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GOING CONCERN RESEARCH ASSESSMENT FOR QUOTED ROMANIAN AGRICULTURAL COMPANIES

Abstract:

In a world without frontiers, the need for financial information is becoming greater and greater, being considered the main control instrument in economic activities.

The transparency of financial information cannot be achieved without accountancy and audit contribution, main factors in identifying the observance of going - concern assumption.

Moreover the financial crisis may determine the risk increase which affects the proper development of business, in general and of agricultural activities, in particular. This increase in risk may be interpreted as a greater uncertainty as regards the agricultural companies capacity to continue their activity.

The purpose of the paper is to demonstrate the logical connection between the observance of going concern principle in agricultural activities with the decrease of bankruptcy risk. The necessity to predict the bankruptcy risk is relevant not only for governance and company management but also for all other participants in the social act which interferes with the company. Therefore, the continuation of activity can be assessed by different methods applied to annual financial situations. The analysis is achieved both by using accounting methods and also by financial statistic methods. The present day economic life makes the audit resort to these methods of scientific and statistical analysis, directing the audit to another method - the metric audit. The scientific - technical basis of this paper is given by the research regarding the necessity of going concern - an element of risk management.

In order to make this research there have been used information and speciality reference materials. In order to attain the proposal objective there has been used a methodology of fundamental research as regards risk character.

Keywords:

going concern, bankruptcy risk, governance, financial statistic methods, scoring-function, metric audit

JEL Classification: M41, M42, M49

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1. Introduction

The appreciation and evolution of financial health of an agricultural business in financial accounting diagnosis lay down risk – assessment which may occur during its activity, some of them proving their vulnerability and others predicting their insolvency which threatens their being perennial. Risks modifying the qualitative and quantitative results of an entity, are one of the main factors which affect the economic-financial phenomena, raising them or not to the performance level in its dynamics or as regards competition.

The risk evaluation of agricultural business is important for its proper governance. A good governance leads to risk identification and management, which may prevent the business efficiency and effectiveness.

The risk in business can be controlled by implementing some company strategies, an operational and financial plan oriented towards the attainments of affair objectives. The risk presence within the framework in which the entity operates imposes that all decisions regarding it should be grounded taking into consideration the risk.

2. Literature Review

2.1. Testing the Assumption of Going Concern in the Mission of “Metric Audit”

The new European tendencies regarding methodological approach of financial audit require an increase of auditor’s responsibility as regards the estimation of the way in which those responsible for the governance of audited entity uses properly the principle of going concern when drawing up financial situations. In speciality literature the principle is translated by the phrase “to continue as a going concern” or the “the going concern assumption”. If the concept “concern” (a term attributed to the great American companies of 60’s-70’s) is associated to the adjective “going” (with the meaning of going steadily) we can get the idea of a company to continue its activity.

The International Financial Reporting Standards IFRS through IAS 1 “The Presentation of Financial Situations” provides that an entity will make up financial situations starting from the assumption that it will continue its activity in a predictable time horizon, excepting the case when the governance is going to liquidate the affair, to reduce significantly its activity or when there is no alternative leading to this situation. (IFRS, 2013) The impact on making up financial situations may be felt especially at the level of evaluation. In such a situation the management must take into consideration and present all the events or conditions which may lead the company to the impossibility of observing the going concern principle.

At the level of financial market the effects of reporting such information can be felt and quantified through the impact on the price of firm shares under discussion and implicitly on the stock-exchange capitalization. So, we find again two situations which may lead to informational asymmetry as regards investors access to information concerning the observance of applying the principle of going concern: (Robu, 2014)

- The financial market will not be sent all the necessary information for the evaluation of firm capacity to continue its activity, a situation in which the reduction of informational asymmetry can be achieved by the accession to IFRS and by applying to IAS 1 which recommends that the users of financial information and investors implicitly may benefit from a minimum set of situations which analyzed, to estimate the firm capacity of continuing its activity. In this way the bankruptcy risk can be estimated on the basis of liquidation, insolvency, rentability or indebted rates and the audit is reported to the reference values of the speciality literature or the norms;
- The financial market will be sent information which by mistake may lead to a misinformation regarding the firm capacity of continuing its activity, a situation represented by sending some financial information to the market which require certification and quality warranty.

In this way the role of financial auditor is felt present, who has as main responsibility the report of some objective, professional and independent opinions as regards the accuracy of financial information given, under the most significant aspects, in accordance with a reporting framework of applicable reference. In order to warranty the quality of reported information by using the professional standard on audit ISA 570 International Standard on Auditing – Going Concern Principle it is presented the auditor's responsibility in the audit of financial situations as regards the assumption of going concern when making up the financial situations. The auditor has to get audit evidence as regards the use of this principle by the management and to report conclusions if there is a significant uncertainty regarding the firm capacity of continuing its activity.

ISA 500 "Audit Control" provides that all audit evidences can be obtained by means of audit procedures among which are inspection, observance, external confirmation, recalculation, remaking, analytical procedures and interrogation. Among these, at the level of speciality literature and practice it is imperative the use of analytical procedures as a way of estimating financial and nonfinancial information by means of fluctuations investigation or by comparing them with information from previous periods with anticipated results of audited company or with information from similar fields of activity. (Robu, 2014) Under the conditions of the actual external environment with sudden changes in the lack of stability, the financial auditor considers that it is necessary to lay stress on the audit reports with the highest level of accuracy and warrantee (information got from the third parties) and especially on analytical procedures in close interdependence with all the other audit procedures.

We appreciate as being more than useful the methods of quantitative analysis of measuring the risk failure – an antithesis of going concern, more exactly the scoring methods. In order to get audit evidence as regards the possibility to estimate the unity capacity of continuing activity, the speciality literature recommends the use of advanced statistic methods by means of which a rational judgement can be obtained as regards the possibility of bankruptcy risk.

One of the most common methods is the discriminating analysis or the scoring technique which has efficient results as regards the assessment of bankruptcy risk. By using this method it is estimated a score for the firms with or without risk failure. Then on their basis there can be made some risks intervals in which the analysed companies can be classified.

The method can also be applied by using specialised statistics soft wares type SPSS, the users being able to get scoring functions which may be used in classifying the firms in distinct risk groups. There are also some disadvantages because these scoring functions must be periodically analysed and so they can be applied only for companies which are similar to those included in the echelon used for getting the respective function.

The basic idea of discriminating analysis is the following: (Robu, 2014)

- It is considered a scoring function $Z = \beta_0 + \beta_1 \cdot X_1 + \beta_2 \cdot X_2 + \dots + \beta_i \cdot X_i + \dots + \beta_n \cdot X_n$, with $i=1, \dots, n$, where β_i represents the model rates and X_i represents a series of variables included in the analysis (financial rates). The idea of using financial rates is supported by their possibility of making evident the company financial standing and performance, and the idea of their aggregation in the form of a function is supported by the fact that some firms which have different financial standing can obtain similar financial performances and firms having similar financial standing can obtain different financial performances;
- The estimations of the scoring function parameters are obtained by using the discriminating analysis, starting from an echelon of performant and nonperformant companies;
- Once estimated the parameters of scoring function Z , the risk intervals can be calculated, which can be used later for classifying firms in risk groups and for their capacity to continue their activity.

A drawback of this method is given by the fact that starting from Z function used for a company it is estimated, according to information regarding financial position and performance, a Z scoring which belongs to one of the calculated intervals in the conditions in which Z is very closed to the limits of two neighbouring intervals, the auditor's assessment of firm's capacity to continue its activity is still difficult, because the probability of the event to take place is not known. Therefore the professional thinking is called for, a qualitative element difficult to be quantified in the approach of determining the continuation of the activity.

In this way the auditor may use another method which may response successfully to these drawbacks: the regress analysis based on the probability of the event to take place at a given moment (the type of logistical or probable regress). The basic idea of this methods is represented by the fact that under the influence of the same financial factors (and especially nonfinancial, a thing which is not permitted in discriminating analysis) there can be estimated the probability of a bankruptcy.

In case of analysis of logistical regress, the model by which the bankruptcy risk can be estimated is in the format $p/(1-p) = 1/(1+ e^{-(\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_i X_i + \dots + \beta_n X_n)})$, with $i=1, \dots, n$, where β_i represents the rate of the model, X_i represents a series of variables included in the analysis (financial rates but also non-financial indicators) and p shows the insolvency or bankruptcy probability under the influence of determining factors (X_i) included in the analysis. Compared to discriminating analysis, the analysis of logistical regress leads to estimations of bankruptcy risk, at the level of the whole population or on categories (depending on the object of activity, on the category of Bucharest Stock Exchange to which they belong, etc). However this approach uses in its analysis only the financial information of current exercise, without considering the information in the previous financial exercises. This thing may constitute a vulnerability of the auditor's opinion and a limit of an audit mission, especially when accepting new clients where all the information got in the previous financial exercises are not known.

This lack can be reduced by using other statistic methods of data processing, the survival analysis which uses nonparameters and semiparameters lasting models. The advantage of these methods is determined by the fact that starting from a series of financial and non financial factors the probability of failure to take place can be determined. Moreover, it can be estimated the time after which the event may appear from its first quotation at stock exchange or from the setting up of the company. In such kind of analysis the used model is in the format : $h(t) = [h_0(t)]e^{\beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_i X_i + \dots + \beta_n X_n}$, where $h_0(t)$ represents the rate of reference hazard risk (known from previous research), $h(t)$ represents the hazard rate associated with the studied event (insolvency or failure) at t moment (financial exercise in which the financial audit takes place), B represents the model rates, and X represents financial and non-financial variables included in the model.

The financial auditor can use one of the three models previously mentioned, but we consider as being accurate the application of the three methods in order to get a reasonable warrantee that the entity will continue its activity in a predictable time horizon.

2.2. Research Regarding the Risk-Failure

Bankruptcy represents for agricultural business one of the greatest threat and it occurs when the entity is not able to honour its debts in time. Bankruptcy represents for any business, for any entrepreneurial initiative lack of flexibility, a slow reaction and their increased exposure to the anticipated modifications and to uncertainty.

There is the probability that under the empire of changes, from the outer background and even from relatively passive phenomena which may act within the entity, to get to the impossibility of having liquidities and to register a positive treasury to ensure the payment in due date. Moreover, bankruptcy is evident when the inability to generate financial resources to cover the entity obligations in due time becomes permanent.

Dalota M.D. și Dalota S. (2000) consider that "The bankruptcy risk is connected with the difficulty standing of the company considered to be a permanent state of financial crisis. From juridical point of view a firm is considered to be in difficulty when it is unable to make payments, being unable to face the exigible debts, the law providing in this case reorganization or the liquidation of the firm".

The bankruptcy presents interest both to investors and to the company managers. The risk bankruptcy represents the probability that an enterprise may register losses and not to be able to honour its due obligations to its creditors, in other words to be insolvent.

Stancu I. (1997) considers that the diagnosis of bankruptcy risk consists in the evaluation of the enterprise capacity to face the assumed engagements to the third parties, therefore the evaluation on of the enterprise solvency.

J.S. Daigne (2008) appreciated in his paper "Entreprise en difficultes" that any financing of an enterprise in difficulty through financial aid or credits granted, has the same effect like a drug".

In speciality literature there are a series of methods used in evaluating the continuation of the activity. Popescu Ghe. and his collaborators (2009) classifies these methods in accounting methods which we consider to be methods of financial analysis which presupposes an analysis of liquidity, solvency and financial balance, nonfinancial methods which use qualitative variables and statistic methods. Moreover, Koh H.C. and Low C.K. (2004) consider that "statistical methods of evaluating a going concern are an extension of prediction of bankruptcy risk".

Both the accounting methods and nonfinancial ones to analyse the bankruptcy risk use financial information which can be easily deteriorated, in this way presenting a disadvantage for a clear and accurate information about future events of agricultural firms. Under these conditions the need of knowing the future of agricultural firms, of forecasting the vulnerability has determined the appearance of scoring method, a method meant to improve the traditional methods.

The scoring method allows the estimation of risk failure on the basis of correlation between health state and a series of significant financial rates, by means of statistical methods. Colasse B. (2009) considers that this rate combinations has led to the elaboration of a scoring function whose value separates the companies in being: healthy or with financial and economic difficulties.

The economic practice and theory presents a series of methods based on the scoring method. Mazilescu V. and collab. (2010) considers that the methods can be classified according to the accounting system relevant for the country for which they have been elaborated as follows:

- ✓ Anglo-saxon models: Credit Men sau Security – Analysis in 1930, Beaver unidimensional model – 1966, Altman in the year 1968, Edmister -1972, Diamond - 1976, Koh și Kiilough – 1980, Zavgren – 1983, CA Score – 1987, Koh -1992, Shirata – 1999;

- ✓ Continental models: Yves Collongues in the year 1976, Conan&Holder – 1979, model of French Bank Balance Centre during 1977-1979, Model of French Commercial Credit;
- ✓ National models: Măneacuță și Nicolae in 1996, in 1998 Gheorghe Băileșteanu and Ivonciu, Ion Anghel in 2002.

Altman and Narayanan (1977) classify the models on the country level of development for which they have been elaborated: models for developed countries and models for developing countries.

Fang M. and Yi-Chung H. (2010) settle the criterion based on the type of analysis used to elaborate a model or a scoring function. There can be found:

- ✓ Models elaborated on the analysis of multiple discrimination: in 1968 Altman model, in 1977 Haldeman and Narayanan model, 1984 - Apetiti, Izan, 1998 - Shirata, Conan&Holder in 1979 and during 1977-1979 the model of French Bank Balance Centre;
- ✓ Models elaborated by the analysis of logistical regress: Eisenbeis – 1977, Ohlson – 1980, Jones – 1987, Long – 2001;
- ✓ Models elaborated on the analysis of probalistic regress: Farber – 1977, in 1992 McDowell and Smith;
- ✓ Models obtained as a result of applying euristic algorithms like in neurological networks: Bell et al. in 1990, Tam and Kiang in 1992, Coats and Fant – 1993, Wilson and Sharda – 1994;
- ✓ Decisional trees: Curram – 1994, Zheng and Yanhui in 2007.

Mossman and his collaborators (1998) identifies another criterion of classifying models of bankruptcy prediction, a criterion which applies the information taken into account in order to create the scoring function.

- ✓ Models based on financial rates: Altman – 1968, Altman, Haldeman and Narayanan in 1977, Collins in 1980;
- ✓ Models based on cash-flow information, such as Gentry, Newbold and Whitford model – 1985;
- ✓ Models based on result variation: Beaver – 1968, Clark&Weinstein – 1983;
- ✓ Nonfinancial models among which are Cooper et al.- 1990, Reynolds – 1987.

Altman E. (1968) analysed the activity of 33 industrial companies having financial problems and 33 firms without problems, during 1946-1965. He obtained by means of 22 indicators a new model, applicable to firms quoted at the stock exchange, based on five rates considered relevant. In order to be applicable for unquoted firms too, Altman replaced the indicator reporting the market value with the amount of proper capital and recalculated the share of all indicators. He also applied the model to other fields of activity, reconsidering the scoring function and keeping four rates.

In 1985 the French Bank Balance Centre Model appeared relying on 8 rates out of 26 analysed in a period of 2 years (1977-1979) with firms having less than 500 employees.

Keasey and Watson presented in 1987 a study made on 73 firms going bankrupt and on 73 non failing companies. By using this study they demonstrated that by including nonfinancial variables the forecasting power of the model rises.

Anghel I. (2002) presented Beaver model, which in 1966, as a result of a study on an echelon of 76 failing firms and on 79 non-failing firms, published a model of forecasting bankruptcy risk having 5 financial rates. Anghel I. also presents that J. Argenti analysed in 1976 how the bankruptcy risk evolves and found that the financial indicators registered different values from a case to another. At national level, Anghel I. proposed in 2002 a model made up of a constant and four indicators.

Bailesteanu Ghe. proposed in 1998 for Romanian firms a model made up of four variables, having as star-up Altman, Argenti and Conan&Holder models. In the same year Paul Ivoniciu – economist – made a study on a echelon of 50 firms from different sectors of activity and proposed the model of scoring function made of 6 indicators. In 1996 two specialists from national Forecasting Commission proposed a model applicable in metallurgical industry on 59 firms.

Isaic Maniu I. (2006) presents the Conan&Holder model which in 1979 published the results of a research made on 95 industrial firms for the years 1970-1975. The two authors elaborated some specific models also applicable to other fields of activity.

The way of reviewing all the scientific research for covering, estimating the hypothesis of risk failure is that of making the basis necessary for reaching a logical conclusion as regards the best model which might find the characteristics of risk-failure in agricultural business.

We notice that a great number of specialists in the field were concerned with the idea of risk and uncertainty, which are met in different contexts in the speciality literature such as: technical, economy, law. Moreover, bankruptcy risk represented and still represents a field in which the specialists proposed to make research and to achieve a mathematic model to answer the question whether the economic entity is on the way of bankruptcy or not.

Taking into account that agriculture in Romania, represents 4,4% of GIP at the level of the year 2014, and that the agricultural affairs are growing, the market is becoming mature, the research is justified in the idea that it is necessary to be mentained an economic thinking and judgement of qualitative results in order to further support and develop this sector. (<http://www.zf.ro/zf-news/agriculture-share-in-GIP-has-decreased-four-times-in-the-last-20-years-and-has-reached-only-to -4-4-13926133>).

3. Research objectives

The research has in view to reach the following objectives:

- ✓ Development of existing scientific support as regards going concern in agriculture;

- ✓ Research of speciality literature regarding the bankruptcy risk – a prediction in order to ensure the continuation of agricultural activities;
- ✓ Analysis of observing accounting convention – the continuation of agricultural activities through scoring function – a basis of management of an efficient risk.

The aim of our scientific approach is to identify the utility of statistic – financial models of predicting risk – failure, in order to ensure the continuation of agricultural business. The relevance of scientific approach in the field of agriculture resides from the role agriculture has played after 2008 up to present in the income of Romanian economy.

4. Research methodology used

In order to attain objectives there have been used the following methodological instruments:

- ✓ Extended documentary research;
- ✓ Diachronical research of the evolution of knowledge in the respective field in general and in the scientific one in particular;
- ✓ Comparative research made on seven statistic – financial models of predicting risk – bankruptcy and on nine agricultural firms quoted;
- ✓ Case-study.

In order to get some data and information there has been used a documentary and diachronical research from national and international journals in the field and of some specialists who made the studies.

5. Study results

Prediction of bankruptcy risk in order to assure the continuity of agricultural business – analytical presentation of the main statistic-financial models

We have accessed the data of a company quoted at Bucharest Stock Exchange in the field of agriculture. The agricultural company has a good financial standing in order to notice the accuracy of risk-failure prediction. The financial-economic indicators used in predicting models of risk failure in the period 2011-2013 represented the starting point to achieve the study.

Although, the scoring functions presented are not addressed to agricultural activities, by the following calculations we try to draw the conclusion if the functions are convergent to the same risk zone, and if there are functions among the ones under discussion which are different, as a result of risk bankruptcy from the zone of the rest of the functions. The model of the scoring function, also found in speciality literature and applied to financial information of agricultural company under the study are the following:

Altman model for firms quoted at stock exchange, where:

$Z = 1,2 r1 + 1,4 r2 + 3,3 r3 + 0,6 r4 + 1,0 r5$, where: $r1$ – circulating asset/total asset – rate of asset structure measuring the flexibility level of the economic entity; $r2$ –

reinvested profit/total asset – indicates the economic entity contribution to finance investment; r_3 – gross profit/total asset – shows the performances of patrimony asset; r_4 – market value of the capital/long term liabilities – shows some of the obligations level; r_5 – rate of turnover/total asset – expresses the patrimony return.

The value of Z scoring settles two limits and a zone of uncertainty: $Z < 1,8$ – bankrupt in a year; $1,81 \leq Z \leq 2,675$ – uncertainty zone with a great bankruptcy risk; $2,67 \leq Z \leq 2,99$ – zone with low risk failure; $Z > 2,99$ - zone without bankruptcy risk.

Z score obtained was 3,56 at the end of 2011, of 4,05 at the end of 2012 and of 3.73 at the end of 2013. It results that the agricultural firm is situated in a zone lacking threat of bankruptcy.

Conan&Holder model has the function of 5 rates dependence.

$Z = 16x_1 + 22x_2 / 87x_3 / 10x_4 + 24x_5$, where X_1 – rate of partial liquidities; X_2 – rate of financial stability; X_3 – rate or level of financial expenditures as to the rate of turnover; X_4 – rate of staff remuneration (the expenditure share with the staff in added value); X_5 – gross operation surplus as to the total liabilities.

The value of Z score settles three zones, as follows: $Z \leq 4$ – dangerous zone; $4 < Z \leq 9$ – uncertainty zone; $Z > 9$ – stable, favourable zone.

Z score obtained indicates a bankruptcy probability of 10%, therefore a favourable situations.

Model of French Bank Balance Centre, Z score has the following formula:

$$Z = -1,255 r_1 + 2,003 r_2 - 0,824 r_3 + 5,221 r_4 - 0,689 r_5 - 1,164 r_6 + 0,706 r_7 + 1,408 r_8 - 85,54$$

The rates represent: r_1 – gross operation result/total liabilities – shows the proper financing capacity of liabilities; r_2 – proper capitals/total liabilities – shows patrimonial solvency; r_3 – liquidness and investment/total asset – quantifies the performances of patrimony assets; r_4 – financial expenditures/turnover – indicates the level of financial expenditures; r_5 – staff expenditures/added value – expresses the level of staff remuneration; r_6 – proper capital/total assets; r_7 – gross operation result/total assets; r_8 – necessary floating assets/turnover.

Z values indicate: $Z < -0,25$ – difficulty zone; $-0,25 < Z < 0,125$ – uncertainty zone; $Z > 0,125$ – favorable zone.

Z values, at the level of analysed agricultural company records -0,8 at the end of three years, a fact which indicates that it is in the uncertainty zone.

Model of French Commercial Credit according to which Y score has the following formula: $Z = 6,47 - 9 r_1 - 1,1 r_2$

The rates represent: r_1 – financial expenditures/gross operation result; r_2 – (loans+interests)/proper capital

The value $Z=0$ separates enterprises into good ones and with difficulties.

At the level of analysed agricultural firm, Z registers a value greater than 0 which indicates that the firm has a good financial situation, but the trend is not satisfactory.

Method “credit-man” or “security analysis” used in USA.

$Z = 0,25 r_1 + 0,25 r_2 + 0,10 r_3 + 0,20 r_4 + 0,20 r_5$, where r_1 – (liquidities+liabilities)/short term debts – rate of intermediary solvency; r_2 – proper capitals/total debts – rate of financial structure showing proper capacity to cover the debts; r_3 – proper capital – rate of floating assets; r_4 – turnover/stocks – rate of stock rotation; r_5 – turnover/commercial debts – debt rotation.

Z value is compared with that of average per sector, and estimation is made by relation: $Z < 0$ – unfavourable zone; $Z > 0$ – favourable zone.

Z values registered with the analysed agricultural company lead us to a favourable zone. Their value is 10,75 at the end of 2011, 6,15 for the year 2012 and 7,38 for the year 2013.

Model B – Băileşteanu – starts with the studies made by Altman, Argenti, Conan&Holder. He considers that bankruptcy is determined by the following factors: impossibility of paying current debts, lack of financial resources for loans reimbursement, delayed receipts of delivered goods counter value, loss accounts.

$$B = 0,444 G_1 + 0,909 G_2 + 0,0526 G_3 + 0,0333 G_4 + 1,414$$

where: G_1 – current ratio = current assets/current liabilities; G_2 – solvency (net profit+depreciation)/(reimbursed rate loan+interest); G_3 – clients recovery = turnover/clients ; G_4 – costs return = profit/costx100.

B has a maximum value equal to 4 and a minimum value equal to -1,4.

Depending on registered value it is considered: $B < 0,5$ – imminent bankruptcy; $0,5 < B < 1,1$ – limited zone; $1,1 < B < 2,0$ – intermediary zone; $B > 2,0$ - favourable.

Z values, at the level of analysed agro firm are 4,94 at the end of 2011, 3,68 at the end of 2012 and 4,01 at the end of 2013. Therefore the firm is situated in a favourable zone.

A model – Ion Anghel according to which $A = 5,676 + 6,3718 X_1 + 5,3932 X_2 - 5,1427 X_3 - 0,0105 X_4$, where: X_1 = net profit/incomes; X_2 = cash-flow/assets; X_3 = debts/ assets; X_4 = (liabilities/turnover) x 360; $C = 5,676$ – constant.

Connection between value of A function and bankruptcy probability: $A < 0$ - bankruptcy/failure; $0 < A < 2,05$ – uncertainty zone; $A > 2,05$ non-failure.

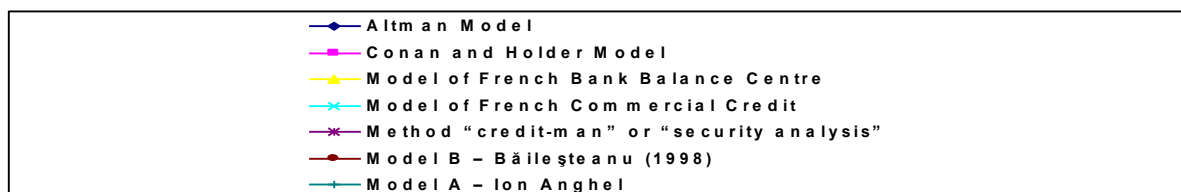
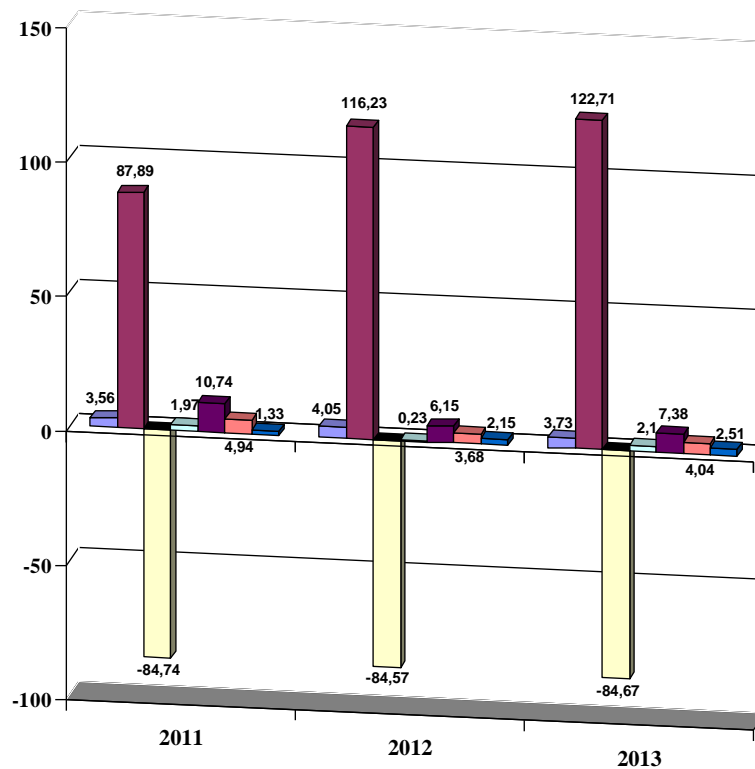
In the year 2011, the analysed agricultural firm records a value of function A of 1,33, this result classifies the business in an uncertainty zone. At the end of 2012-2013 we notice that the values of A (2,15; 2,51 respectively) lead to a non bankruptcy zone. During the research period, the entity directed its efforts to taking the production into account, getting profitable contracts, increase of net treasury, improvement of economic return, of financial return, which may cover the interest and debts in general.

In order to get a complete image on risk failure of the analysed agro company, we

presented its evolution depending on seven methods previously mentioned in figure 1. As a result of applying the seven models of risk bankruptcy prediction on economic – financial indicators of analysed agricultural unit for the period 2011-2013, we found that it is situated in a zone lacking the threat of bankruptcy, recording a percentage of 70%, while the difference of 30% classifies it in a zone of uncertainty.

However, remarkable is that model A – Ion Anghel differentiates the results for analysed period. Therefore, in 2011 the firm is in an uncertainty zone, followed by a non-bankruptcy zone for the period 2012-2013.

Figure 1: The gap between modern methods of assessing the bankruptcy risk for quoted company analysed



(Source: made by the authors on the financial reports of the company <http://www2.bvb.ro/ListedCompanies/SecurityDetail.aspx?s=CBOT>)

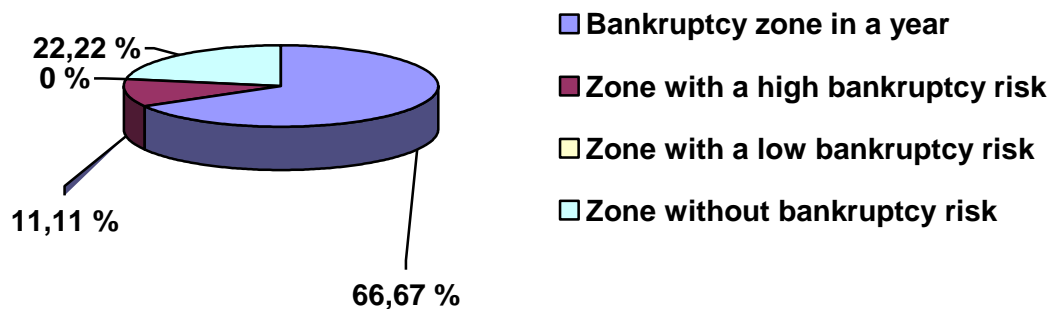
As a whole, the agricultural firm has a healthy financial structure, keeping itself in a stable zone as regards bankruptcy risk, but to remain in this zone presupposes that management, in future, should establish a strategy laid on the characteristics of Romanian agriculture, with the tendency of addressing to a communitary or even international market.

Stancu I. (2007) considers that Altman Model, highly used in financial practice, has a classifying accuracy of over 70%. Moreover, it was the first scoring-function which allowed the anticipation of 75% of bankruptcies two years before their taking place. The model is applicable especially for firms quoted and it can be also used in different fields of activity.

The research is continued by applying Altman model – which we consider that it is viable for agricultural field too - to other nine firms from this domain, actively quoted at BSE.

The results for the period 2011-2013 are presented as we can see in the following figures:

Figure 2: Evolution of bankruptcy risk for nine firms quoted at BSE, depending on Altman model, for year 2011



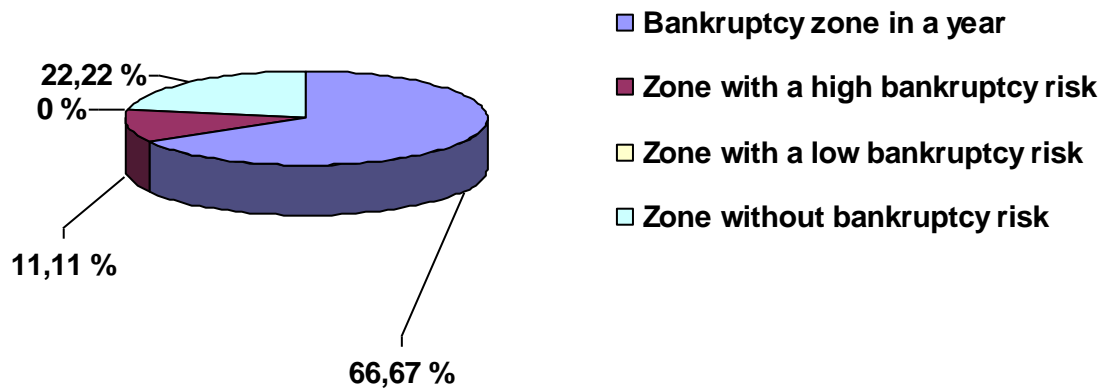
(Source: made by the authors on the financial reports of the company)

Figure 3: Evolution of bankruptcy risk for nine firms quoted at BSE, depending on Altman model, for the year 2012



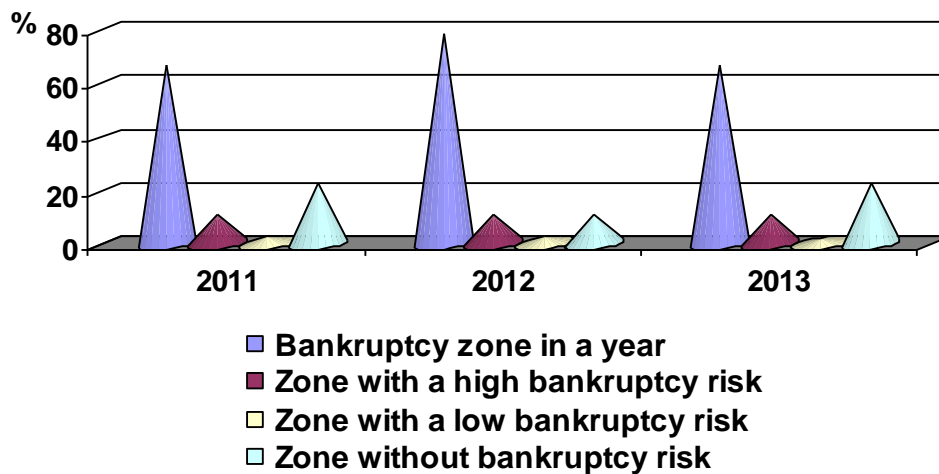
(Source: made by the authors on the financial reports of the company)

Figure 4: Evolution of bankruptcy risk for nine firms quoted at BSE, depending on Altman model, for the year 2013



(Source: made by the authors on the financial reports of the company)

Figure 5: The dynamics of quoted agricultural firms by applying Altman Model, in the period 2011-2013



(Source: made by the authors on the financial reports of the company)

A proportion of 70% from the quoted agricultural firms analysed, in the period 2011-2013, are in a bankruptcy zone in a year, 10% are in a zone with a low bankruptcy risk and a percentage of 20% in a zone lacking the threat of going bankrupt. The management of agricultural companies have to discover the responsive zones and even more to express their point of view as regards the model relevance.

6. Further research

The authors have proposed the elaboration of a proper predicting method of bankruptcy risk for agricultural companies to answer the requirements of the Romanian economy, to implement an informatics program to use the scoring function and in case of changing the working hypothesis to have as a main objective a

permanent updating of bankrupt zone in which the company operates, so that in any moment, it could have under control, the incapacity of debt payment and so take the necessary measures in due time.

7. Conclusions

The managers of agricultural companies should understand the need for a change and permanently follow the risk of going bankrupt, settling the causes and effects of its dynamics. Moreover, they may select for the achievement of proposed objectives, in order to get a change, from the following four categories: structural changes in the nature of tasks, in the organizational relations, in the structure of components; changes in the staff motivation and level of training; technological changes; changes in the management style. (Androniceanu, 1998)

The modern agricultural business has to be able to benefit from the statistic-financial research methods, from applying accountancy conventions and from the development of a functionable governance. The use of statistical methods within the mission of financial audit, as well as their connection with the methods of financial analysis, and last but not the least with accountancy, may constitute the start-up of a new research direction, being called hypothetically - metric audit. Robu M.A. and his collaborators (2012) consider that this new field will propose the analysis of economic-financial phenomena of the financial audit on the basis of some indicators of financial analysis by using statistical and econometrical advanced methods.

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