by it and at what rate of recurrence it will be provided etc., giving priority to the information regarding the costs and profits of the entity.

According to the financial-accountancy specialists' opinion, accountancy represents the main information resource for the leadership; therefore the accountancy informational system remains the most important component of the informational system for the directing group.

Usually, for the analysis of the financial information, individual indicators considered

separately, are not too pertinent. Nevertheless there are important connections, between indicators and indicator clusters. As a result, the financial reports analysis requires the identification and detailing of the connection between the indicators and indicator clusters, and also the identification of the changes in such indicators.

The computing for the financial reports *data analysis,* is done using two primary objectives, namely *solvability* and *profitability*.

Solvability represents the ability of a company to pay off its debts in time, ability that is reflected by the economic entity's balance sheet.

On the other hand, *profitability* represents a company's ability to generate revenue, ability that is reflected by the economic entity's profit and loss account.

Generally speaking, anyone interested in the business of one company will be interested in its profitability and solvability.

The financial reports of an economic entity are analyzed on the inside by the company's managers while they are analyzed on the outside by the investors and creditors.

The financial analysis conducted by the managers relates mainly to different activities of the company.

This approach allows the management to elaborate development plans, to evaluate and control the operations inside the company.

Investors and creditors concentrate their analysis over the company's entire financial reports. This analysis will help them decide if they should invest in the company or credit the company.

The objective of the financial statements and of the financial analysis reports is to provide information regarding the financial standing, the performance, the modification of the financial condition and to provide information regarding the economic entity's risk of capital investment loss. Such information is useful for a wide range of users when taking economic decisions.

The financial statements that are elaborated towards serving this goal, comply with the general needs of the majority of users. Still, the financial statements do not comprise all the information that the users require for taking economic decisions, as the financial statements overall, reflect the financial effects of past events and usually they do not reflect non-financial information. In this regard the financial analysis reports append to the information needs of internal and external users.

The financial statements also illustrate the results of the economic entity's administration, including the leaders' management of trusted resources. The users that wish to

evaluate the organizational skills and the management level of responsibility, they do it for attributing to themselves the ability of taking economic decisions; these decisions may regard for example the option of keeping or selling the investment in the particular economic entity or of the option of replacing or revalidating the management.

In the respect of the financial reporting system the following aspects can be upshot:

■ even though the IAS does not impose a standard model for financial standing reporting, the reporting of mandatory elements cannot be skipped, respectively current assets, non-current assets, current liabilities, non-current liabilities, and capital own. The report model is a standard model in Romania and a permissive model in USA or Europe.

■ The balance sheet model applicable in Romania was implemented by the Scottish experts starting the year 2001, in the same time with the implementation of International Accountancy Standards in the Romanian companies. The differences between the Scottish and the Romanian balance sheet consist in the form that the current assets and non-current assets are arranged. The Scottish complies with the arrangement form of US GAAP and of UK GAAP while in Romania the assets are displayed in an opposite order starting with the non-current assets and ending with the current assets. By this fact I determine that the Romanian mediators considered that in the regard of the economic entity's financial standing, the investment condition should still be given priority against the exploiting activity;

■ a highlight of the balance sheet within the Romanian entities is the following two indicators: the current assets (position E) and the adjusted net assets (position F).

■ The profit and loss account, respectively the revenue account (in the case of American or Dutch companies) must be structurally compatible in order to be analyzed by using the same correlated system of indicators. At this stage, the structure of the profit and loss account in Romania must be adjusted and modified based on the particular model presented within this chapter. We think that conducting comparative analysis between Romanian and American IT companies regarding their financial performance will be possible only by applying such strategy.

■ the cash flow condition is therefore an important *financial tool* provided for the entity management in order to allow foreseeing the entity's cash flow sustinance (or growth) capabilities within the current activities. For this end, the financial statement provides additional objective information regarding the following:

- The capability of an entity to generate cash flow from the exploitation activities;
- The trends within the cash flow components and the cash account consequences generated by the financing and capital investment decisions;

- The management decisions in key domains like *the financial policy regarding the operational activity, shares policy and the entity development investment policy.*

In our opinion neither the balance sheet nor the profit and loss account contain sufficient information for empowering decision making, not on their own.

That is why the data in the profit and loss account and the balance sheet has to be joint with the cash flow, in order to forego the detailed analysis of the economic entity's capabilities of acquiring or producing assets based on the reported revenue, of paying off the liabilities resulted from the engaged expenses, and only on these grounds could be elaborated adequate actions for the entity.

Of course that the conceptualization and the building of an economic-financial analysis model in the field of the IT industry, must be the result of a complex economic-financial analysis process, whose outcome will emphasize the model's functional components of real time strategic and operative decision making at each decedent level, facets that we will present in the following chapter.

Chapter III – THE FINANCIAL CONDITION AND PERFORMANCE OF THE ENTERPRISE – COMPONENT OF THE PROJECTED ANALYSIS MODEL emphasizes the IT field analytical system coordinates by making use of the microeconomic level financial analysis techniques and methods.

Throughout the chapter I developed the analysis of the projected system components, and I showed that the profit and loss account data put together with the balance sheet data are ultimately mirrored in the entity's rating which emphasizes the result of the entity's financial management viewed under the scope of financial policy decisions.

The components of the projected analysis model for the informatics industry, is referring in our opinion to the financial condition and also to the financial performance of such entities, which in their turn could be made valuable through an analysis regarding assets, liabilities, capital own, financial balances, an analysis of the triggered modifications in the financial performance and standing of such entities, by making use of a correlated system of indicators that will record the progression causes of these components as well as the effects produced by a certain positioning within the projected analysis model. This way a first component of the model is represented by the analysis of the IT industry entities financial condition, issue that we are presenting next.

The two components of the analysis model respectively the financial condition and the

financial performance are relying on a detailed analysis using the rating method, as well as on a general analysis.

On the other hand, it is required the attuning of the Romanian specific financial information from the profit and loss account, with the information from the revenue account (for the American or Dutch companies) thus allowing the analysis by making use of the same correlated system of indicators.

At this stage, the configuration of the Romanian profit and loss account must be modified relying on the particular model presented within this chapter.

We believe that only this way a comparison is possible between the Romanian IT companies and the American or European IT companies, in the regard of their financial performance.

In the same time we consider that the different micro-levels of both the condition and financial performance will definitely be reflected in the *rating of these enterprises* which we consider to be the *sensor of the economic-financial analysis model* projected this way.

Chapter IV – ENTERPRISE RATING – THE OUTCOME OF THE ANALYSIS MODEL IN THE IT INDUSTRY is the reward of the efforts of displaying as correct as possible the functions and dysfunctions of the entire analysis system for the IT entities.

In this sense we conceptualized and produced an **aggregated rating system** relying on a personal model, on the bank models and on the statistical credit scoring models, and which finally undoubtedly emphasizes **the financial standing of the entity**.

The economic entity activity is facing risk at all times. Usually, it is considered that risk constitutes the probability of an undesirable event to occur.

An economic entity may face risks with more or less difficulty, depending on its market standing, on its economic and financial state of affairs, on the economic environment, respectively on the environment that it operates in. Basically, there is no economic activity that will not face risk at one time or another. On the other hand the amplitude of the risk may differ depending on the field, on the market trends, on the country image in the international context etc.

Economic entities are usually facing the following risk categories: economic, financial and bankruptcy.

The financial wealth diagnosis represents a means to obtaining truthful data and quality information regarding the real possibilities of the economic entity in the primordial stage of the economic crisis. An economic entity presenting a stern analytical system is

capable of recognizing in due time the approaching crisis. By the aid of the financial analysis weak spots in the economic entity's economy can be found and efficient solution for outliving the difficulties can be planned.

In our view, *the bankruptcy risk* may be defined as the companies' impossibility to face a financial-banking operation, respectively their incapability of reimbursing in time the borrowed amounts of capital, while respecting the conditions agreed upon within the credit contracts with the banks. The bankruptcy risk can be the result of certain arising difficulties that couldn't be identified initially, at the time of the analysis and at the time of upraising and credit approval. They couldn't be identified, but throughout the time of the contract these difficulties appeared. Therefore, the process of risk diagnosis consists of assessing the economic entity's capabilities of facing the engagements towards tertiary, so the assessment of the economic entity solvability.

The bankruptcy risk is of interest to both the investor and the manager of a company. Many researchers and many financial institutions have been and are still preoccupied with finding a *risk and bankruptcy prediction* method, starting from a limited set of indicators strongly related to the strength or weakness of companies. That is why many researchers considered that bankruptcy risk measurement can be established through an empirical function that would allow the evaluation of the probability that an entity will register losses, therefore it will become unable to comply with the commitment to its clients and crediting banks.

The main hypothesis in the classic fundamental analysis is the economic entity's future activity continuity. When the likelihood of this continuity decreases significantly, the investors are interested in its evaluation in order to diminish the potential losses.

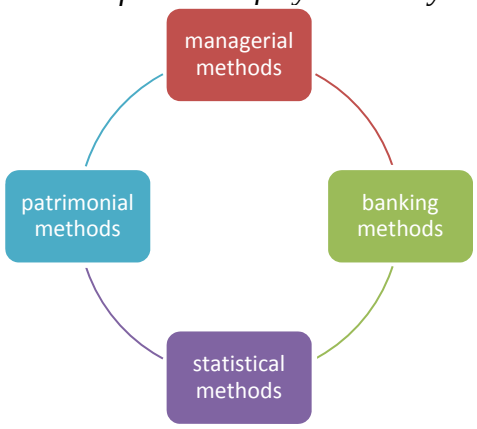
Considering the companies cited on the capital market seems absurd since it's generally known that the harsh admission criteria for being listed on the capital market, admission criteria that is regarding the high levels of profitability and capitalization of the latest 2-3 years, permitted the listing on the capital markets of only the economic entities that are highly competitive and that present a strong financial standing

Still the well known cases of sudden bankruptcy of companies cited on the international markets are no news to investors. Hence, the quick degradation of financial performance, correlated with the managements' talent for the superficial "beautification" of the true results in the cited entities, imposed the need to elaborate certain models for the quick prediction of their failure or success.

The bankruptcy risk analysis may be fulfilled by the aid certain methods, which by

considering the connection type between the phenomenon (the economic entity solvability) and its factors of influence, can be grouped in my opinion in four categories: managerial methods, patrimonial methods statistical methods and banking methods.

Methods for bankruptcy risk analysis



In order to establish more precisely the rating of an economic entity, we built the aggregated model, in which we implemented the ratings established by each model on its own.

Using this logic we considered a unique system of grades and points that would reflect the sub standings registered by an entity through each previously presented model.

The grades obtained by through the three groups of methods (the "M" method; the banking method and the credit scoring method) were equalized through a leveled scoring by taking into consideration the number of models for each category (1 for the "M" method, 2 for the banking method and 2 for the credit scoring) in the same time maintaining the grades A through E and the corresponding points while the inserting brackets within one of the grading was calculated by inserting into the computation the number of models considered.

The value brackets and the scoring grid used in the agregated model

			A	B	C	D	E
Aggregated grading M			15-13 pct	12-9 pct	9-6 pct	6-3 pct	<3
			A	10	5 x 2		
			B	8	4 x 2		
			C	6	3 x 2		
			D	4	2 x 2		
			E	2	1 x 2		
			A	B	C	D	E
Aggregated grading BANKS			10-8 pct	8-6 pct	6-4pct	4-2pct	<2
			A	10	5 x 2		
			B	8	4 x 2		
			C	6	3 x 2		
			D	4	2 x 2		
			E	2	1 x 2		
			A	B	C	D	E
			10-8 pct	8-6 pct	6-4pct	4-2pct	<2
GRADING TOTAL		**M**	A	B	C	D	E
Aggregate M			5	4	3	2	1
Score (Average 25 %)		25%	1,25	1,00	0,75	0,50	0,25
Aggregate BANKS		**Banks**	A	B	C	D	E
Score (Average 40 %)			5	4	3	2	1
Aggregate credit scoring		40%	2,00	1,60	1,20	0,80	0,40
Score (Average 35 %)		**Statistical**	A	B	C	D	E
TOTAL SCORE			5	4	3	2	1
GENERAL GRADING TOTAL		35%	1,75	1,40	1,05	0,70	0,35
		TOTAL	5,00	4,00	3,00	2,00	1,00
Grades			**A**	**B**	**C**	**D**	**E**
Value brackets			5,00 - 4,50	4,50-3,50	3,50-2,50	2,50-1,50	<1,50

Source: personal computing.

In order to establish the aggregated rating model, three levels of rating were included in the calculations:

- the M model;
- the aggregated model of BRD and BCR; and
- the Altman and Stikney aggregated credit scoring model.

As we demonstrated in the paragraph 4.4.2.5., the "M" rating model relies on three categories of indicators grouped as liquidity indicators, solvability indicators and profitability indicators. For each indicator group were established 7 grading qualifications: "very good",

"good", "over satisfactory", "satisfactory", "under satisfactory", "weak", and "very weak", as well as their due scoring.

These qualifications were matched to the 5 A-E grading, afferent to the banking and credit scoring models into as follows: "very good" and "good"=A, "over satisfactory" and "satisfactory"=B, "under satisfactory"=C, "weak"=D and "very weak"=E. It was continued by giving score points comprised within the 3-15 points bracket, separated on the A-E grading qualifications, as it shows in the table above. The points afferent to the grading categories are level averaged to 25% in the aggregated model in order to obtain the general grading.

Within the banks' aggregated model and within the aggregated credit scoring model, were given score points comprised within 2-10 for each rating category, as it shows in the table above. The points afferent to the rating categories are level averaged to 40% within the aggregated banking model and to 35% within the credit scoring model in order to obtain the general grading.

The final rating is given by summing up the number of points and the entity qualification as follows:

Aggregated rating

Level averaged result of entity rating	Entity grade rating
4,5– 5,00	A
4,49 – 3,50	B
3,49 –2,50	C
2,49 – 1,50	D
< 1,5	E

Source: personal computing

The final rating for the analyzed enterprises is presented as follows:

Table 0.1 Aggregated Rating Sinthesys-20 ITenterprises

Indicators		Achieved 12.31.2005	Achieved 12.31.2006	Achieved 12.31.2007	Achieved 12.31.2008	Achieved 12.31.2009
AGGREGATED „M" MODEL						
***Method:* „M"**						
CATEGORY		B	B	B	B	B
Score		12	12	12	12	12
Aggregated grade qualification M		**B**	**B**	**B**	**B**	**B**
AGGREGATED BANK MODELS						
Method: BRD-GSG S.A						
CATEGORY		A	A	A	A	A
Score		5	5	5	5	5
Method: BCR						
CATEGORY		B	B	B	B	B
Score		4	4	4	4	4
TOTAL SCORE BANKS		9	9	9	9	9
Aggregated grade qualification BANCI		**A**	**A**	**A**	**A**	**A**

AGGREGATED CREDIT SCORING MODELS						
MODEL: ALTMAN						
CATEGORY		A	A	A	A	A
Score		5	5	5	5	5
Method: STICKNEY						
CATEGORY		E	E	E	C	D
Score		1	1	1	3	2
TOTAL SCORE CREDIT SCORING		6	6	6	8	7
Aggregated grade qualification CREDIT SCORING		**B**	**B**	**B**	**A**	**B**
GRADING TOTAL						
Aggregate **„M"**		**B**	**B**	**B**	**B**	**B**
Score (Average 25 %)		1,00	1,00	1,00	1,00	1,00
Aggregate BANKS		**A**	**A**	**A**	**A**	**A**
Score (Average 40 %)		2,00	2,00	2,00	2,00	2,00
Aggregate CREDIT SCORING		**B**	**B**	**B**	**A**	**B**
Score (Average 35 %)		1,40	1,40	1,40	1,75	1,40
TOTAL SCORE		4,40	4,40	4,40	4,75	4,40
GENERAL GRADING TOTAL		**B**	**B**	**B**	**A**	**B**

Source: personal computing

Aggregated rating synthesis -778 IT enterprises

Indicators	**Achieved 12.31.2005**	**Achieved 12.31.2006**	**Achieved 12.31.2007**	**Achieved 12.31.2008**	**Achieved 12.31.2009**
AGGREGATED „M" MODEL					
Method: M					
CATEGORY	B	B	B	B	B
Score	12	12	12	12	12
Aggregated grade qualification M	**B**	**B**	**B**	**B**	**B**
AGGREGATED BANK MODELS					
Method: BRD-GSG S.A					
CATEGORY	A	A	B	B	B
Score	5	5	4	4	4
Method: Banca Transilvania					
CATEGORY	B	B	B	C	C
Score	4	4	4	3	3
TOTAL SCORE BANKS	9	9	8	7	7
Aggregated grade qualification BANKS	**A**	**A**	**A**	**B**	**B**
AGGREGATED CREDIT SCORING MODELS					
MODEL: ALTMAN					
CATEGORY	A	A	A	A	A
Score	5	5	5	5	5
Method: STICKNEY					
CATEGORY	E	E	E	E	E
Score	1	1	1	1	1
TOTAL SCORE CREDIT SCORING	6	6	6	6	6
Aggregated grade qualification CREDIT SCORING	**B**	**B**	**B**	**B**	**B**
GRADING TOTAL					
Aggregate M	**B**	**B**	**B**	**B**	**B**
Score (Average 25 %)	1,00	1,00	1,00	1,00	1,00
Aggregate BANKS	**A**	**A**	**A**	**B**	**B**
Score (Average 40 %)	2,00	2,00	2,00	1,60	1,60
Aggregate CREDIT SCORING	**B**	**B**	**B**	**B**	**B**
Score (Average 35 %)	1,40	1,40	1,40	1,40	1,40
TOTAL SCORE	4,40	4,40	4,40	4,00	4,00
GENERAL GRADING TOTAL	**B**	**B**	**B**	**B**	**B**

By groups:

GR I	**GENERAL GRADING TOTAL**	**B**	**B**	**B**	**B**	**B**
GR II	**GENERAL GRADING TOTAL**	**B**	**B**	**B**	**B**	**B**
GR III	**GENERAL GRADING TOTAL**	**A**	**B**	**B**	**B**	**B**
GR IV	**GENERAL GRADING TOTAL**	**D**	**D**	**D**	**B**	**C**
GR V	**GENERAL GRADING TOTAL**	**B**	**B**	**B**	**B**	**B**

Source: personal computing

It can be noted that there isn't any noticeable differentiation between the ratings established for the entities of each group and the ratings of the respective groups meaning that the rating level can ascend or descend by one qualification grade at the most.

Throughout this chapter we showed that each rating type relies on well established hypothesis and on personal models for computing and analyzing the financial indicators.

Secondly we noticed a multiple criterion approach to the rating issues, starting with the balance sheet information, the profit and loss account and little less the cash flow situation.

The "M" model, which I conceptualized as a result of the conducted studies regarding numerous financial indicators in the 778 entities as well as in the 20 entities, and which guarantees the mirroring of all the financial aspects with an impact over future activity development, over profit and over the reimbursement capabilities of these entities.

From between the analyzed indicators were selected the financial rates of liquidity and performance.

The personal rating model is compatible with the aggregated model and they both put forward an important guide to the rating analysis of the entities in the IT industry

The performance of a company is greatly dependant on its financial structure, namely how much of the activity is financed through its own capital and how much is it financed through credit. According to the traditional theory an optimal ratio between the two financing sources exists, ratio that leads to minimizing the society's capital cost and consequently leads to maximizing the company's value. In this respect we found interesting to observe if at the level of Romanian IT companies exists a significant link between their performance, measured through ROE and ROA and their liability degree (as a measure for exposing the company and consequently as the company's financial structure circumstantial means), respectively their liquidity.

In the conducted statistical research statistical is noticeable that ROA is significantly influenced by the of the liability current liquidity evolution. Within the software editing specialization, a 1% modification of the liabilities will lead to a 0.0704% ROA modification, and a 1% change in current the liquidities will to a 0.0030% ROA modification. Current liquidities do not represent an influential factor For ROA in any of its four sub domains, and the liability level influences only the ROE of the companies specialized on software editing and commerce. Thus, in the case of software editing a 1% modification of the liabilities will lead to a 3.2305% ROA modification. It's noticeable that both performance indicators are negatively affected by the liability level, no matter what sub field is regarded.

The conducted analysis emphasized the distribution of the median value for ROA and ROE, towards the four fields by taking into account “three areas” called: the green zone (0-30%), the brown zone (30-60%) and the red zone (over 60%).

From the analysis of the major statistical indicators for the main trends and for the of the profitability ratio variance resulted that over 50% of the companies whose object of activity is consultancy are located in the green zone and do not present permanent financial difficulties.

For this reason we consider that it should be imposed that the theory and financial practice of entities be found more often within the rating models that could prevent the collapse of economic entities.

CONCLUSIONS

● Undoubtedly when elaborating an analytical system we must start from studying the informational flow within the entities from the investigated field of study.

● Afterwards the analysis must focus on the quality of provided information by this system in order to eliminate the possible superpositions or redundancies that could make difficult the understanding of the informational flow of the economic entity.

● The managerial and financial decision taking systems themselves must represent the focal point of the financial analysis system conceptualization and for the IT industry.

● We think that the decision making system must rely primarily on the informational system central component, namely on the financial-accountancy system, which is the primary information and data provider, information and data that is needed by the economic entity's internal and external users.

● The objective of the financial statements is to provide pertaining information regarding the financial condition, the performance and cash flow in an economic entity, information useful for a large number of users, when taking economic decisions.

● Such financial reports must be regarded as a whole, since their comprised data is correlated within itself, they provide objective, useful and pertaining information within due time, information that is essential when taking investment, crediting or similar decisions conforming to the financial reporting objectives.

● Financial reports also provide the data regarding assets, liabilities, profit, cash flow and capital own of an entity. The effects of transactions or other events are registered in the financial reports in accordance with the financial reporting national standards.

● in our opinion, all businesses are striving towards two major objectives which are the profitability and the solvability of the economic entity. On one hand, *profitability* represents the capability of an entity to generate the revenues reflected in the profit and loss account. On the other hand, *solvability* represents the capability of an entity to pay off its liabilities to tertiary, when they become due, liabilities reflected in the balance sheet.

● The main *goal* of the cash flow condition is to emphasize the cash or its equivalent intakes and outtakes throughout a determined timeframe, usually throughout the financial exercise.

From within the elements presented throughout the second chapter we extracted the following conclusions:

- Firstly, we notice that the balance sheet model within the Romanian entities complies

with the requests imposed by the financial standing analysis, even more it comprises more detail then the European or US IT companies balance sheets.

- The financial standing analysis presents an overall financial standing analysis and also the financial standing equilibrium analysis, all according to the methodology presented within this work.
- Throughout the financial standing overall analysis we followed characteristics regarding the *structure* and the *evolution* of certain elements like assets/liabilities/capital own.
- The trends or financial standing analysis requires the establishing of indicators from the balance sheet calculated for the assets/liabilities/capital own elements.
- The financial standing analysis requires the establishing of structural rates for the assets/liabilities/capital own elements.
- When assessing the *financial health* of an economic entity we have to track not only its solvability but also its *liquidity*, in other words for this entity to have good standing it is not enough to have the capability of paying off its debts (to be *solvable*) but it is also required to pay its debts within the agreed upon *due time*. This way the economic entity may be solvable, owning a number of total assets far superior to its liabilities (a *positive net* result), while it may not own enough *liquidities* for complying with the payments due times, therefore a separate liquidity analysis is required.
- If solvability is referring to the economic entity ability of managing its liabilities on the short, medium and long terms and if it offers fractional information over short term liquidities, the *liquidity degree* represents the equilibrium quality of the financial entity on the *short term.*

Finally I judge that the detailed indicators usefulness in this situation is dependant on the financial analyst's experience and creativity. The financial indicators are totally useless on their own therefore they must be analyzed on a comparative basis.

The general objective of the present work was to identify the analysis types for the standing, performance and risk of the economic entities overall. As a result of the specialized literature study and of conducting a case study over the data provided by the 778 entities together with the 20 IT entities which provided us complete data for this study, we deducted the following conclusions:

The three components of the analysis model, respectively the financial standing and

performance and the cash flow are relying on both a general analysis and a detailed analysis by the aid of the rating method.

On the other hand an attuning is required regarding the financial information in the profit and loss account for the Romanian entities and the financial information in the revenue account (for the American or Dutch companies), in order to allow an analysis based on an identical system of correlated indicators.

At this point the structure of the profit and loss account in Romania has to be modified according to the presented model.

We believe that only this way, a financial performance comparison between the Romanian IT companies and the European or American IT companies, is possible.

In the same time we think that the different micro situations in the financial performance and standing and in the cash flow will undoubtedly be echoed in the *rating of such entities* which we consider to be the *financial-economic analysis sensor* hence projected as a synthetic approach to the risk of business overall, to the bankruptcy risk especially.

The "M" rating model that was conceptualized through conducting research over numerous financial indicators in the 778 entities and in the 20 entities altogether, ensures the mirroring of all financial aspects with impact over the future development activities, over the revenue and over the credit reimbursement capabilities of such entities.

Among the analyzed indicators were selected the financial ratings for performance and liquidity.

Both the personal rating model and the aggregated model are compatible and the present an important guide for the rating analysis of IT industry companies.

The performance of a company is directly dependent on its financial structure, namely on how much of its activity is being financed through credits as opposed to how much is being financed by its own capital. According to the traditional theory there is an optimal ratio between the two financing sources, ratio that can determine the minimizing of the capital costs of the company and consequently will lead to the maximizing of the company value. In this regard we found interesting to study if within the Romanian IT companies may exist a significant link between their performance, measured through ROA and ROA and the extent of its liabilities (as a measure for exposing the company and consequently as the company's financial structure circumstantial means), respectively of its liquidity.

The conducted statistical analysis brought forward the fact that that ROA is significantly influenced by the evolution of the extents of liabilities and by the current liquidity evolution. Within the software editing specialization, a 1% modification of the

liabilities will lead to a 0.0704% ROA modification, and a 1% change in current the liquidities will to a 0.0030% ROA modification. Current liquidities do not represent an influential factor For ROA in any of its four sub domains, and the liability level influences only the ROE of the companies specialized on software editing and commerce. Thus, in the case of software editing a 1% modification of the liabilities will lead to a 3.2305% ROA modification. It's noticeable that both performance indicators are negatively affected by the liability extent, no matter what sub field is regarded.

The conducted analysis emphasized the distribution of the median value for ROA and ROE, towards the four categories by taking into account "three areas" called: the green zone (0-30%), the brown zone (30-60%) and the red zone (over 60%).

From the analysis of the major statistical indicators for the main trends and for the the profitability ratio variance resulted that over 50% of the companies whose object of activity is consultancy are located in the green zone and do not present permanent financial difficulties.

The imposed conclusion that is reflected is one only, and namely that risk governs life and knowing risk is the prime formula for improving the quality of life.

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2. HG 704 din 22.12.1993 pentru aprobarea unor măsuri de executare a Legii contabilităţii nr.82/1991, publicată în M.Of.nr.208 din 10.08.1994;
3. Legea 31/1990, privind societăţile comerciale, republicată în M.Of.nr.1066 din 17.11.2004;
4. Legea 85/2006, privind procedura insolvenței, publicată în M.Of. nr. 359 din 21.04.2006;
5. Legea contabilităţii nr. 82/1991, republicată în M.Of. nr.454 din 18.06.2008 ;
6. OMF 403 din 22.04.1999, pentru aprobarea Reglementărilor Contabile Armonizate cu Directiva a IV-a a Comunităţilor Economice Europene şi cu Standardele de Contabilitate Internaţionale, publicat în M.Of.nr.480 din 4.10.1999;
7. OMFP 94 din 29.01. 2001, pentru aprobarea Reglementărilor contabile armonizate cu Directiva a IV-a a Comunităţilor Economice Europene şi cu Standardele Internaţionale de Contabilitate, publicat în M.Of.nr.85 din 20.02.2001;
8. OMFP nr. 1752 din 17.11.2005, pentru aprobarea reglementărilor contabile conforme cu directivele europene, publicat în M.Of. nr. 1090 din 30.11.2005;
9. OMFP nr. 3055, pentru aprobarea Reglementarilor contabile conforme cu directivele europene, publicat în M. Of. Partea I nr. 766 din 10.11.2009;

10. Regulamentul BNR nr.3 din 19.03.2009, privind clasificarea creditelor şi plasamentelor, precum şi constituirea, regularizarea şi utilizarea provizioanelor specifice de risc de credit, publicat în M.Of.nr.200 din 30.03.2009;
11. Regulamentul BNR nr.5 din 22.07.2002, privind clasificarea creditelor şi plasamentelor, precum şi constituirea, regularizarea şi utilizarea provizioanelor specifice de risc de credit, publicat în M.Of.nr.626 din 23.08.2002.

International regulations

1. [xxx] Committe on Accounting Terminology, Accounting Terminology Bulletin No.1, New York: American Institute of Certified Public Accountants, 1953, par.9;
2. [xxx]Statement of the Accounting Principles Board No.4, „Basic Concepts and Accounting Principles Underlying Financial Statements of Business Enterprises, New York: American Institute of Certified Public Accountants, 1970, par.40 ;
3. [xxx]Statement of Financial Accounting Concepts No.1, „Objectives of Financial Reporting by Business Enterprises" (Stamford, Conn: Financial Accounting Standards Board, 1978), par.9.

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