

SUMMARIES

Joanna Duda: **The role of bank credits in investment financing of the small and medium-sized enterprise sector in Poland** ■ *Managerial Economics* 2013, No. 13

Keywords: *bank credit, innovations, sources of financing, SME, investment*

Innovativeness of enterprises is largely dependent on their ability to obtain investment capital. Problems encountered by the SME sector when trying to obtain bank credits are commonly mentioned, therefore this paper attempts to evaluate the role of bank credits in financing investment activities of Polish SMEs on the basis of available literature and empirical research. To this end, sources of financing were analysed, focusing in particular on crediting offered to small and medium-sized enterprises, costs and terms of obtaining credits are presented in reference to the structure of actual investments.

Henryk Gurgul, Roland Mestel, Robert Syrek: **The Testing of Causal Stock Returns-Trading Volume Dependencies with the Aid of Copulas** ■ *Managerial Economics* 2013, No. 13

JEL classification: G15, G17

Keywords: *intraday data, realized volatility, trading volume, dynamic interrelations, copulas*

This paper is concerned with a dependence analysis of returns, return volatility and trading volume for five companies listed on the Vienna Stock Exchange. Taking into account the high frequency data for these companies, tests based on a comparison of Bernstein copula densities using the Hellinger distance were conducted. It is worth noting that these tests can be used in general settings since there is no restriction on the dimension of the data. The parameter which must be set up for the testing procedure is a bandwidth. It is necessary for estimation of the nonparametric copula. The paper presents some patterns of causal relationships between stock returns, realized volatility and expected and unexpected trading volume. There is linear causality running from realized volatility to expected trading volume, and a lack of nonlinear dependence in the opposite direction. The authors detected strong linear and nonlinear causality from stock returns to expected trading volume. Therefore, a knowledge of past stock returns can improve forecasts of expected trading volume. They did not find causality running in the opposite direction.

Henryk Gurgul, Artur Machno, Roland Mestel: **Modeling of Returns and Trading Volume by Regime Switching Copulas** ■ *Managerial Economics* 2013, No. 13

JEL classification: G15, G17

Keywords: *stock return volatility, trading volume, interdependency, regime switching copulas*

The structure of links between realized volatility and trading volume can be reflected by regime switching copulas. The estimation by means of copula based regime switching models delivered

results concerning the interdependencies between realized return volatility and trading volume of selected companies listed in ATX. A copula in the first regime was chosen as an asymmetric copula with positive lower and upper tail dependencies. Conversely, Gaussian copula in the second regime is a symmetric copula and variables linked with it are tail independent. For all analyzed stocks the probability of being at the first regime appeared to be vitally greater than being at the second regime. This result suggests that there is considerable dependence between realized volatility and daily volume in extreme values. The results suggest that interdependencies between realized volatility and trading volume do not probably depend on the size but rather on the branch of a company.

Henryk Gurgul, Marcin Suder: Modeling of Withdrawals from Selected ATMs of the “Euronet” Network ■ *Managerial Economics* 2013, No. 13

Keywords: *ATMs, withdrawals, replenishment scheduling, SARIMA modeling*

This paper deals with the problem of withdrawals from Automated Teller Machines (ATMs), using daily data for selected ATMs installed by the Euronet network in the Polish provinces of Małopolska and Podkarpacie for the period from January 2008 to March 2012. The main aim of this paper is an estimation of the proper econometric models for withdrawals time series and attempt to forecast future demand on cash flow in ATMs in respect to their localization. This is necessary to establish a replenishment schedule. The results of computations suggest that models built on the basis of SARIMA methodology are useful tools for an modeling daily withdrawals time series. This kind of model can be applied independently of the localization of an ATM. The exercises for ex post data imply ex post forecast errors under 20%. This size of forecast errors is lower than the bias of actual replenishment scheduling.

Katarzyna Liczmańska, Agnieszka M. Wiśniewska: A Strong Brand as a Determinant of Purchase the Case of Sectors, where Advertising in Mass Media Is Banned – on the Example of the Polish Spirits Sector ■ *Managerial Economics* 2013, No. 13

Keywords: *brand strength, instruments of competing, purchasing decisions, ban on advertising*

The purpose of the paper is the assessment of the significance of a strong brand in the process of competing for clients as well as in the clients' decision making processes in a situation where advertising in mass media is almost completely banned. The paper presents results of two complementary studies. The first study was carried out by means of personal interviews on a trial group of 1501 individual respondents in 2007 in Poland. The second study was carried out using personal or Internet questionnaires on a trial group of 16 companies producing or importing spirits. The collected material showed that clients pointed to a strong brand as the key factor influencing their choice of top market alcohols. All representatives of producers see the need for building strong brands and declare having such brands in their offer. Building strong product brands is possible even in sectors in which mass media advertising is prohibited or for some reason cannot be used. The conceptual model proposed by the authors suggests what should be taken into account when creating a strong brand in sectors where advertising may not be used for this purpose.

Paweł Zając: The New Approach to Estimation of the Hazard Function in Business Demography on Example of Data from New Zealand ▪ *Managerial Economics* 2013, No. 13

Keywords: *business demography, birth and death of enterprise, hazard function, Monte Carlo simulation, prediction*

The author presents the new methodology for the estimation of the hazard function for the new born enterprises' survival rate called FIRM. The methodology is based on construction of a stochastic process and is examined in the Monte Carlo simulation study with real data. The dataset is provided by Statistics New Zealand and contains all enterprises born in period between 2001–2010. Enterprises are divided in clusters according to the number of employees and for each cluster individual simulations are made. Achieved coefficients of determination in clusters are around 90%. The author finds substantial differences in survival probability according to employee count size in the company. Simulations done in this study allow to estimate mean and standard deviation of life duration for enterprises and prediction of the hazard function for each cluster.