ABSTRACTS
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PREDICTING BANKRUPTCY WITH THE USE OF MACROECONOMIC VARIABLES

Abstract: Regarding the current global financial crisis, the firms can expect the increased uncertainty of their existence. The relevant literature includes extensive studies on bankruptcy prediction. Studies show that the most popular method used for prediction of firms' failures are discriminant analyses (30,3% of all models), then logit and probit models (21,3%), which all three are parametric models. The nature, the structure of the current dynamic world and the linkages between all the financial and economical markets around the world make necessary to continuously research for the new methods of bankruptcy prediction. The purpose of this article is to analyze the usage of innovative method – fuzzy logic system in predicting bankruptcy for one year, two and three years before the failure of companies. Additional unique feature of this article is the use of macroeconomic variables in the predicting process. Authors aimed to verify the effectiveness of created fuzzy logic models with the use of not only financial ratios, but also the macroeconomic indicators.

To conduct this research authors have used financial statements of 132 stock equity companies (25 bankrupt and 107 nonbankrupt).

This research proves high bankruptcy forecasting predispositions of the used method. Presented models in the article distinguish with high effectiveness of predicting the bankruptcy among accessible results in the world literature.

Keywords: bankruptcy, crisis, prediction, fuzzy logic, ratings.

JEL Classification: **G - Financial Economics - G17 - financial forecasting**.

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RECENT DEVELOPMENTS IN THE BORROWING BEHAVIOR OF ROMANIAN HOUSEHOLDS

Abstract. *Financial stability of an economy is significantly influenced by the evolution of the population's borrowing behavior, i.e. the risks associated with its financial liabilities. Increased indebtedness, caused by economic and social factors, is a general phenomenon in the developed countries. In order to tackle the issue efficiently, analyses on the current and expected situations are needed. In Romania, despite the real progress made in the informational system regarding socio-*

economic surveys, the database available for such analyses is inappropriate. As a solution for solving the problem, a pilot section dedicated to the financial behavior of the population was added to the Household Budget Survey, as part of a research project.

The present paper aims to present some of the most recent aspects of the borrowing behavior of Romanian households and to model this behavior using binomial logistic regression based on the data obtained from the first wave of the modified survey, carried out during the second semester of 2008.

Key words: borrowing behavior, credit, survey, econometric model.

JEL Classification: E21, E51, D14

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SMOOTH TRANSITION REGRESSION MODEL FOR SLOVENE STOCK EXCHANGE INDEX RETURNS

Abstract. In this paper, we examined the returns of the Slovene Stock Exchange Index (SBI 20) using special nonlinear econometric models, i.e. smooth transition regression (STR) models, which are characterized by switching regimes through continuous transition function depending on the values of the transition variable. STR models naturally lend themselves to modelling structural change and may be a useful tool for incorporating asymmetries in the dynamics among different variables. In this investigation, we attempt to explain the returns of the SBI 20 with the help of gross domestic product, interest rates, and other financial and macroeconomic variables. Additionally, it has proven useful to introduce the S&P 500 and FTSEurofirst 100 stock market indices into the nonlinear equation. During different GDP growth regimes, the dynamics of global financial markets impact the Slovenian stock exchange with varying intensity. We can conclude that the up-coming financial crisis is manifested weaker in Slovenia probably due to less intensive exchange of securities with global markets and less developed financial markets.

Keywords: nonlinear econometric models, smooth transition regression, structural change, stock returns, financial markets.

JEL Classification: C22, C51, G10, G12

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COST-PERFORMANCE EVALUATION ENVIRONMENT FOR THE ADOPTION OF A CASE MANAGEMENT SOLUTION

Abstract. In order to enter or stay on the market organizations must respond swiftly to the market demands and to possible unforeseeable events, considering the present permanent changing business environment and the economic crisis that most world countries are facing. For the organizations too be more flexible, business process modeling must be done according to the present technologic and economic context, specific to the knowledge-based economy. On this basis, one of the most commonly used business process management solutions is Case Management. The present paper provides an approach on the stages and elements necessary for the successful integration of a Case Management solution, putting forward the creation of an evaluation environment of its impact on the organization. For this purpose, the article provides a starting point for the identification and measurement of the main costs and benefits of Case Management, and support in choosing the investment solution and in determining its implementation opportunity.
Key-words: Case Management, metrics, cost-performance analyses, ROI, integration strategy

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A NOTE ON SKEWNESS IN THE STOCHASTIC VOLATILITY MODELS

Abstract. This article proposes a different point of view on the effect of the stochastic volatility on the skewness of the underlying asset return density when the underlying price is uncorrelated with its volatility. The option pricing models literature established that when the state variables are uncorrelated, stochastic volatility changes only the kurtosis of the underlying asset density. This paper indicates that the stochastic volatility always affects the higher moments of the underlying asset distribution even if the price is uncorrelated with its volatility. Also, the paper shows that when the state variables are uncorrelated a relation between the risk-neutral probabilities can be obtained.
Keywords: *option, volatility, stochastic, valuation, closed-form formula.*

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A COMPOSITE INDEX OF R&D ABSORPTION CAPACITY. SPATIAL CONFIGURATION IN ROMANIA

Abstract. R&D activity is considered to be one of the most significant factors in innovation activity and a key driver of economic growth. The conceptual analytic framework upon which this study is based envisages the design of a composite index as a measurement and benchmarking tool for the capacity of the Romanian regions and counties to absorb the output from R&D activities. The results revealed that the potential to create new knowledge and innovations and the ability to exploit it are extremely geographically concentrated and Romania needs to boost the absorption capacity of its regions and counties.

Keywords: research and development, absorption, region, composite index.

JEL Classification: O32, C80, R12

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MODELS OF SIMULTANEOUSLY PROGRAMMING THE INVESTMENTS AND THEIR FINANCING

Abstract.   Possibilities of modeling in order to obtain a program for investments and its financing are presented.

We illustrate, starting from two case study, the mode of simultaneous programming by using an heuristic model conceived by Dean and a linear programming model.

For the second model, the results obtained in conversational system are explained. The parametric analysis of resources (feasible financing) and of the unit income obtained by purchasing the investment objects, pointing out the consequences of the different variations upon the objective function value, is achieved.

Key words: investment, financing, maximum income, heuristic model, Dean, parametric analysis, QM,WINQSB.

JEL Classification: C02, C61, E22, G11

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SELECTING THE GROUP OF COMPARABLE FIRMS FOR VALUATION BY MULTIPLES ON BUCHAREST STOCK EXCHANGE

Abstract. This paper examines the valuation accuracy of the price-earnings (P/E), the price-book value (P/B) and the price-total assets (P/TA) valuation methods. It is used a sample of companies traded at the Bucharest Stock Exchange in the period 2003 - 2008. This paper selects comparable firms, on which the performance of valuation methods relies, based on industry membership (IND), total assets (TA) and return on equity (ROE), both individually and in pairs. It is found that ROE-included selection methods assure the best accuracy for every multiple analysed. It was also found that P/E valuation method performs the best comparative with the other two valuation methods while the P/TA multiples has the lowest valuation performances.
Keywords: multiples, comparables, relative valuation, equity valuation, capital markets.

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A FACTORIAL ANALYSIS ON RISK MANAGEMENT PRACTICES. THE CASE OF THE ROMANIAN COMPANIES

Abstract. Risk management and risk valuation at the level of business sector represents a sensitive problem for managers acting on an emerging country like Romania is. This paper is focused on a factorial study on risk management and risk analysis instruments used by managers from Romanian private and public companies. This factorial approach gives us the possibility for a better understanding of the Romanian managers' perception on the importance risk management for their companies. The data used in this study was obtained from a questionnaire applied on a significant number of Romanian companies and we obtained interesting conclusions regarding the understanding of an integrated risk management approach and the existence of competences in this field.
Keywords: risk management, risk valuation, risk perception, competitiveness

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ONE APPROACH FOR MANAGEMENT RAIL MARKETING STRATEGIES

Abstract   Due to growing and strengthening competition on the transport market it is very important for transport companies to work on loyalty of current clients. Considering liberalization on the railway transport market it is necessary for rail companies to be market oriented and more flexible to constant changes on the market. Making influence on customers in order to retain them is possible with applying target marketing. The aim of target marketing is to improve profit of rail companies applying the best marketing strategies for a particular client's group. In this paper the model for choosing adequate marketing campaigns of a rail company, is proposed by using the Fuzzy Analytic Hierarchy Process, FAHP, a method for multicriteria decision making. The considered problem and developed model are a part of the project "Selecting Restructuring Strategy for "Railway Transport of Montenegro" J.S.C.".
Keywords: Analytic Hierarchy Process, Fuzzy Logic, Marketing Strategies, Railway.

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ASSESSMENT OF NON-ACCELERATING INFLATION-CAPACITY UTILIZATION RATE IN TUNISIA: APPLICATION OF THE STRUCTURAL VAR APPROACH

Abstract. *The measure of capacity utilization rate has traditionally been used as an indicator of future changes in inflation. The recent strength of the Tunisian economy and historically low rates of inflation have sparked considerable debate among economists. Indeed, after 1986, econometric tests reject the hypothesis that capacity utilization rates can provide any information about changes in inflation. In order to better explain the recent behavior of inflation, some observers have raised the concept of a non-accelerating inflation capacity utilization rate (NAICU). In this study, we present a new methodology to estimate the NAICU. A simple structural vector autoregression, including consumer price index, capacity utilization rate, and the long-run real interest rate, is used to identify production capacity. Results show that production capacity is consistent with stable trend inflation. Using simple Phillips curves, out-of-sample forecast exercises show that the capacity utilization rate generated by the methodology presented in this paper seems to outperform the same result to autoregressive model.*
Keywords: Capacity utilization rate, Inflation, NAICU, Structural VAR, ARDL.

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A NONPARAMETRIC ANALYSIS OF THE RELATIONSHIP BETWEEN UNEMPLOYMENT RATE AND U.S.A. SHADOW ECONOMY USING LOCAL POLYNOMIAL REGRESSION MODELS

Abstract. This paper aims to estimate the size of the U.S. shadow economy (SE) using a Structural Equation Approach using and to investigate the relationship between unemployment rate and shadow economy usinglocal polynomial regression models.. In order to do that, the shadow economy is modelled like a latent variable using a special case of the structural equation models-the MIMIC model.

The results confirm that taxes on corporate income, contributions for government social insurance, unemployment rate and the self-employment are the main causes of shadow economy. The size of the SE is estimated to be decreasing over the last two decades.

In order to evaluate the nature of the relationship between the two variables, we have estimated the most used non-parametric regression models, loess and lowess, and a global linear fit using least squares. The results reveal a very little difference between the two nonparametric fits.

Finally, we have compared loess fit with a globally linear fit in order to determine if there is a significant amount of nonlinearity between the two variables, using an F-test. The results reveal a significant linear relationship between unemployment rate and shadow economy.

Keywords: shadow economy, unemployment rate, nonparametric regression, U.SA..

JEL Classification : C14, E26, H20, H50, O17

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RISK PREMIUM IN THE SPANISH MARKET: AN EMPIRICAL STUDY

Abstract. Several papers in the financial literature propose using fuzzy numbers (FNs) to model interest rate uncertainty and to adjust the temporal structure of interest rates (TSIR). In this paper we propose a methodology to test the pure expectations theory in an uncertain environment. Prices and internal rate of returns (IRRs) observed in the government debt market shall be considered fuzzy numbers. The fuzzy test, contrary to the classical approach, leads not to the binary decision: to reject or to accept a given null hypothesis, but to a fuzzy decision showing a grade of acceptability of the null and the alternative hypotheses,

respectively. The study concludes with an application to the Spanish public debt market for the period 2005-2007, which also allows results to be compared from both fuzzy and crisp environments.
***Key words**: Finance; Term structure of interest rates; Testing pure expectations theory, forward rate, spot rate.*

JEL classification: **D81, E43**

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PREDICTABILITY AND COMPLEXITY: THE CASE OF THE EXPORT AND IMPORT AS GDP COMPONENTS IN THE ROMANIAN ECONOMY

Abstract. *After treating Gross Fixed Capital Formation and Domestic and Public Consumption' we continue with the problem of the relation between predictability and complexity in Romanian economy, analyzing other two components of GDP: Import and Export.*
The macroeconomic forecasting is a very difficult task due to the complexity of economic behavior. Constructing reliable time series models is difficult due to short data series, high noise levels, nonliniarities and nonstationarities. This series of three articles exemplify the application of the theory of complexity and predictability as an alternative to model the economy evolution of GDP.
These demonstrate that performance can be obtained using complexity models.
Key words: *complexity, predictability, complexity pursuit, time series forecasting.*

JEL Classification: **E20, E27, C22, C5**

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SOME COMMENTS ABOUT WAGNER LAW

Abstract. *This paper aims to identify the characteristics of the defense expenditures at the level of developed countries, but also for two countries, Romania and Bulgaria, which have been admitted in the structures of NATO and the European Union (2007). We use a series of econometric techniques such as Granger tests for causality analysis and ECM. We compute for the two categories of countries the elasticity on short and long term of the defense expenditures in relation with Gross Domestic Product. The results show a number of resemblances on the evolution of the defense expenditures in countries like U.S., U.K., France and Russia on the one hand, and Romania and Bulgaria on the other. Japan and Germany have different characteristics of the defense expenditures, in comparison with those of the other countries included in the study. A causal relationship between the defense expenditures and GDP is confirmed for U.S., U.K., Germany, Russia and Romania. For other countries included in the study, there is no causal relationship.*

Keywords*: Wagner's law, defense expenditures, econometric techniques, ECM, unit roots.*

Abstract We use a dynamic term structure model with default and observa-ble factors to study the interaction between macro variables and the Brazilian sovereign yield curve. We also calculate the default proba-bilities implied from the estimated model and the impact of macro shocks on those probabilities. Â Which variables have greatest impact on default probabilities? This study presents an empirical investigation of these questions by using an ane term structure model with macroeconomic variables and default risk1. There are two main approaches in credit risk modeling: structural and reduced form models2. Â Finally, a latent factor highly correlated with the level of the Brazil-ian sovereign curve predicts a substantial fraction of the yield and default probability movements. Bankruptcy Prediction Incorporating Macroeconomic Variables Using Neural Network. December 2010. DOI: 10.1109/TAAI.2010.24.Â Kin K. L. and Jerome Y. [18] which they also come up with the new combine model after considering the best factor effecting bankruptcy to make a decision on the best fit model that should Malaysia use to test the bankruptcy. The results show that the percentage are slightly improved when macroeconomics variable are included. [11] managed to predict bankruptcy using financial ratios of the market and macroeconomics, applying Logit and NN to a sample of non-financial firms in the United Kingdom. In their study they detected that macroeconomic variables show some reliability problems. [27] used a series of diverse techniques (MDA, NN, DT and Logit) for Russian firms. In their models they attained a precision of 87.80%. [28] using NN, the Cox model and Logit managed to correctly predict 81.20% of bankruptcy cases, using a sample of French firms for their models.Â This study uses a Logit model in order to predit bankruptcy based on observable financial variables of the companies. The model specification may be represented via expression Eq (1). (1). Limits of Macroeconomics. It is also important to understand the limitations of economic theory.Â Even with the limits of economic theory, it is important and worthwhile to follow the major macroeconomic indicators like GDP, inflation, and unemployment. The performance of companies, and by extension their stocks, is significantly influenced by the economic conditions in which the companies operate and the study of macroeconomic statistics can help an investor make better decisions and spot turning points. Likewise, it can be invaluable to understand which theories are in favor and influencing a particular government administration. Bankruptcy Prediction Using Discriminant Analysis.Â Since bankruptcy is cash oriented phenomenon, the use of variables based on cash flows is theoretically appealing. Specifically, the equation developed by G.H. Lawson was used to test a bankruptcy predictive model (Aziz et al, 1988, 1989). Lawson's relation includes operating cash flow, net investment, liquidity change, taxes paid, shareholder cash flow, and lender cash flows.Â Regarding the use of cash flows to predict corporate bankruptcy, the common view is that cash flow information does not contain any significant incremental information over the accrual accounting information to discriminate between bankrupt and non-bankrupt enterprises. (Watson, 1996).