

1<sup>st</sup> International Conference:  
**NEOCLASSICAL AND BEHAVIORAL FINANCE**

# **Conference Papers Abstracts**

Łódź, Poland, June 26–27, 2014

Organized by:  
The Department of Industrial Economics and Capital Market  
and The Institute of Finance  
University of Łódź



## CONTENTS

Authorized Capital as Risk Management Tool in Emerging Economy. Case of Poland <i>Adamska Agata, Staszkievicz Piotr</i> .....	7
Behavioral Research in Accounting – Its Relation to Behavioral Finance <i>Artienwicz Nelli</i> .....	7
The Introduction to a New Theory of Financial Leverage – Assumptions, Definitions and Leverage Laws <i>Berent Tomasz</i> .....	8
Liquidity Dynamics around Jumps <i>Będowska-Sójka Barbara</i> .....	8
Time and Probability Tradeoff <i>Białaszek Wojciech, Gaik Maciej, Zielonka Piotr</i> .....	9
Understanding the Ramadan Effect <i>Białkowski Jędrzej, Shivlal Akash</i> .....	9
Price Discovery in an Extremely Thinly Traded Agricultural Futures Market: Evidence from the Eurex Hog Futures <i>Bohl Martin T., Gross Christian</i> .....	10
Do Intangible Assets Determine the Capital Structure of a Company? <i>Bolek Monika, Lyrroudi Katerina</i> .....	10
Central Bank Communication and the Impact of Public Announcements of New Monetary Policy Data on the Reaction of Foreign Exchange and Stock Markets: Evidence from Poland <i>Brzeszczyński Janusz, Gajdka Jerzy, Kutan Ali</i> .....	11
Investment Performance of Component Stocks from the Respect Sustainability Index at the Warsaw Stock Exchange <i>Brzeszczyński Janusz, Gajdka Jerzy, Schabek Tomasz</i> .....	11
The Reduced-form Model to Price Sovereign Credit Risk of an Emerging Market <i>Camba-Mendez Gonzalo, Kostrzewa Konrad, Mospan Anna, Serwa Dobromił</i> .....	12
„Sell Not Only In May”. Seasonal Effect on Emerging and Developed Stock Markets <i>Castro H., Schabek T.</i> .....	12
Information Asymmetry and Using Short-term Debt in the Selected European States <i>Czapiewski Leszek, Kubiak Jarosław</i> .....	13
Reassessing Polish IPO Underpricing and Underperformance <i>Czapiewski Leszek, Lizińska Joanna</i> .....	13

Psychological Motivations behind the Use of Technical Analysis <i>Czekaj Jan, Czupryna Marcin, Kubińska Elżbieta, Markiewicz Łukasz</i> .....	14
Investor's Expertise and the Rationality of Decision Making <i>Czerwonka Monika, Rzeszutek Marcin, Walczak Magdalena</i> .....	14
Evaluation and Certainty in Analyst Reports: A Linguistic Analysis in the Polish Language <i>Dynel Marta, Klimczak Karol Marek</i> .....	15
Economic Growth and Stock Prices <i>Gajdka Jerzy, Pietraszewski Piotr</i> .....	15
An Exchange Rate Model with Market Pressures and Contagion Effect <i>Grabowski Wojciech, Welfe Aleksander</i> .....	16
From Classical Models to Multidisciplinary Approach – The Chance to Reduce Model Risk in Finance? <i>Jajuga Krzysztof</i> .....	17
Proposition of Real Option Valuation Including Elements of Behavioral Finance <i>Jarzęcki Marek, Mizerka Jacek</i> .....	17
Practical Aspects of Effective Risk Management on the Example of the Changes of the Prices of Liquid Fuels <i>Klepcki Jarosław</i> .....	18
Managers' Consideration about Behavioral Factors that Influence their Decision Making in Liquidity Management <i>Korzeniowska Dominika</i> .....	18
Leasing in the Creation of Innovative Projects <i>Lewandowska Lucyna</i> .....	19
Hedonic Indices, Financial Returns and Style Effect in Polish and Czech Art Investment <i>Lucińska Anna</i> .....	19
Doing Business Using Emotion or Altruism? The Case of Financing Football in Poland <i>Majewski Sebastian</i> .....	20
Surviving without Profits: The Curious Case of US Airlines <i>Meeks G., Jayasekera R.</i> .....	20
Psychological Factor in Shaping Investor Expectation on Capital Market <i>Mikołajek-Gocejna Magdalena</i> .....	21
Index Effect on Polish Stock Market on the Example of WIG20 Index <i>Miziołek Tomasz</i> .....	21
Impact of the Shareholder Structure on Corporate Governance <i>Moszoro Marian, Dietl Marek, Bednarek Ziemowit</i> .....	22
Special Economic Zone Companies – Are They Better than the Best? The Case of Poland <i>Pastusiak Radosław, Bolek Monika, Wolski Rafał</i> .....	23
International Transmission of Liquidity Shocks between Parent Banks and Their Affiliates: The Host Country Perspective <i>Pawłowska Małgorzata, Serwa Dobromił, Zajączkowski Sławomir</i> .....	23

---

IPO Underpricing in Poland <i>Pomykalski Przemysław, Domagalski Maciej</i> .....	24
Application of Behavioural Finance to Enhance Voluntary Retirement Savings. Are the Solutions Universal around the World? <i>Sieczkowski Wojciech</i> .....	24
Shadow Banking in Behavioral and Neo-classical Finance <i>Solarz Jan K.</i> .....	25
Cultural Aspects in The Processes of Acquisition in Pharmaceutical Companies <i>Stankiewicz-Mróż Anna</i> .....	26
Elements of Control Theory Applied to an Investment Portfolio in the Capital Market. The Optimal Time Horizon for Selling a Portfolio <i>Tymiński Jerzy</i> .....	27
The Use of Methods of Estimating of Tax Base in Income Taxes in the Researches <i>Witczak Radosław</i> .....	27
Liquidity – Profitability Relationship Analyzed Once Again <i>Wolski Rafał, Bolek Monika</i> .....	28
Post-IPO Underperformance and the Cross-section of Stock Returns at the Warsaw Stock Exchange <i>Zaremba Adam, Szyszka Adam</i> .....	28



**AUTHORIZED CAPITAL AS RISK MANAGEMENT TOOL  
IN EMERGING ECONOMY. CASE OF POLAND**

*Adamska Agata, Staszkievicz Piotr*

This paper addresses the strength of the incentives from both supervisors and market players to use authorized capital application as a risk management tool. The study contrasts the motivational factors for the financial market in transition and market supervisor. It analyses the interaction between motivation and the application of authorized capital as a risk management tool. We challenge the hypothesis that there is a weak statistical relationship between goodwill rates and the existence of authorized capital instruments for quoted companies and a weak statistical relationship between bank allowance and authorized capital instruments. Through the application of logit procedures to companies quoted on the Warsaw Stock Exchange, we conclude findings based on 386 listed and domiciled entities in Poland, as quoted on the of 30 December 2011. We conclude a semi-effective market suffers from efficiency in adoption of authorized capital as a risk management tool. We indicate that market forces are overridden by supervisory requirements; thus, the promotion of effective risk management tools is positively associated with regulator and supervisory activities.

\* \* \*

**BEHAVIORAL RESEARCH IN ACCOUNTING  
– ITS RELATION TO BEHAVIORAL FINANCE**

*Artienwicz Nelli*

The information, which financial market participants use to make their decisions comes directly and indirectly from accounting. Although finance and accounting use the language of numbers – numbers that seem to be very clear and plain, it is obvious that sums presented in financial statements and then interpreted and used by financial managers and investors and other stakeholders are very subjective. The aim of this paper is to pay attention on the implications of behavioral research in accounting for behavioral finance. It is argued that accounting should be taken into consideration by behavioral finance researchers, because the product of accounting in form of reports, statements and different analyses represents not only economic standing of a company but also those behind the scenes – accountants and other participants of accounting processes.

## **THE INTRODUCTION TO A NEW THEORY OF FINANCIAL LEVERAGE – ASSUMPTIONS, DEFINITIONS AND LEVERAGE LAWS**

*Berent Tomasz*

The paper calls for the formulation of a new general theory of financial leverage capable to embrace all or most of different leverage concepts, measures and definitions present in the finance and accounting literature on leverage into one unified and coherent system. Although the new theory itself is not developed here, all of its main building blocks, i.e. the theoretical assumptions underpinning it, the basic definitions and its fundamental laws and theorems are proposed. The paper defines financial leverage as a value neutral concept useful in explaining the magnification effect exerted by financial activity upon the financial results. By adopting constructivism as a methodological approach, we are able to clearly introduce, define and interlink various types of financial leverages such as capital and income leverages, base and non-base leverages, leverages for levels and leverages for distances, leverages for absolute and relative distances, accounting and market value leverages etc. Based on the results developed in this paper, the new general financial theory can be formulated in the form of, using the terminology of Lakatos, a research programme with a clearly defined hard core that captures the essence of leverage and a protective belt populated with auxiliary hypotheses.

\* \* \*

## **LIQUIDITY DYNAMICS AROUND JUMPS**

*Będowska-Sójka Barbara*

The aim of our study is to examine the dynamics of trading volume and number of trades around jumps detected in intraday stock returns. We detect jumps in equally spaced 10-minute returns for most liquid stocks quoted on Warsaw Stock Exchange within one year sample period. We match jumps with macroeconomic and firm specific news. We find that to some extent jumps are associated with information news, but jumps are mainly motivated by liquidity shocks in the spreads and the number of trades.



## **TIME AND PROBABILITY TRADEOFF**

*Białaszek Wojciech, Gaik Maciej, Zielonka Piotr*

Probability and time are integral dimensions of many decisions, but their impact on choice has been rarely studied in combination. Traditional studies focus on time or probability as separate phenomena. Our investigation reports a time and probability tradeoff. Participants were asked to make a decision to adjust a risky payoff to a delayed payoff in domain of gains and losses. In other words they were giving a probability equivalent of time. The main result is that the function (i.e. time and probability tradeoff –  $p(t)$ ) is strongly related to the time discounting –  $f(t)$ , but not to the probability discounting –  $f(p)$ . Furthermore there was a significant interaction of amount and sign in the  $p(t)$  and  $f(t)$  condition.

\* \* \*

## **UNDERSTANDING THE RAMADAN EFFECT**

*Białkowski Jędrzej, Shivlal Akash*

Stock market returns in predominantly Islamic countries have been found to be significantly higher and less volatile during the holy month of Ramadan than during the rest of the year. Explanations as to why this anomaly has been present revolve around investor sentiment and the celebratory nature of Ramadan. We investigate what the key drivers of this anomalous effect are using a sample of 5600 companies in fourteen Islamic countries over the period 1986–2012. Portfolios are created based on industry, size and compliance with Sharia law and we find that each of these portfolios experiences greater returns during the Ramadan period versus the rest of the year. However, only telecommunications and utilities are found to have returns that are higher by a statistically significant amount. Furthermore, these two portfolios have lower volatility during Ramadan, satisfying the anomaly. It is argued that this is a result of strong performance in these sectors during Ramadan and the magnification of this performance by strong positive investor sentiment during the month. These results are robust over several different estimation procedures.

## **PRICE DISCOVERY IN AN EXTREMELY THINLY TRADED AGRICULTURAL FUTURES MARKET: EVIDENCE FROM THE EUREX HOG FUTURES**

*Bohl Martin T., Gross Christian*

This study investigates the price discovery process in the extremely thinly traded Eurex hog futures market applying cointegration techniques and error correction models for the period from July 2009 until February 2014. Despite the low trading volume of the futures market, we find evidence for the presence of a long-run equilibrium relationship between spot and futures. Moreover, the futures market plays a dominant role in the price discovery process, as our estimates indicate that about 75% of new information is incorporated first in futures prices and then transmitted to the spot market. Taken together, our results suggest that the level of trading activity required for the futures market to fulfil its role as a price discovery mechanism is remarkably small.

\* \* \*

## **DO INTANGIBLE ASSETS DETERMINE THE CAPITAL STRUCTURE OF A COMPANY?**

*Bolek Monika, Lyrouti Katerina*

This study investigates the relationship of the intangible assets of a company, as proxy for its intellectual capital, with leverage and equity, parts of their capital structure and size. Our empirical results indicate that there is a negative relation between the intangible assets of a company and its leverage based on the Warsaw Stock Exchange main market and NewConnect. Moreover, the equity capital is found positively related to the level of intangibles in each of the two markets. The intangibles level is negatively correlated with the size of a company. These results support the thesis that the intangible assets influence the capital structure of a company.

## **CENTRAL BANK COMMUNICATION AND THE IMPACT OF PUBLIC ANNOUNCEMENTS OF NEW MONETARY POLICY DATA ON THE REACTION OF FOREIGN EXCHANGE AND STOCK MARKETS: EVIDENCE FROM POLAND**

*Brzeszczyński Janusz, Gajdka Jerzy, Kutan Ali*

In this study, we analyze the impact of monetary policy communication of the National Bank of Poland (NBP), i.e. NBP announcements of interest rates changes and NBP announcements of new macroeconomic figures, on the financial market in Poland in its two main segments: the foreign exchange market and the stock market, and we provide evidence on how they react to public information released by the NBP. We are particularly interested in the uncertainty (i.e. risk) effects and the wealth (i.e. return) effects of NBP communication, i.e. whether it had any influence on financial market returns and its activity. Using ARCH methodology, we document negative effects in the conditional variance of ARCH models of WIG index volume of trade and WIG returns and PLN/USD bid-ask spread and PLN/USD returns, suggesting the existence of calming effects of NBP communication with financial markets on the changes of their activity. The evidence presented in our study indicates that the NBP announcements had stabilizing effects on stock and foreign exchange markets in Poland.

\* \* \*

## **INVESTMENT PERFORMANCE OF COMPONENT STOCKS FROM THE RESPECT SUSTAINABILITY INDEX AT THE WARSAW STOCK EXCHANGE**

*Brzeszczyński Janusz, Gajdka Jerzy, Schabek Tomasz*

In this paper we analyze profitability of investments in stocks from the RESPECT sustainability index at the Warsaw Stock Exchange since its launch in year 2009. We calculate raw returns for individual component stocks, estimate their beta coefficients as well as assess their performance on the risk-adjusted basis. The results indicate that the profitability of investing in stocks from the RESPECT sustainability index is on average higher than the corresponding returns of the benchmark broad market index WIG. Our results show the importance of considering socially responsible investments (SRI) stocks in portfolios' construction, in particular from the point of view of risk-adjusted performance.

## **THE REDUCED-FORM MODEL TO PRICE SOVEREIGN CREDIT RISK OF AN EMERGING MARKET**

*Camba-Mendez Gonzalo, Kostrzewa Konrad, Mospan Anna, Serwa Dobromił*

We analyze the market assessment of sovereign credit risk in an emerging market with the use of sovereign CDS financial instruments. We construct a recently developed reduced-form model to price the CDS spreads. Our model enables to derive probabilities of default (PD) and loss given default (LGD) from the quotations of CDS spreads. We compare different specifications of the models allowing for the fixed and time-varying LGD and use them to analyze sovereign CDS premia for Polish debt. Our results point to the presence of a low potential loss and a relatively high probability of default for Poland during the recent financial crisis.

\* \* \*

## **„SELL NOT ONLY IN MAY”. SEASONAL EFFECT ON EMERGING AND DEVELOPED STOCK MARKETS**

*Castro H., Schabek T.*

Described in Bauman and Jacobsen [2002] stock market anomaly still remains unexplained. In long time series and wide geographical spread research „Halloween effect” is significant on 19 amongst 73 markets, but also in 11 amongst 23 with long time series data. Data shows that abnormal returns could be realized also in strategies starting in October, November and December. We conclude that even with control of weather (sun hours), behavioral (sentiment index, number of IPOs) and macroeconomic (industrial production) factors, the effect persists. Analyzing period starting just after publication of Bauman and Jacobsen [2002] the effect vanished almost on all markets – it could be proof of the market efficiency and exploitation of the strategy or just statistical phenomena caused by short period of data sample. „January effect” is detected in much less cases than „Halloween effect”.

## **INFORMATION ASYMMETRY AND USING SHORT-TERM DEBT IN THE SELECTED EUROPEAN STATES**

*Czapiewski Leszek, Kubiak Jarosław*

The article analysed the relation between the degree of information asymmetry and the scope of use of short-term debt by companies from 5 European states: France, Greece, Germany, the United Kingdom and Italy. Information asymmetry was measured by Synthetic Measure of the Degree of Information Asymmetry, which was constructed on the basis of 9 indicators. The presented analyses showed that, according to expectations resulting from the capital structure theory, the enterprises characterized by a higher degree of information asymmetry, use short-term debt to a greater extent.

\* \* \*

## **REASSESSING POLISH IPO UNDERPRICING AND UNDERPERFORMANCE**

*Czapiewski Leszek, Lizińska Joanna*

The purpose of the research was to update the price behavior of initial public offerings (IPO) of equities listed on the Warsaw Stock Exchange during 1996 to 2010. We also aimed to observe the IPO underpricing and the underperformance phenomenon with different approaches. The short-term performance was analyzed with raw and adjusted initial returns. For the long-term, we compounded and cumulated abnormal returns. Different methods of outliers detecting and ways of minimizing the detrimental effect of outliers were applied. In the long-term studies we also compared the results for the daily, weekly and monthly returns.

The IPO underpricing and underperformance on the WSE still remains substantial and significant, even accounting for a variety of methods applied. The difference in underpricing between 1996–2004 and 2005–2010 sample was insignificant. However, we reported statistically significant and economically important difference in underperformance between both samples.

## **PSYCHOLOGICAL MOTIVATIONS BEHIND THE USE OF TECHNICAL ANALYSIS**

*Czekaj Jan, Czupryna Marcin, Kubińska Elżbieta, Markiewicz Łukasz*

This paper investigates the psychological background of technical analysis. Such a background may give additional explanations to the popularity and common usage of technical analysis as an investment decisions tool. This popularity is seen as a puzzle due to the missing theoretical and scientific background of technical analysis and the contradictory empirical evidence on its effectiveness. We propose that overconfidence (regardless of its manifestation: overestimation, overplacement, and illusion of the control) and experiential system following (thus an intuitive approach toward the investment process) reinforces technical analysis usage. This hypothesis is tested in the present study conducted with professionals (traders in a proprietary trading company) and novices (finance students). The hypothesis got partial empirical support. Overconfidence – in particular the illusion of control – explains technical analysis usage in both investigated groups. The experiential system following influence is less straightforward. Indeed the intuition-driven students prefer technical analysis more, while the observed relationship is the opposite for professional traders. Possible explanations of this finding are discussed.

\* \* \*

## **INVESTOR'S EXPERTISE AND THE RATIONALITY OF DECISION MAKING**

*Czerwonka Monika, Rzeszutek Marcin, Walczak Magdalena*

The aim of this paper is to explore the determinants of the rationality in decision making among Polish stock market investors with different level of expertise with investing. Rationality in decision making was defined from the behavioral finance point of view and was operationalized as the frequency of some behavioral biases (see: the certainty effect) within decision making process. The study included 270 participants: 90 professional investors working in Polish banks and brokerage houses, 90 frequent retail investors at the Warsaw Stock Exchange, and 90 psychology students from the Faculty of Psychology at the University of Finance and Management in Warsaw, with no experience in investing (control group). Participants filled out questionnaire with basic demographic information and one situational exercise, which assessed susceptibility to the certainty effect. Statistical analyses demonstrated that susceptibility to the certainty effect depends on the level of expertise with market investing, such that expertise increases susceptibility to this behavioral bias.

## **EVALUATION AND CERTAINTY IN ANALYST REPORTS: A LINGUISTIC ANALYSIS IN THE POLISH LANGUAGE**

*Dynel Marta, Klimczak Karol Marek*

Studies of analyst reports and corporate disclosures written in the English language show that tone and other linguistic characteristics used in narratives convey information beyond that contained in hard, quantitative financial information. This paper extends the literature by focusing on analyst reports prepared in a non-English language and in a culture of high uncertainty avoidance. The goal of this paper is to determine what communication strategies are used by analysts who follow major companies listed at the Warsaw Stock Exchange in Poland. The Polish language uses verb conjugation like German or French, so the results of the study offer insights into international differences and the method used here can be applied to other languages. The culture of Poland is ranked high on the uncertainty avoidance scale of Hofstede [Kolman et al. 2003], compared to a low rating of the USA, which was the subject of previous studies. We find that analysts use a range of explicit and implicit evaluation strategies, as well as hedging strategies, which allow them to reduce their accountability for the recommendations they make. Analysts use subjectivisation (e.g. „our assessment”), depersonalization and time deixis (specific assessments of past, present, or future events) to manage the uncertainty associated with fundamental analysis.

\* \* \*

## **ECONOMIC GROWTH AND STOCK PRICES**

*Gajdka Jerzy, Pietraszewski Piotr*

In this paper we discuss the relationship between capital market and real economy measured by correlation between stock market returns and real GDP growth. Evidence available in the existing literature suggests that those correlation coefficients tend to be negative in the samples of the most developed countries. In our paper we present new results using the sample of Central and Eastern European countries. According to our findings, we detect a positive correlation between stock market returns and GDP in Central and Eastern European markets, which confirms that there exist differences between the most developed and emerging market countries in that regard.

## **AN EXCHANGE RATE MODEL WITH MARKET PRESSURES AND CONTAGION EFFECT**

*Grabowski Wojciech, Welfe Aleksander*

The exchange rate model we propose combines PPP and UIP hypotheses with the effect of risk aversion in financial markets, the impact of currency market pressures, and the contagion effect between countries of the same region. A new indicator was developed to identify the periods of pressure in the currency markets, which allows not only short-term but also long-term instabilities to be detected. Because in addition to being an explanatory variable (in the exchange rate equation) the indicator is also explained by the model variables and because the time series are generated by non-stationary stochastic processes, cointegration with dichotomous variables was chosen as an appropriate tool for inference. The asymptotic distribution of the trace statistics necessary to determine the size of the cointegrated space had to be derived and the critical values were simulated.

The empirical results obtained with the Polish data confirm that instabilities in currency market are caused not only by fundamental factors, such as the volume of economic activity and the country's balance of payments, but also by the contagion effect resulting from investors' inclination to perceive Poland and its neighbours, the Czech Republic and Hungary, as one group. On the other hand, it has been shown that the exchange rate is increased by rising inflation and interest rates (*vis-à-vis* the reference countries), higher risk attributed to the particular market (country) and market instabilities.



## **FROM CLASSICAL MODELS TO MULTIDISCIPLINARY APPROACH – THE CHANCE TO REDUCE MODEL RISK IN FINANCE?**

*Jajuga Krzysztof*

Model risk inherent in mainstream financial models is blamed for some failures in the use of financial theory in real world. This risk is driven by many underlying factors, including unrealistic assumptions, unjustified extension of the model or mismatching model with real situation. Since some of the causes of model risk can be derived from inappropriate use of classical models, several alternative approaches (most notably behavioral finance) have been proposed. The paper aims at discussing whether new approaches can lead to the reduction of model risk.

The following issues in the paper will be discussed:

- Model risk in classical finance – review of models and remedies,
- Synthetic review of alternative approaches,
- General evaluation of model risk in non-classical finance.

\* \* \*

## **PROPOSITION OF REAL OPTION VALUATION INCLUDING ELEMENTS OF BEHAVIORAL FINANCE**

*Jarzęcki Marek, Mizerka Jacek*

The paper contains a proposition of real option valuation approach including selected achievements of the Kahnemann and Tversky's [1979] prospect theory. A one-period valuation model is presented, based on binominal tree analysis. The starting point is the Cox, Ross and Rubinstein [1979] approach to option valuation. Next, the no-arbitrage hypothesis is given up and a model of subjective valuation of real options is developed. It is assumed, that the investors' perception is characterised by individual value functions and weighting functions, based on investors' own specific reference points and individual parameters of both functions.

**PRACTICAL ASPECTS OF EFFECTIVE RISK MANAGEMENT  
ON THE EXAMPLE OF THE CHANGES OF THE PRICES  
OF LIQUID FUELS**

*Klepcki Jarosław*

The interpretations of doing business in a changing external environment is to generate the highest possible safety factor. Security, in turn, is a derivative financial stability and good growth prospects and verifiable. The key is, however, the process of effective management of major risks. Indisputably one of these risks is the possibility of increased operational costs. For many Polish enterprises one of the main cost is the price of fuel. Recent years have seen a lot of important changes in marginalized until recently, the risk management of adverse changes in fuel prices. The purpose of this paper is to specify the practical aspects of these changes.

\* \* \*

**MANAGERS' CONSIDERATION ABOUT BEHAVIORAL FACTORS  
THAT INFLUENCE THEIR DECISION MAKING  
IN LIQUIDITY MANAGEMENT**

*Korzeniowska Dominika*

The paper presents selected fragment of the outcomes of qualitative research led by the author. It concerned factors influencing decision-making in liquidity management, associated with human traits (human as an acting person of such choices) both in terms of mental processes' characteristics peculiar to the entire human species (features of human mind) as well as the specific attributes of individual decision-makers. The aim of the study was to discover how managers perceive determinants of liquidity decision-making process, basing on their professional experience, and whether in their consideration on the subject had ever appeared the determinants related to the person of the decision-maker.

## **LEASING IN THE CREATION OF INNOVATIVE PROJECTS**

*Lewandowska Lucyna*

The paper presents a concept of financing innovative capital assets through leasing. It outlines development trends in the use of this form of financing in Poland, the EU Member States and internationally. The distinctive characteristics of leasing are highlighted, which designate it as a leading solution in the financing of innovative capital assets that enable also the implementation of innovative technologies. Attention is also given to the possibility of diffusion of innovative capital assets across a globalized economy and of the process being used by financially weaker SMEs.

\* \* \*

## **HEDONIC INDICES, FINANCIAL RETURNS AND STYLE EFFECT IN POLISH AND CZECH ART INVESTMENT**

*Lucińska Anna*

Art markets in European post-communist countries, although small, became a place of interest for investors seeking alternative assets that could be useful to diversify the portfolio. The results of painting auctions held in Polish and Czech auction houses led to a question about preferences of investors and the differences in return rates achieved in investing in painting. The problem of national taste in terms of preferring XIX Century, Modern Art or Contemporary Art seemed to be worth investigation. The purpose of this study is to analyze the short-term price movements and to compare the buyers preferences and rates of return as far as periods in painting are concerned for Polish and Czech art markets. The study covers the artworks of most significant painters and uses transaction data from art auctions in auction houses in Poland and Czech Republic in the years 2007–2012. The results of the investigation proved higher returns and volatility on Czech art market for XIX Century Art and Contemporary Art. Moderate and similar returns with higher volatility of Modern Art are appearing on Polish art market.

## **DOING BUSINESS USING EMOTION OR ALTRUISM? THE CASE OF FINANCING FOOTBALL IN POLAND**

*Majewski Sebastian*

The main goal of this article is to verify the hypothesis about the behavioural character of relationships between enterprises financing football in Poland and fans of this sport. In his research the author analyses selected companies listed on the Warsaw Stock Exchange which are engaged in the financing of football in the Polish Ekstraklasa. The author uses quotations of such companies as: Ruch Chorzow, Comarch, KGHM, Tauron, Lotos and Police. It is possible to divide these companies to three groups: owners (Comarch, KGHM), sponsors (Tauron, Lotos, Police) and a public company (Ruch). In the research ARCH models are used based on econometric models with independent variables: sport results and betting odds.

\* \* \*

## **SURVIVING WITHOUT PROFITS: THE CURIOUS CASE OF US AIRLINES**

*Meeks G., Jayasekera R.*

Warren Buffett has argued that a „farsighted capitalist ... at Kitty Hawk would have done his successors a huge favour by shooting Orville [Wright] down” – so little profit did the US airline industry earn in the twentieth century. After the millennium, major losses cumulated, more than can be explained by movements in demand or in the cost of fuel; and yet hardly any airlines disappeared from the industry, defying economic natural selection. Having deployed macroeconomic modelling and financial statement analysis to define this puzzle, the paper explores the way that the legal and taxation framework reinforced the competitive advantage developed by GE, a dominant upstream supplier of engines and of finance to the airlines. GE’s sophisticated strategy secured strong and stable profits for its shareholders, while its airline customers clung on despite heavy losses, becoming even more dependent on their dominant supplier.

## **PSYCHOLOGICAL FACTOR IN SHAPING INVESTOR EXPECTATION ON CAPITAL MARKET**

*Mikołajek-Gocejna Magdalena*

In this article we have stated that investors' expectations have significant influence on the prices on the capital market, because they determine to a large extent investors' behaviour and decisions. We should also assume that there exists a relationship between the psychological mindset of investors and the behaviour of financial markets and that biological factors, next to fundamental factors, play a significant role in forming investors' expectations.

\* \* \*

## **INDEX EFFECT ON POLISH STOCK MARKET ON THE EXAMPLE OF WIG20 INDEX**

*Miziołek Tomasz*

Investment decisions made by professional market participants may contribute, although in lesser extent than in the case of individual investors, to anomalies in capital markets. The main reasons for this phenomenon are herding behaviours of asset managers (e.g. managers of investment funds). They may have the nature of the apparent herding behaviours, i.e. behaviours independent of each other, e.g. on the basis of the same information, rationally processed. This include, among others, investing in shares that are to be included in the index portfolio. This results in abnormal positive returns of new index constituents observed either at the time of announcement about the new composition of the index, or at the time of actual change of the index portfolio. This phenomenon is referred as to index inclusion effect or simply index effect.

The purpose of this article is a preliminary analysis of index effect on the Polish stock market on the example of WIG20 index – the most important index published by Warsaw Stock Exchange and most frequently licensed by financial institutions, which focuses on large-cap companies. The analysis covers the period 2010–2014 (first quarter). During this period 24 changes in the composition of the WIG20 portfolio index were carried out, including 5 annual revisions, 12 quarterly adjustments and 7 extraordinary adjustments. As part of these changes shares of 13 companies were included to the blue-chip index portfolio.

## IMPACT OF THE SHAREHOLDER STRUCTURE ON CORPORATE GOVERNANCE

*Moszoro Marian, Dietl Marek, Bednarek Ziemowit*

The classic theory of corporate finance bases on the assumption that companies are owned by multiple shareholders who have perfectly diversified portfolios. In reality, companies differ with respect to shareholder concentration and shareholder portfolios. We examine the relationship between companies' shareholder segmentation and their financial characteristics. We hypothesize that the type of shareholders defined by ownership and portfolio concentration determines the corporate governance and the managers' willingness to take risks, which affects firm characteristics in terms of the following: size, profitability, debt, growth, cash holdings, capital expenditures, R&D expenses, dividend policy, price volatility, and valuation.

We construct quantitative models that explain the key financial performance of the companies as a function of ownership concentration (OC) and portfolio concentration (PC). As measures of concentration, we use Herfindahl-Hirschman Indices (HHI) for each company at the annual level. Based on algorithmic readings of quarterly and annual reports, we've retrieved and standardized the information about shareholders' positions of 1,071 companies listed at the Warsaw Stock Exchange from 1997 to 2013. First, we compute the level of ownership concentration and diversification of investors' portfolios. We then introduce a novel and intuitive taxonomy of four distinct segments on a two-by-two matrix using our measures: The „classic firms” (low OC, low PC), „holdings” (high OC, low PC), „activists” (low OC, high PC) and „family business” (high OC, high PC). To avoid classification volatility and to augment the effect of our descriptive variables, we limit our study to the lower and upper quintals of OC and PC and screen these companies through a survival test at each segment for 12 months. Lastly, we correlate the shareholder segments with more than 30 financial indicators and company characteristics in panel probit regressions.

The relationship between the ownership structure and the firm's characteristics is crucial for understanding the relationship and channels of interaction between corporate governance and assets pricing. In this study, we address the following question: How does the shareholding structure influence the firm's characteristics and do managers have different risk aversions depending on the type of shareholders?

Instrumentally, we also address the following questions: What is the role of shareholders in the dynamics of Emerging Markets corporations? What role should the shareholders play in corporate strategies and policies? Is the involvement of shareholders too small or too big? Have shareholders become more influential over time? Do they use that power constructively? Do strong shareholders increase the value of the company? What should be the role of proxy advisory firms?

## **SPECIAL ECONOMIC ZONE COMPANIES – ARE THEY BETTER THAN THE BEST? THE CASE OF POLAND**

*Pastusiak Radosław, Bolek Monika, Wolski Rafał*

The difference in performance ratios between the companies listed on the Warsaw Stock Exchanged (WSE) considered as the best on the market and the Special Economic Zones enterprises operating on special conditions is analyzed in this paper. Measures of profitability are calculated basing on financial statements and market data related to the required rate on return. Moreover the debt – equity ratio is regarded as the additional determinant of profitability. As the result the profitability of companies operating in Special Economic Zones, even if we skipped the tax reliefs, is higher the same as the leverage, comparing to the WSE companies.

\* \* \*

## **INTERNATIONAL TRANSMISSION OF LIQUIDITY SHOCKS BETWEEN PARENT BANKS AND THEIR AFFILIATES: THE HOST COUNTRY PERSPECTIVE**

*Pawłowska Małgorzata, Serwa Dobromił, Zajączkowski Sławomir*

In this study we analyze how funding liquidity shocks affecting large international banks were transmitted to Polish subsidiaries and branches of these banks in recent years. We investigate differences in the effects of liquidity shocks on banks owned by both Polish and foreign institutions. All Polish banks reacted to liquidity shocks after Lehman Brothers failure; however, only Polish subsidiaries and branches of foreign parent banks adjusted their funding after liquidity shocks had taken place during the sovereign debt crisis of the Eurozone. Mortgage lending in foreign currencies was also affected by liquidity shocks during the crisis. Our results suggest that the intragroup links between banking institutions can serve both as an important channel for international transmission of liquidity shocks and as a stabilizing mechanism during liquidity crises.

## **IPO UNDERPRICING IN POLAND**

*Pomykalski Przemysław, Domagalski Maciej*

We review the theory and evidence on IPO activity and underpricing focusing on Warsaw Stock Exchange and confirm that many IPO phenomena in Poland are not stationary. Focusing on behavioural reasons for underpricing we investigate the accuracy of analysts' valuations made prior to initial public offerings. Using a unique set of data we find disappointing accuracy not only in results of valuations but also in underlying forecasts of revenues.

\* \* \*

## **APPLICATION OF BEHAVIOURAL FINANCE TO ENHANCE VOLUNTARY RETIREMENT SAVINGS. ARE THE SOLUTIONS UNIVERSAL AROUND THE WORLD?**

*Sieczkowski Wojciech*

Behavioural finance is a promising enterprise to be applied in VRS and is gaining recognition around the world. However, there may be some limitations to transferability of its applications. This paper summarizes the key findings relevant to long-term savings and then analyses the aforementioned limitations, by first pointing to some methodological assumptions made and then looks at potential set of variables impacting applications' transferability.



## **SHADOW BANKING IN BEHAVIORAL AND NEO-CLASSICAL FINANCE**

*Solarz Jan K.*

Money is not merely a highly exchangeable commodity or the symbol of value that is established in exchange by utility-seeking individuals. Private money is value sui generis that is established by reactions between issuers-shadow banking and users of money. These relations can be explain by behavioral theory of finance and neoclassic theory of finance.

Shadow banking and classical banking relations are characterized by relations of both cooperation/trust and conflict/struggle which give private money its value and produce alternating phases of order and disorder.

If the link between the public and the private sector is to be bypassed or severed, should this be seen as an exceptional emergency measure or the first step in radical structural change in the social relations for the production of money? Neo-institutional answer on this question is that shadow banking is on the beginning of its institutionalization. Shadow banking it is fundamental systemic financial innovations. It is all financial activity, except traditional banking, which require a private or public backstop to operate.

## **CULTURAL ASPECTS IN THE PROCESSES OF ACQUISITION IN PHARMACEUTICAL COMPANIES**

*Stankiewicz-Mróz Anna*

In order to succeed in the acquisitions of companies, the financial, legal and structural analysis are not sufficient. A lot of attention should be also paid to the analysis of the issues referring to a cultural adjustment of the transactions partners both in a national and organizational dimension. It is also important to implement in a skillful way changes connected with a gradual incorporation of new elements into the current culture.

This article presents the research results of 5 acquisitions with the branch character which took place in the pharmaceutical sector. The aim of the research was to diagnose an approach to cultural issues and, consequently, the identification of the model adopted for the implementations of cultural integration. The analysis of the range of cultural differences, their depth and the dynamics of integration activities helped in it.

The research showed that in the described companies in the pre-transaction phase no due-diligence analysis which would allow for the assessment of the compatibility of partners at the moment of the transaction in the field of culture was conducted. In three out of five examined transactions a pluralistic model was adopted assuming that the companies-partners of the transactions stick to their rules, norms and values. In the research it was underlined that a marginalization of the cultural aspects results from a conviction that an organizational culture in pharmaceutical companies is weak and additionally staff transfers within a branch cause the copying of the management practices and patterns of behavior. Additionally it was underlined that managers of integration with proper competencies are hardly ever employed. It increases the risk of integration and the consequences of an inapt integration of cultures can be even more serious than a lack of actions in this aspect.

**ELEMENTS OF CONTROL THEORY APPLIED TO AN INVESTMENT  
PORTFOLIO IN THE CAPITAL MARKET.  
THE OPTIMAL TIME HORIZON FOR SELLING A PORTFOLIO**

*Tymiński Jerzy*

The article presents a concept of capital management for assembling investment portfolios. Two optimization variants of a portfolio to be purchased are discussed. Portfolio I is structural using the „traditional model”. To assemble Portfolio II, elements of reliability theory and the dynamic programming method were used.

The article also analyses the sale of a portfolio with respect to the demand for financial instruments in the capital market.

\* \* \*

**THE USE OF METHODS OF ESTIMATING OF TAX BASE  
IN INCOME TAXES IN THE RESEARCHES**

*Witczak Radosław*

In the economy exist the tax evasion of income taxes. One way of reduction the tax evasion is estimating of tax base. The provisions point out different methods of estimating of the tax base. The provisions gives the opportunity to use other methods of estimating of the tax base than named in the act. The analyse of using such methods of estimating of tax base by the tax authorities was given. The scope of the analyse were different cases from the administrative court. The cases concerned different types of methods of tax estimation used by tax administration. The implementation of rules concerning other methods of estimating of tax base was proposed.

## **LIQUIDITY – PROFITABILITY RELATIONSHIP ANALYZED ONCE AGAIN**

*Wolski Rafał, Bolek Monika*

In this article, authors present a study on relationship between liquidity and profitability of an enterprise. Besides traditional measures of liquidity and profitability, the analysis takes account also of dynamic measures, i.e. the cash conversion cycle and the economic value added. The authors demonstrated that the lack of cohesion in the theory in the case of statistical measures may result from the certain snapshot effect, whereas the analysis of dynamic measures allows the interpretation of ratios consistent with the theory. This article also presents EVA as a financial ratio for the calculation of which not all accounting corrections proposed so far must be used.

\* \* \*

## **POST-IPO UNDERPERFORMANCE AND THE CROSS-SECTION OF STOCK RETURNS AT THE WARSAW STOCK EXCHANGE**

*Zaremba Adam, Szyszka Adam*

In this paper we propose a new cross-sectional asset pricing model employing a Young-minus-Old (OMY) factor, which accounts for long-run post-IPO underperformance. The OMY factor might be also seen as a measure of market sentiment. We test the model using stock returns from the Warsaw Stock Exchange, second most active IPO market in Europe after London, in the period from April 2001 to January 2014. We form portfolios double-sorted on size and age and attempt to explain their returns with the new model and also the traditional, well-established models such as CAPM and the Fama-French three-factor model. The CAPM and F-F models are rejected, while our model explains the returns well. Additionally, we deliver fresh out-of-sample evidence for the long-term underperformance of initial public offerings in Poland. The anomaly is particularly strong among the small companies.