

## **Sessions:**

ESM = Entrepreneurship and Management

From strategic management to human capital knowledge and sustainable development, this session includes all topics focusing on managing and leading enterprises.

MFR = Mathematical Finance and Risk

In finance and especially in the field of risk management, mathematics is an essential and crucial tool. This session primarily focuses on quantitative aspects of financial management.

ACR = Accounting and Reporting

Accounting policies are subject to constant amendments and it can be tricky to keep track of their development. Together with reporting these two topics form a fundamental basis for managing an enterprise's resources.

SFC = Social Finance and Crowdfunding

This session concentrates on evolving trends in doing business. Especially Crowdfunding is currently a hotly debated topic and might ultimately change the way of how entrepreneurs go about when launching a company.

ORM = Organisation and Risk Management

The identification and effective management of an enterprise's risk exposure can be a competitive advantage in today's market volatility. Organisational aspects and the qualitative management of risks are the cornerstone of this session.

## **Session ESM 1:**

*Marhfor Ahmed, Cosset Jean-Claude, M'Zali Bouchra*

### **Can companies profit from analyst coverage?**

In this paper, we investigate whether more analyst coverage alleviates firm's financing constraints. Using a sample of 44 countries, we find that analyst following is positively related to firm's financing constraints, in accord with the view that financial analysts' activities do not reduce information asymmetries between market participants. Our results also indicate that analysts' activities do not produce different effects depending on the country's home environment.

**Keywords:** analyst coverage; firm's financing constraints; information asymmetry; market efficiency; Investment-cash flow sensitivity; Financial Hierarchy

*Ilya Gikhman*

### **Fixed Income Basic Notions and Randomization**

In this paper, we outline a randomization of the primary fixed income notions. We present a construction of some stochastic interest rate models. We also consider forward rates which are implied by stochastic bond prices. We highlight to major drawbacks of the commonly used stochastic models. The first drawback is the theoretical possibility that bond admits higher than its face value prior to maturity. The second drawback is related to modeling itself.

We model stochastic interest rate in such a way that it would be consistent with deterministic definition of the bond while some popular are not. In the next paper we will pay more attention to FX and a formal definition of the LIBOR rate. Here LIBOR rate is assumed to be known.

**Key words:** Stochastic interest rate, stochastic forward rate, LIBOR.

*Arvind Ashta, Glòria Estapé-Dubreuil, Jean-Pierre Hédou, Stéphan Bourcieu:*

### **Social Innovation lessons from Microangels?**

#### **An Institutional Entrepreneurship Case study of the Cigales movement in France**

Micro-entrepreneurs can increase their ability to take debt by taking equity alongside, thus respecting prudent ratios and reducing stress. Since 1983, microequity has been started in France through a socially innovative movement known as CIGALES. We look at the development of the CIGALES movement from an Institutional lens to understand how these clubs of microangels multiplied and why the movement hasn't grown faster and more global. We find that catalytic innovation not only requires the institutional entrepreneur to collaborate with other complementary institutions but also to create such institutions. The blocks to the movement are both internal values and the external institutional cage. Understanding this movement could be useful for future development efforts.

**Keywords:** institutional entrepreneur, venture capital, business angels, catalytic innovation, microfinance, micro-equity

### **Session ESM 4:**

*Dr Carol Royal, A/Prof. John Evans, Mr Sampath S Windsor:*

#### **The Missing Strategic Link – Human Capital Knowledge, and Risk in the Finance Industry – Two Mini Case Studies**

Understanding risks faced by firms and their reactions in response to those risks requires analysis of the ambiguities inherent in human behaviour. Yet, evidence from two case studies on investment and insurance professionals in the finance industry suggest that more focus on human capital may be prudent in reducing epistemic uncertainty particularly considering recent events in which the investing public has had a crisis of confidence in corporate leaders. It is particularly appropriate for regulators to provide a context in which market participants exercise due diligence by ensuring human capital is enhanced by as much knowledge as possible where more human capital knowledge could reduce both risk in investments and insurance, ultimately challenging the sustainability of organisations during periods of epistemic uncertainty. This paper suggests that investment analysts, fund managers and insurance professionals lack the appropriate competencies, skills, knowledge and abilities required to meet the demands of the analysis of human capital in relation to understanding risk. Such competencies include disciplinary knowledge of sustainable human resource management and organisational change systems and their links to corporate performance and risk mitigation. An alignment with human resource management (HRM/

HR) that is equally focused on internal and external risk is of strategic importance for such professionals and their organisations in human capital risk mitigation.

**Key words:** regulation; risk management; financial services

*Santanu K. Ganguli*

### **Persistent High Liquidity, Ownership Structure and Firm Performance : Indian Evidence**

There exist conflicting arguments as regards the role of high liquidity on firm performance. Excess liquidity reduces financing cost in presence of information asymmetry but creates agency problem as the self-serving manager may not use the liquid fund in the stockholders' best interest. The paper investigates the characteristics and performance of the persistent high liquidity firms in India in the backdrop of ownership concentration for a five year period including one year prior to and one year succeeding the consistent high liquidity holding period. Empirical evidence reveals that the persistent high liquidity firms consistently post superior performance, have better growth prospect and resort to less debt financing. Ownership structure has no influence on the performance of such firms. However, consistent with trade off theory we find that persistent liquidity as a policy beyond a certain point in time may adversely impact performance. Industry-and- size matched comparison firms with non-persistent liquidity tend to overinvest that might hinder performance. Ownership concentration has a negative influence on performance of such firms.

Key words : Agency Theory, Concentrated Shareholding, Firm Performance, India, Industry and Size Matched Comparison Firms.

JEL Classification : G 32, G 34.

*Abdylmenaf Bexheti, Sadudin Ibraimi, PhD, Gadaf Rexhepi, PhD:*

### **Sustainable Development of Energy Sector and the Environment – the Case of Macedonia**

One of the topics that were mostly discussed in an international level in past decade is the sustainability of energy and environment, this mainly because of the rise of the industry and modernization of the countries which seeks for use of more energy. The debate was oriented on what will happen if we don't change the way how we use energy and how we produce energy. One of the things that is well known in the economy is that the growth of the supply of the energy has had always environmental consequences such as damage to the forests, reduce of the number of fish, influence on the climate changes etc.

In the theoretical part of the research paper we will try to analyze what sustainability of the energy sectors means and what is relationship between the use of energy and environment, what is the right balance between the use of natural resources and the use of energy, how can we use energy now and still have it in the future. Further we will try to identify sustainable energy systems, identification of energy indicators for sustainable development and energy policies for 2050.

Our main concern in Republic of Macedonia is, are we using our resources in production of energy rationally, are we sure that with this tempo of use of environment in production of energy we will still have resources to produce energy in a future. That's why our research will be oriented toward Macedonian energy sector in terms of the balance of use of natural resources in production of energy and the relationship between the production of energy and environment. In the beginning we will describe the Macedonian actual situation relating to

energy, its production, the sustainability of the energy sector, the effect of energy production into environment etc. We will analyze the strategy of development of energy sector in Macedonia till 2030, and the elements relating to the sustainability of energy sector and the balance of use of natural resources. The main research will be oriented to analyze and show how long Macedonia can produce energy with this way of use of natural resources and its impact to the environment. What it should be done in order to change the actual situation toward use of natural resources. Also we will make a comparative analysis on the actual situation towards Kyoto Protocol of Macedonian energy sectors and the countries in region.

**Keywords:** Sustainable development; Environment, balance of use of natural resources and environment, sustainable sources of energy, energy efficiency.

*Syed Abdul Sattar Shah, Prof. Dr. Pir Roshan Shah Rashdi, Dr. Anwar Ali Shah G. Syed*

### **Global Issues in Textile industry of Pakistan**

This research investigates the global issues in Textile Industry in Pakistan. Data were collected 100 textile mills, in the form of unstructured questionnaire from the textile industry of Pakistan. The main respondents of the questionnaire were senior to middle level management located in Karachi, Hyderabad, Kotri, Nooriabad, Faisalabad and Lahore the for the purpose of this study yellow pages were used for identification and address of the respondents and web site of APTMA. Findings of this research indicates that 77% correlation between CC and LR, therefore by controlling contaminated cotton we can control the lower returns as well as the quality of yarn can also be improved. There is a 57% correlation between HM and CA, therefore by improving the handling methods we can take benefit of competitive advantage to some extent. Furthermore, we have take some measures so that textile industry of Pakistan can take desired benefit of competitive advantage.

**Keywords:** Global, Issues, Textile Industry.

### **Session ESM 5:**

*Armingier, Josef*

### **Solvency-Tests – an Alternative to the Rules for Capital-maintenance within the Balance Sheet in the European Union**

Creditor protection in the European Union (EU) is based on the principle of capital maintenance within the balance sheet in accordance with the Second Company Law Directive issued in 1976. Developments in financial reporting, especially the trends to-wards internationalization in connection with the adoption of International Financial Reporting Standards (IFRS), have a major impact on the current principles of capital maintenance. Accounting law in the EU is based on the Fourth Council Directive which allows a wide range of accounting options leading to a different basis for distributions to shareholders. As a consequence creditor protection may be endangered. As a consequence the European Commission has initiated projects with the aim to modernize company law. Solvency tests are seen as a possible alternative to the existing principles of capital maintenance.

This contribution provides an overview of the current rules within the EU to limit distributions to shareholders. On the other hand, a critical analysis of both systems, as well as an overview of current developments, shows a need for political action.

**Keywords:** Solvency-test, Capital-maintenance, Creditor Protection

*Carolina Laureti, Ariane Szafarz*

### **The Time-Inconsistency Factor:**

#### **How Banks Adapt to their Mix of Savers**

This paper starts from a puzzle. On the one hand, the literature documents that a large proportion of poor people are ready to forgo interest on rigid – or commitment – savings accounts to discipline their future selves. On the other, our stylized facts from Bangladesh show that microfinance institutions pay a premium on commitment savings with respect to flexible savings. To address this puzzle, we build an equilibrium model in which a monopolistic bank offers flexible and commitment savings accounts to both rational and time-inconsistent agents. Two factors concur to explain why the bank may find it optimal to pay a commitment premium even though time-inconsistent savers do not necessarily demand one. First, the bank needs commitment accounts to meet its reserve requirements. Second, it cannot segment its clientele *ex ante*, and rational savers demand compensation for commitment. Last, we discuss the consequences of our findings from a regulatory perspective.

**Keywords:** Savings, banks, microfinance, commitment, flexibility, present-bias, hyperbolic discounting, Bangladesh.

*Radha Ladkani, Ashok Banerjee*

### **Lead Kindly Light? A Blended Neo-classical and Behavioural Context of Merger Waves in Emerging Markets**

The preferred mode of payment in M&A deals in the emerging markets is cash, primarily due to high ownership concentration. Such markets are characterized by institutional voids, such as lack of investor protection, under-developed debt markets and lack of access to bank funding for M&A deals. These features close-out equity and debt mis-valuation routes for merger waves to occur in these markets. However, conscious policy decisions (often deregulatory) at the aggregate and the industry level give impetus to firms in some industries to restructure, and such restructuring at the industry level generally clusters in time, causing merger waves. Moreover, there are certain behavioural causes like herding, envy and hubris, which can also drive merger waves. We observe that industry-shock thesis embedded in the neo-classical explanations and the 'anchor acquirer' hypothesis embedded in the behavioural theory explain merger waves at the industry level. Additionally, we lead an inquiry in to the ethnic background of promoter-managers in the context of merger waves, and study its impact on bidder returns, and also analyse the herd behaviour of bidders at the aggregate level.

**Keywords:** Merger waves, mergers and acquisitions, emerging markets, mis-valuation hypothesis, behavioural corporate finance, promoter ethnicity, regulatory changes.

## **Session ESM 6:**

*Nesrin Benhayoun, Ikram Chairi, Amina El Gonnouni, Abdelouahid Lyhyaoui*

### **How non-Interest loans can improve the financial behavior of companies and prevent economic crises: Toward a Support Vector Machine Approach**

In recent years, Islamic Finance has grown rapidly with the expectation that it will play an increasingly more important role in the years to come; as such, the appeal of this type of finance stems mainly from its underlying fundamental concept of justice as well as from the sharing of risk and prohibition of interest. We intend in this paper to examine the practice of Islamic Finance and its impact on the financial health of companies.

Given that a company forms a micro financial system, its good financial health contributes to building a powerful economic engine; this is why we have a greater focus on companies' financial situation, especially the company's debt situation.

Therefore, we have, over 3 years (2009-2011), selected a sample of 20 firms with considerable conventional bank loans. We have also extracted about 40 financial indicators impacting their debt situation in order to set up an intelligent financial solution to measure the impact of interest on the firm's solvency.

Using Support Vector Machine Model (SVM), we have proved the high-impact of interest loans on the financial behavior of companies, and we have concluded through our SVM prediction model that interest loans can highly increase unexpected financial crises.

**Keywords:** Interest loans, Intelligent financial solution, Financial health, Islamic Finance, Ethical Finance, Financial crisis, Support Vector Machine.

*Gadaf Rexhepi*

### **How to grow your Business? Evidence from Macedonia**

Selecting the right strategy in the right moment usually can become the best competitive advantage that an enterprise can gain. The purpose of the paper is to achieve this competitive advantage, through understanding the strategy and selecting the right growth strategies typical for different phase of life cycle in which their enterprise is at the moment. In the paper, are presented the growth strategies that small and medium enterprises can gain when it is in the growth stage by using theoretical and practical research. Empirical data which came as a result of 95 enterprises which operate in the growth phase in Macedonia showed that hybrid strategy tends to be the better strategy that enterprises can select when they operate in the growth phase.

*R. Gadjiev, Y. Bychaev, E. Iakovleva*

### **Increase in Economic Efficiency of Enterprise Due to Fixed Assets Upgrading**

This paper suggests using "value-oriented approach" or maximization of market value of an operating enterprise (MVOE). This calls for theoretic reconsideration of a number of fundamental statements of the economic science, solution to methodological problems, related with development of principles for economic efficiency formation, parameters, defining its value, assessment criteria and influencing factors, creation of economic efficiency

management mechanism. The latter should become an efficient system of management of production, material, human and intellectual assets, which generate income, and ensure management decisions aimed at value maximization of an enterprise in the conditions of present resource limitations, high uncertainty of modernization process, investment in new technology and probabilistic nature of the forecast parameters.

**Keywords:** economic efficiency, market value, innovation, investments, economic added value, profitability, risk.

## **Session MFR 1:**

*Christian Kamtchueng*

### **FVA, Modelling and Netting Arbitrage**

After Lehman default and the Euro Crisis (crisis which started mid 2007), the industry started to consider the funding risk as a major risk. The practitioners began to charge for their funding cost. In this stressed context, the FVA has been the subject of intense debate; even its definition is not well established. In this article we follow the footsteps of Kamtchueng by establishing netting arbitrage in the FVA framework relative to our hedging strategy. It is the first time that the FVA is related to another funding spread.

**Keywords:** FVA, netting, arbitrage, funding valuation adjustment, funding cost

*Yuri A. Katz, Yudi Lu, and Li Tian*

### **Superstatistical fluctuations in time series of leverage returns**

We study the time series of daily leverage returns of 520 North American industrial companies during the financial crisis, 2006 - 2012. We find that majority of firms have fat-tailed  $q$ -Gaussian distributions of leverage returns. For distributions of returns with a finite second moment, we observe a striking consistency of the values of an average Tsallis entropic parameter  $q$  obtained by two independent methods: i) direct fitting of  $q$ -Gaussians to empirical distributions of returns and ii) derived from the fitting of Gamma distributions to histograms of an inverse historical variance of daily leverage returns. This finding supports the superstatistical model, which assumes that  $q$ -Gaussian distributions result from superpositions of locally normal fluctuations of returns with Gamma distributed inverse variances. Notably, for a small group of issuers, having  $q$ -Gaussian distributions with a divergent second moment, the mean values of  $q$  derived by both methods are very different. It is likely that in this group of companies, fluctuations of leverage returns are so violent that the superstatistical model assumptions are not applicable. These observations are essential for valuations of credit risk.

**Keywords:** Superstatistics, Leverage returns, Stochastic volatility,  $q$ -Gaussian distribution, Credit risk.

*Lucia Del Chicca*

## **First Steps in Hybrid-Monte Carlo Methods for Credit Risk Management**

The system "CreditMetrics" of J.P.Morgan is one of the most well known frameworks for credit risk management. This system is used to calculate - amongst other things - the expected value of a credit portfolio of a bank in one year, the variance of this value and the 1% - percentile of this value, on the basis of certain model assumptions. The calculation of the 1% - percentile is based on the use of Monte Carlo methods. In many applications it has turned out that quasi-Monte Carlo methods outperform plain Monte Carlo methods.

The new idea in this work is to combine the benefits of the two methods for CreditMetrics and to generate a "hybrid-Monte Carlo method". In this paper we introduce the setting for the hybrid-Monte Carlo method in CreditMetrics, we give the basics of quasi-Monte Carlo simulation, and we compare the performance of the different simulation methods in CreditMetrics for a lot of representative examples.

**Keywords:** Monte Carlo, Quasi-Monte Carlo, CreditMetrics, Credit Risk Management

*Saadiah Mohamad, Jaizah Othman, Hartini A. Aziz, Nur Amalina Borhan, W Nurul Hazwani W Aziz*

## **The Use of Islamic Hedging Instruments as Non Speculative Risk Management Tools**

The objectives of this research are firstly, to examine how an Islamic hedging instrument can be used as a risk management tool, secondly, to identify the factors that influence the demand for Islamic hedging and thirdly to examine the challenges faced by an Islamic Financial Institution (IFI) in promoting the use of Islamic hedging instruments. This research is an exploratory study and involves a qualitative research methodology using case study analysis. Data was gathered using published literature and information from official websites as well as interviews with industry practitioners on Islamic hedging instruments from Bank Muamalat Malaysia Berhad (BMMB) and CIMB Islamic Berhad. The two banks are selected because they are among the major players in the Islamic hedging market in Malaysia. This study reveals that the Islamic hedging instruments offered to corporate clients by the two Islamic banks under study are Islamic Forex, cross currency and profit rate swaps and commodity hedging instruments. This study also suggests that price, documentation, bank reputation, awareness and ownership are factors that influence the demand for Islamic hedging products. Islamic *Shariah* compliant hedging instruments are meant to appeal more to clients who are looking for *Shariah* compliant hedging instruments to hedge their risk exposure and less to investors who are looking for speculative ventures to gain huge returns much like investing in hedge funds. Its use is still limited and it appears that it is more a question of marketing and branding as Islamic hedging is still unknown even though the needs for it could easily be established to many corporate clients.

**Keywords:** Islamic hedging, Shariah compliant, non speculative, profit rate swaps, Islamic Forex

## **Session MFR 2:**

*Ankit Sharma*

### **Performance of Indian Commodity Futures Market: An Analysis**

This paper studies the diversification benefits of commodity futures to a conventional portfolio of stocks and bonds in Indian commodity futures market. Asset allocation strategies namely strategic asset allocation (buy and hold strategy) and tactical asset allocation (momentum and term structure strategy) are studied from 2004-2012 on yearly basis using monthly data of most liquid commodity futures contracts. Ex ante Sharpe ratios are higher than conventional portfolios in constrained and unconstrained mean variance optimal portfolios including commodity futures indicating diversification benefits. Momentum and term structure strategies provide positive ex post returns on average. Ex post Sharpe ratios of constrained portfolios are higher than conventional portfolio of stocks and bonds in most years but the results are mixed as higher Sharpe ratios are distributed among different trading strategies for different years. Annually commodities are selected on the basis of mean absolute correlation between inflation and commodity futures return and top six are selected to form an equiweighted portfolio. Ex ante Sharpe ratios of this commodity portfolio with stocks and bonds give higher Sharpe ratio than conventional portfolio during double digit inflation years and thus provide evidence that commodity futures can act as an inflation hedge.

**Keywords:** commodity futures, inflation hedge, momentum strategy, term structure strategy, portfolio

*Yoichiro Fujii, Hideki Iwaki, Yusuke Osaki*

### **An Economics Premium Principle under the Smooth Ambiguity Aversion**

This paper considers a pure exchange economy of ambiguity loss and extends the economic premium principle of Bühlmann (1980, 1984) to an economic premium principle under the ambiguity. In the economy, the agent follows the dual version of the smooth ambiguity model advocated by Klibanoff, Marinacci and Mukerji (2005). This paper also conducts some comparative statics and demonstrates the effect of ambiguity on equilibrium insurance premium.

**Keywords:** Ambiguity, Economic premium principle, Equilibrium, Smooth ambiguity model

*Ilya I. Gikhman*

### **Derivatives Pricing**

This paper presents a fallacy of the Black and Scholes' (BS) option pricing concept. The BS pricing is still the unique theoretical way for pricing derivatives though quite a large number of experts have found a lot of remarks concerning its theoretical and practical failings. We should note that implementation of BS methodology uses a real historical data and it is difficult to identify in practice whether deviations of the theoretical predictions of the option prices are due to incorrect interpretation of the BS option prices or deviations are implied by initial assumptions of the theoretical model regarding to say for example a stock model. In [4] one presented a critical point of view on BS pricing concept. After this paper was published BS methodology is continue to be the benchmark interpretation of the derivatives pricing. Our

goal is to introduce more substantial formal arguments which demonstrate that Black and Scholes' approach to derivative pricing is incorrect.

**Keywords.** Option, derivatives, pricing, dynamic hedging.

*Sebastien Valeyr, Denis Grebenkov, Sofiane Aboura, Qian Liu*

### **The Reactive Volatility Model**

We present a new volatility model, simple to implement, that includes a leverage effect whose return-volatility correlation function fits to empirical observations. This model is able to capture both the “retarded effect” induced by the specific risk, and the “panic effect”, which occurs whenever systematic risk becomes the dominant factor. Consequently, in contrast to a GARCH model and a standard volatility estimate from the squared returns, this new model is as reactive as the implied volatility: the model adjusts itself in an instantaneous way to each variation of the single stock price or the stock index price and the adjustment is highly correlated to implied volatility changes. We also test the reactivity of our model using extreme events taken from the 470 most liquid European stocks over the last decade. We show that the reactive volatility model is more robust to extreme events, and it allows for the identification of precursors and replicas of extreme events.

**Keywords:** Volatility, tail event, risk management, asset pricing

## **Session MFR 3:**

*Cathrine Jessen & David Lando*

### **Robustness of distance-to-default**

Distance-to-default is a measure of default risk derived from observed stock prices and book leverage using a structural model of default risk. It has proven empirically to be a strong predictor of default. We use simulations to investigate whether the empirical success of the measure is due to robustness to model misspecifications. We consider a number of deviations from the simple Merton model that involve different asset value dynamics and a different default triggering mechanism. Stochastic volatility poses the largest challenge to the robustness of distance-to-default. We therefore propose a volatility adjustment of the distance-to-default measure, that significantly improves the ranking of firms with stochastic volatility but is less robust to deviations from this assumption.

*Jim Chen*

### **Portfolio Theory as a Pattern of Timeless Moments**

Quantitative finance traces its roots to modern portfolio theory. Despite the deficiencies of modern portfolio theory, mean-variance optimization nevertheless continues to form the basis for contemporary finance. The term *postmodern portfolio theory* expresses many of the theoretical advances in financial learning since the original articulation of modern portfolio theory. Any complete overview of financial risk management must address all aspects of portfolio theory, from the beautiful symmetries of modern portfolio theory to the disturbing behavioral insights and the vastly expanded mathematical arsenal of the postmodern critique. This article surveys portfolio theory, from its modern origins through more

sophisticated, “postmodern” incarnations, according to the first four moments of any statistical distribution: mean, variance, skewness, and excess kurtosis. Mastery of these quantitative tools and associated behavioral insights holds the key to the efficient frontier of risk management.

*Vicente S. Cardoso, André L. S. Guimarães, Henrique F. Macedo, Jorge C. C. O. Lima*

### **Assessing Corporate Risk: a PD model based on credit ratings**

This paper proposes a model which tries to mimic agencies’ corporate ratings. Using financial data for more than 1,400 firms across several years, a model based on financial statements was estimated and yielded reasonable accuracy for companies of diverse sizes and industries. The model was able to predict ratings within 3 notches of accuracy for about 90% of the cases.

*Gal Zahavi, Yaron Rosenstein*

### **Weather Derivative Pricing With Nonlinear Weather Forecasting**

In recent years we witnessed a rapid growth of weather derivatives market. These derivatives are used to hedge energy contracts and distribute weather risk. While most derivative markets are complete and contingent claims replications are standard procedure, this special market is incomplete, and therefore modeling the weather is a more appropriate approach to pricing. In this work we base our modeling on a widely accepted physical approach. We base our analysis on Navier-Stokes equations applied to a thin atmosphere as presented by Lorentz 1962. This modeling is considered by meteorologists a “very-long-weather” prediction, allows for an accurate and robust temperature forecasting. We show that under this setting we empirically outperform the standard approach to weather derivative pricing.

## **Session MFR 5:**

*Merav Ozair*

### **What Does the VIX Actually Measure?**

#### **An Analysis of the Causation of SPX and VIX**

We examine the causality relationship between the S&P500 (SPX) and the VIX. Our contention that a circular mechanism which “feeds” itself that can be explained by “cause and effect”, is supported by the empirical findings on the intraday, minute bar, time series of the SPX and the VIX. The findings are supported across different samples and estimation models and show that: (1) the SPX shock to the VIX time series is not only significant but also persistent; (2) the VIX follows a serial pattern of significant reversal (in the first lag) followed by momentum in the subsequent lags (and beyond the first 10 minutes); (3) the VIX endures a “permanent” market impact, while the SPX sustains a “transitory” one; and (4) the SPX shock on the VIX system remains in the system long enough to account for 70% of the variance of the VIX, suggesting a predictive power of the SPX to the current movement of the VIX.

*Shirly Siew-Ling WONG, Chin-Hong PUAH, Shazali ABU MANSOR, Venus Khim-Sen LIEW*

### **Measuring Business Cycle Fluctuations: An Alternative Precursor to economic Crisis**

This study constructs a factor-based model of business cycle identification for the Malaysian economy via the dynamic factor approach. Our central focus is to explore a factor-based business cycle indicator (BCI) that can serve as a good gauge for economic crises. The empirical finding is in harmony with the envisaged objective; the constructed BCI produces satisfactory identification of business cycle turning points and statistically outperforms the traditional non-model-based indicator built by the national statistical institution of Malaysia in terms of predictive accuracy and forecasting performance. Therefore, we reckon that the constructed BCI can serve to identify the business climate and foretell approaching economic crises in a timely manner.

**Keywords:** Business cycle indicator; Dynamic factor model; Turning points

*Henrique F. Macedo, André L. S. Guimarães, Vicente S. Cardoso e Jorge C. C. O. Lima*

### **Assessing country risk: a PD model based on credit ratings**

The purpose of this study is to examine the main determinants of the sovereign credit ratings provided by the three major rating agencies: Fitch Ratings, Moody's and Standard and Poor's. We follow the Shadow Rating approach in order to model the logit of the Probability of Default (PD) of the ratings, and apply cross section and panel data econometrics to select the most explanatory and robust variables.

*Konstantinidi, Theodosia, Pope, Peter F:*

### **Forecasting Risk in Earnings**

Conventional measures of risk in earnings based on standard deviation are inadequate when the distribution of earnings deviates from normality. We propose a methodology based on current fundamentals and quantile regression to forecast risk reflected in the shape of the distribution of future earnings. We derive measures of downside risk, upside risk and uncertainty in future earnings. Our analysis shows that the level of current earnings is a significant determinant of the upper and lower quantiles of the distribution of future earnings. In-sample and out-of-sample forecasting performance improves significantly when we: (i) decompose earnings into accruals and cash flow; and (ii) allow forecasting coefficients to vary across profit and loss firms. We provide evidence that out-of-sample forecasts of quantile-based risk measures are related to a range of commonly used equity risk proxies and explain incrementally analysts' forecast accuracy and analysts' risk ratings. Our study provides insights into the relations between earnings components and risk in future earnings. It also proposes new risk measures that will be useful in developing understanding of the links between financial statement information and fundamental risk.

**Keywords:** Earnings; accruals; fundamentals-based risk forecasts; quantile regression.

## **Session MFR 6:**

*Xiaoxia Huang, Hao Di*

### **Mean Short Fall Based Behavioral Portfolio Selection with Mental Accounts**

Das et al. (2010) develop a model where investors divide their wealth among mental accounts. In Das et al.'s model, subportfolios associated with different mental accounts are chosen from the same financial assets. In this paper, we argue that investors in Das et al.'s model are still rational rather than normal or behavioral. In the paper, we integrate Das et al.'s model with the economic theory of self-control (Thaler and Shefrin, 1981) to produce a new pyramid mental accounting (PMA) portfolio selection framework for behavioral investors. In our PMA framework, subportfolios associated with different mental accounts are chosen from different layers of assets where assets in each layer are not totally the same. Furthermore, In Das et al.'s model, the probability of failing to reach a threshold level in each account is used as a definition of risk and the investors give their attitudes towards this risk in each mental account. In this paper we argue that the definition of risk Das et al. (2010) used concerns only one loss event, but investors would concern other loss events as well. Therefore, we propose a mean short fall measuring the mean loss level of a portfolio return below a preset base reference return rate and use it as a risk measurement in the PMA model. Furthermore, we give an analytical solution to the proposed problem with short selling.

**Keywords:** portfolio selection, mental accounts, mean short fall, behavioral Finance

*Cheng-Kun Kuo, Chih-Wei Lee, Weiru Kuo*

### **Forecasting Value at Risk: A Strategy to Minimize Daily Capital Costs**

Reporting daily risk estimates by banks to the monetary authorities is re-affirmed in the Basel III Accord. The risk estimates can be computed from an approved internal Value-at-Risk (VaR) model, among others.

It is well-noted that reporting either too high or too low risk estimates can lead to high capital costs. For profit-seeking banks, there is an unambiguous incentive to hold a minimum capital reserve in order to minimize capital costs. This is a typical financial trade-off problem.

In this paper, we suggest a modification to a previously proposed decision rule to tackle the problem in a more realistic way. The results show less capital costs for banks under the condition of restricting the number of violations.

**Keywords:** risk estimates, value-at-risk, capital reserves, capital charges, market risk, internal models, GARCH, RiskMetrics

*Anastassios A. Drakos, Georgios P. Kouretas*

### **Assessing the systemic risk of foreign and domestic banks on the domestic economy: An application of CoVaR**

The recent financial crisis has shown that the regulatory framework that has been formulated and implemented over the last twenty years under the Basel I and II agreements has relied excessively on the monitoring of individual financial institutions. It failed to capture the contribution of systemic risk, which is considered to be the risk that is the outcome of

collective behaviour of financial institutions that have significant effects on the real economy. This paper investigates whether the increased presence of foreign banks which are listed on a national stock market has contributed to the increase in the systemic risk, in particular, after the financial crisis of 2007-2009. We examine the extent to which the distress of foreign banks contributes to systemic risk for the USA. In addition using relevant data for the UK we investigate the extent to which distress within different sub-segments of the financial system, namely, the banking, insurance and other financial services industries contribute to systemic risk. We conduct our analysis with the recently developed by Adrian and Brunnermeier (2011) CoVaR measure of systemic risk using daily data for the period 2 January 2000 to 31 December 2012. Furthermore, we complement our analysis with the application of two tests, the significance and dominance tests, to provide a formal comparison of the relative contribution of either the domestic or foreign banks and/or each individual financial sector. Our main results provide evidence that in the U.S., the non-US banks contribute substantially to the systemic risk although most of the contribution comes from the U.S. banks. In the case of the UK we reveal that the banking industry contributes relatively more to systemic risk in periods of distress than the insurance industry or the other financial services industry. Furthermore, when we examine the estimated  $\Delta\text{CoVaR}$  measures we observe that for all sectors the contribution to systemic risk increased since 2008.

**Keywords:** systemic risk, CoVaR, quantile regressions, risk management, foreign banks

*Ihor Voloshyn, Mykyta Voloshyn*

### **Risk-Adjusted Pricing of Bank's Assets Based on Cash Flow matching Matrix**

To price bank's assets correctly, it is important to know cost of funds. But funding cost calculation is complicated due to the fact that banks fund long-term assets through short-term liabilities. As a result, assets with a given time to maturity are usually financed by several liabilities with different maturities. To calculate funding cost it needs to use cash flow matching matrix or funding matrix. In the paper, a new algorithm of filling of a two-dimensional funding matrix that is based on the golden rule of banking and RAROC-approach is proposed. It provides positive definiteness and uniqueness of the matrix. The matrix shows terms to maturity and amounts of liability cash flows which fund the asset cash flow with a given term to maturity. Examples of partially and fully filled matrices are presented. It is proposed an approach to risk-adjusted pricing that is based on this funding matrix and RAROC-approach adapted to cash flows. The developed approach to pricing integrates organically credit and liquidity risks. It takes into consideration expected credit losses and economic capital (unexpected credit losses) for all lifetime of asset cash flows and not one-year period traditionally used in RAROC.

**Keywords:** asset pricing, funding matrix, economic capital, cash flow at risk, risk-adjusted return on capital (RAROC), cash flow matching

## **Session ACR 1:**

*Steve Asikin*

### **Doing Business in Comprehensive Interactive Interdisciplinary Micro-Macro Economic International Accounting Architecture of Serial Well Known General-Great Theories**

For almost a hundred years, “*The General Theory of Employment, Interest and Money*” from Keynes had fantastically works in Macroeconomics, while three hundred years “*Dual Entries T-Account*” from Paccioli still dominates the Accounting, also another three hundred years of “*Supply-Demand’s Price vs Quantity Tables*” dominates the Microeconomics, then comes the decade’s “*Purchasing Power Parity*” dominates the inter currency economics.

In partial Macroeconomic, ideas of “*Fiscal Budget*” and “*T-Bills vs Monetary Bonds*” powerfully works, while “*Marketing*” reshaping Microeconomics and “*Compounding Rates*” influencing Accounting and “*Linear Regression*” be the Econometric statistical background.

Although they work impacting each other, people always get surprised when the problem goes to another discipline’s subject. Sure that they are interactively related, but how could we shortly put all them in a comprehensive model? Like the physics successfully combined the Rays, Electricity, Magnetism, Quantum, Mechanics altogether, so the economic could do the same for current international business’ economic model accurately:

$$Y=[C+S]=[C+I]=R=PQ=[1/K]\{[G-T]+[O-F][1+E]^N=[1/Z]([X-M]+L-[A/V]\{[1+V]^U-1\})$$

**Keywords:** Accurate Interdisciplinary Comprehensive Interactive Economics

*Mehmet Hasan Eken, Suleyman Kale, Huseyin Selimler*

### **The Evolution of Regulations in Banking: A Cycle Based Approach**

The question about the specialness of banks has been the center of debates amongst academicians and regulators over a long period of time as leading to extensive regulations for controlling and supervision of banks. The base regulations, though not legally compulsory, have been those which are developed and published by Basel Committee since mid-1970s. The main intention of these regulations is to assure globally sound and stable financial systems in individual countries that will eventually lead to a stable economy across the globe. However, the recent financial crisis has proved that the banking regulations have not served as intended and yet they are under major revisions again. In this paper it is intended to investigate the evolution of bank regulations with a particular attention to the scope of banking, capital adequacy and deposit insurance. It will be another focal point of this paper to draw attention to the existence of cycles in the processes of regulations that makes regulations to move between two extremities; tight and loose regulations. In this manuscript these issues are investigated with an analysis of related literature and with specific observation on the evolution of regulations in the United States of America (USA).

**Keywords:** bank regulations, capital adequacy, deposit insurance, basel committee.

*Natascha Jarolim, Carina Öppinger*

## **Effects & Determinants of the Reclassification Option according to the Amendments to IAS 39 & IFRS 7 – A Banking Sector Analysis on Reclassification Behaviour**

Fair value accounting is an essential feature of International Financial Reporting Standards. Even though this accounting method did not spark the financial crisis, it did enhance its impact. As a consequence of the financial crisis the IASB amended IAS 39 to override the fair value recognition. The amendments to IAS 39 & IFRS 7 permitted reclassifications of the categories Held for Trading and Available for Sale, some of which had explicitly been forbidden prior to the amendment. Critics argue that these modifications to IAS 39 made it possible to camouflage losses of hundreds of billions of euros. This paper examines the influence of this debatable amendment on the 2008 financial statements of banks which are included in the STOXX Europe TMI Banks Index. More than twothirds made use of the reclassification possibility. There are additional analyses regarding eg which reclassifications were made, the impact of the reclassifications on results or avoided losses. In the next step the reasons and the motivation for reclassification are analyzed. Furthermore, the value relevance of the reclassification option is analyzed. Finally, the period studied is extended on the years 2009 until 2011 to find out if the reclassification options of the amendment are still used after the peak of the financial crisis.

**Keywords:** banking sector, fair value, financial assets, financial crisis, reclassification, value relevance

## **Session ACR 2:**

*Rama Prasad Kanungo*

### **Pseudo Market Timing of Premium and Standard Listing IPOs**

The pseudo market timing of 231 IPOs is examined over a window of April 2010 to September 2012 from a panel of UK Initial Public Offerings (IPOs). IPOs are classified into premium listings and standard listings under the new FSA issuance regime. The study shows contrasting results for both the categories. The premium listing IPOs register an average -12.03% return over 1-24 post calendar months, while the standard listings yield an average 0.04% excess return. The premium listing IPOs indicate underperformance of between -0.43% to -5.89% over one calendar year. Whereas, the standard listing registers marginal excess positive return over the same post calendar month period. The supplementary analysis suggests that underpricing is significant in the premium listing but is not effective in the standard listing offers. Therefore, the results support to some extent that the timing effects are observable and can be explained by the pseudo market hypothesis.

**Keywords:** Pseudo Market timing, Standard and Premium listing, IPO aftermarket performance

*Noriaki Okamoto*

## **Distributed Cognition and Collective Commitment for Fair Value Accounting**

The expansion of subjective fair value accounting has been a central concern in recent accounting regulation. Moreover, the valuation of esoteric financial instruments has been criticized throughout the recent financial crisis. This study aims to analyze the increasingly complicated and specialized fair value accounting process.

This study performs three tasks. First, it considers a broad issue of the complex and professionalized valuation of financial instruments and identifies why fair value accounting matters in terms of financial innovation. Second, this study applies the Hutchins' distributed cognition perspective (1995a and 1995b) on extensive studies of naval navigational systems and commercial airliner cockpits to valuations of financial instruments that are complicated and distributed to multiple actors. To this end, this study relies on the theory of collective commitment (Tuomela, 2007) and knowledge sharing in professions (Styhre, 2011). More specifically, the study considers the view of Tuomela (2007) that group actions entail commitments from group members in order to construct a conceptual framework that emphasizes the collective commitment of professional actors in financial valuation. Following Styhre (2011), the usefulness of knowledge sharing among professionals is also highlighted even though the division of cognitive tasks is often associated with specialization and separation. Third, this study investigates actual practices by using several information sources to demonstrate that investment companies' actual valuation process is currently distributed beyond the company (or fund). This analysis pays particular attention to the beginning of the financial crisis, when information important for valuations was unevenly distributed among small number of organizations and individuals.

Ultimately, this study argues that knowledge sharing among professional actors play a crucial role in the valuation of complex financial instruments. This study contributes by drawing attention to the importance of and shedding new light on the collective commitments and knowledge sharing among market participants in a highly professionalized fair value accounting.

**Keywords** : Valuation of Financial Instruments, Fair Value Accounting, Distributed Cognition, Collective Commitment, Knowledge Sharing

*Christoph Eisl, Lisa Falschlunger, Peter Hofer, Michael Jungert*

## **Reporting Design – a systematic literature review**

Due to the fact, that the quality of decisions is directly linked to the availability and the perception of information, its selection and representation are of major importance in business communication. The purpose of this paper is to identify the current status quo of existing research in the field of information design in business reports (reporting design) in order to cluster empirical contributions and to generate new findings. A systematic literature review consisting of 48 international studies published between 2003 and 2013 was conducted. The extended cognitive fit model from Shaft and Vessey (2006) serves as a research framework. The analysis of its four main perspectives: "External Problem Representation", "Internal Problem Representation", "Problem-Solving Task" and "Mental Representation" revealed the following eight literature streams: (1) Tables versus Graphs, (2) Analyses of annual reports, (3) Reporting Guidelines, (4) Knowledge and Skills, (5) Task

Type, (6) Task Complexity, (7) Working Memory and Memory Affection, and (8) Information Overload. Based on this literature review a research agenda was developed.

**Keywords:** Reporting Design, Information Design, Information Perception, Visualization, Tables and Graphs, Information Overload

### **Session ACR 3:**

*Guillaume Andrieu, Alexander Peter Groh*

#### **Active hot hands investors, support quality and allocation of control rights in entrepreneurial finance**

We focus on the entrepreneur's trade-off between the benefits and disadvantages of active hot hands and passive investors with a two-staged model in which an innovative venture requires external equity for start-up and expansion financing. The entrepreneur can select among a passive long term and an active hot hands investors. The latter provides a higher support quality but has a shorter investment horizon than the long term investor. He does not want to or cannot provide the expansion capital and exits at the interim state. We search the NPV maximizing contract for the entrepreneur taking into account that the active hot hands investor might be subject to a moral hazard. He would try selling his claim to an uninformed outside investor as a claim in a successful venture even if it should be abandoned. The likelihood of success depends on the entrepreneur's effort which is boosted by the support quality of the investor, while the decision to abandon can be taken either by the financier or the entrepreneur, contingent on who controls the company. There exist several equilibria in this game and we show that entrepreneurs can trade-off several parameters when seeking external financing. Contingent on the allocation of the control rights, on the investor's support quality and investment horizon, on the success by chance, and on the venture's expected liquidation value either investor is the more appropriate.

**Keywords:** Allocation of Control Rights, Investment Horizon, Entrepreneurial Finance, Venture Capital, Business Angels, Crowd Funding

*K. Ceulemans, D. Van Caillie, I. Molderez, L. Van Liedekerke*

#### **A Management Control Perspective of Sustainability Reporting in Higher Education: In Search of a Holistic View**

Higher education institutions have been actively attempting to integrate sustainability in their curricula, research, operations, and outreach activities over the last decades. Despite the efforts undertaken, it is currently still challenging for their internal and external stakeholders to assess an institution's sustainability-related activities and the extent of their implementation within the different activities of higher education. Since sustainability reporting in higher education is currently still in its early stages, and because a holistic view of sustainability integration in higher education on a management level is often lacking, this paper researches possible contributions of management control to sustainability reporting and the sustainability integration process in higher education. The paper adheres to a management control approach by applying Simons' (1995) Levers of Control Framework to the field of sustainability in higher education, in search for a theoretical framework for reporting and integrating sustainability on a strategic level into higher education institutions.

The research stresses the need for a holistic approach and for further in-depth study into certain aspects of the control framework, i.e., practical implementation of vision and mission statements, the concept of materiality, staff development, diagnostic indicator development, and the study of stakeholder engagement processes in higher education.

**Keywords:** Management control; Levers of Control Framework; sustainability in higher education; sustainability reporting; Global Reporting Initiative.

*Susanne Leitner-Hanetseder, Markus Stockinger*

## **How does the elimination of the proportionate consolidation method for joint venture investments influence European companies?**

### **An empirical study of the impacts on selected financial statement figures and key financial ratios**

Following the adoption of IFRS 11 “Joint Arrangements”, IFRS reporting entities are facing new challenges regarding the classification and accounting of joint ventures. As a consequence of the short-term convergence project between the IASB and the FASB, the accounting option for joint ventures has been eliminated in the new standard in order to reduce the differences between these two major accounting principles. However, the abolition of the accounting option for joint ventures has affected financial statement figures and key financial ratios, as some European companies have to change from the proportionate consolidation method to the equity method. This paper examines how the transition from the proportionate consolidation method to the equity method has affected European companies. It describes the relevance and preferred accounting methods for joint venture investments and explores whether the effects on several financial statement figures and key financial ratios are material for European companies. Thus, this paper provides European companies as well as the users of financial statements – auditors, financial analysts, banks and investors – first evidence of these expected effects.

**Keywords:** IFRS 11, joint arrangements, joint ventures, proportionate consolidation method, equity accounting, equity method, materiality

## **Session SFC3:**

*Laurence Attuel-Mendes*

## **Crowdfunding Platforms for Microfinance: A new Way to Eradicate Poverty through the Craetion of a Global Hub?**

Microfinance is a broad category of services provided for poor people in developed and developing countries with the intention of reducing poverty, which fits perfectly with Millennium Development Goals targeted by the United Nations. New opportunities have raised, namely crowdfunding which recently emerged for small start-ups to raise money through the Internet. Crowdfunding is a new word, appeared in 2006, but the concept behind goes back to the ancient times. In a sense, this new medium could be a way for nations to cope with the global crisis. Indeed, it could efficiently complete the action of microfinance to eradicate extreme poverty. Moreover, the number of crowdfunding platforms (CFPs) increased of 300% in two years between 2009 and 2011 according to Massolution (2012), raising millions of dollars. It creates a huge potential for new solutions in microfinance.

Nevertheless, choosing among hundreds of CFPs can be tricky because they operate through many different business models, in varying legal forms, from a range of home country jurisdictions with varying regulatory and legal requirements, and with widely divergent business and social objectives.

This article aims at clearing what is crowdfunding and how it can be a lever for funding microfinance projects. A lot of resemblances link both sectors, in particular the figures about their double-digit growth. It was said that in 2012 2.8 billion dollars will be raised worldwide through crowdfunding (The Economist, June 16<sup>th</sup>, 2012), which is far from the 65 billion dollars circulating in microfinance but which make sense for a newcomer. These figures raise new hope for microfinance, where the need for funds is pervasive and where the market is huge.

*Ayşe Hayali, Selin Sarılı, Yusuf Dinç*

### **The Performance Analysis of Turkish Banking System: A Comparison between Islamic and Conventional Banking**

The Islamic finance and banking model has an increased global awareness particularly in last two decades. This global trend has similar impacts in Turkish economy. While the growth performance of Islamic banking in Turkey is remarkable in recent years, the main share is constituted of conventional banks. Market share of Islamic Banks which are named as participation banks increased from 2,5% to 6% in last ten years in Turkey. Moreover participation banks increased their assets, funds collected, profits and key performance ratios especially during the global financial crisis and aroused interest of society, regulators, investors and other third parties.

The purpose of this study is to measure the performances of conventional banks and Islamic banks during the 2006-2012 period based on Financial Ratio Analysis (FRA). The study focuses on the performance dimensions of Islamic banking in a modern economy. In addition, performances of the conventional banks are evaluated within their corresponding size categories. In this context conventional banks are divided into three peer groups according to their scale, namely small, medium and large. These groups are compared to each other based on FRA. Lastly the participation banks are compared to each group of conventional banks by the same method.

**Keywords:** Islamic banking, conventional banking, participation banks, Turkey, financial ratio analysis

*Katarina Rentkova, Daniela Majercakova*

### **Financing and Cooperation between the Public Administration and Non-Profit Sector in the Slovak Republic**

The research is focused on the analysis of management and financing of the public administration. The management and the financing of the public administration are largely influenced by the level of the partnership and the cooperation between different actors within the public affairs. The news represents the part of people's daily life; they deliver information about what is happening in the public sector. Nobody knows how to be hidden from the information about the local affairs, against the discussions about the development plans and the petitions against the plans of the public administration.

For this purpose, the analysis is carried out via media, billboards advertisement, internet, social networking sites, and we collect also the information on the street. Such information can be used, ignored or, by applying this information we can be able to participate actively in the public sector affairs. The local public administration, citizens, nonprofit organizations and entrepreneurs are essential actors in the public affairs. They dispose of the various formal and informal instruments that affect the local development. The citizen's right to participate in the conduct of public affairs is considered as one of the most important democratic principles. The execution of this right seems being easier in towns and cities where people live and represent much more their opinions and so they are more opened for the dialogue on the local problems when executing their rights .

Non-profit sector is a bridge between the citizens and public affairs because it is related to the public administration. Non-profit sector has the important role, especially in responsibility of citizenship development. It has the influence on the public administration and it is also the bridge between citizen relationships with public or governmental institutions.

**Keywords:** cooperation, local development, management, municipality, non-governmental organization, non-profit management, civil society, citizens

## **Session SFC 4:**

*Denis Frydrych, Adam J. Bock, Tony Kinder*

### **Entrepreneurial legitimacy in reward-based crowdfunding**

Research on non-traditional social-network driven venture capital streams, such as crowdfunding is gradually acquiring scholarly attention. However, our understanding about entrepreneurial actions and processes that facilitate ventures legitimacy creation and financial capital assembly through reward-based crowdfunding is relatively limited. Entrepreneurial legitimacy creation in crowdfunding has not yet been clearly described or explained. Therefore, the purpose of this paper is to advance our understanding of entrepreneurial legitimacy creation processes in reward-based crowdfunding. We employ a novel dataset collected from Kickstarter projects to identify current entrepreneurial activities in crowdfunding and draw preliminary conclusions about entrepreneurial legitimacy creation through reward-based crowdfunding. By doing so, we aim to contribute to theories of entrepreneurial legitimacy creation processes by studying entrepreneurial practices and its outcomes in the innovative context of online crowdfunding.

**Keywords:** crowdfunding, entrepreneurial legitimacy, resource assembly

*Thomas Scheuerle, Gunnar Glänzel*

### **'New ethos' with obstacles? – Empirical results on the barriers and potentials of impact investing from the perspective of investors and social entrepreneurs**

We provide empirical results from Germany on the barriers of the emerging financing form of impact investing that has been recently discussed as a tool to help social enterprises scale their social impact. While it potentially can provide capital that is more flexible than conventional social sector funding streams and allows for capacity building and product development, the expectations of financial returns additionally to social and ecological ones

is rather new and challenging for the social sector. As rather unfiltered point of contact between the institutional logics of the market and the social spheres, we found that there are several interrelated barriers on the side of the investors, the social enterprises and in the legal and normative ecosystem. Those barriers are related to the estimation of the financial risks, the valuation and demonstration social and ecological returns, personal relations and norms as well as capacities and infrastructure of the still nascent field. Strategies that cope with these barriers might lead to shifts and removals of the barriers. We discuss the implications of our results from an empirical and theoretical perspective and provide some conclusions on the limitations and potentials of impact investing – which can be seen as a social innovation itself – to contribute to the identification and strengthening of innovative solutions to social problems.

*Menschl, Barbara*

### **Money makes the world go around - a naturalistic fallacy executed by Humes Guillotine**

My philosophical approach to the question "what are the theoretical and ethical issues in economics?" is less likely to produce an answer than it is to produce a survey of the definitional and territorial difficulties and controversies in the History of Philosophy.

Though better known for his treatments in philosophy and history David Hume also made essential contributions to economic theories. His empirical argument against Mercantilism formed the basis for classical economics. In his clarification of monetary theory, in particular his clear exposition of the price-specie-flow mechanism that equilibrates national balances of payments and international price levels, Hume characteristically abandons the search for cause.

Hume made two other important contributions to economics. One is his firm conviction that economic freedom is a necessary condition for political freedom, later elaborated by Friedrich Hayek in his road to Serfdom.

The second is his assertion that "you cannot deduce ought from is" – that means, value judgments cannot be made on the basis of facts. The "is-ought problem" is also known as Hume's Law and Hume's Guillotine. A similar though distinct view is defended by G.E. Moore's open question argument intended to refute any identification of moral properties with natural properties. This so-called naturalistic fallacy is contrasted by the views of ethical naturalists.

The fact-value distinction is a concept that distinguishes what is (can be discovered by science, philosophy, or reason) and what ought to be (a judgment agreed to by consensus, or believed to be objectively morally binding). The terms positive and normative represent another way to express this, as do the terms descriptive and prescriptive, respectively. Positive statements make the implicit claim to facts, whereas normative statements make a claim based on values or norms. Positive economics is defined as the economics of "what is", whereas normative economics discusses "what ought to be".

The naturalistic fallacy is the idea that what is found in nature is good. It was e.g. the basis for Social Darwinism, the belief that helping the poor and sick would get in the way of evolution, which depends on the survival of the fittest.

*Nesma A. Heshmat, Sahar M. R. Mahran*

## **The Rational Behavior in the Egyptian Stock Market: Empirical Investigation of Herding Behavior**

This study will employ different testing methodologies proposed in the literature in order to investigate the existence of herding behavior in the Egyptian stock market under different market conditions (up-down markets, and high-low trading volume). The data set include daily data from 2006 to 2010 for all stocks listed in EGX100.

The importance of this study rise from fact that share prices are substantially affected by market participants' behavior . It has been linked to market inefficiencies which cannot be explained by the rational asset pricing model, such as high market volatility and market destabilization. Therefore, examining herding behavior helps investors to understand price formation in financial markets.

The results found no presence of herding behavior at the market level in any studied conditions. On the other side, at the sectors level this behavior appeared in only three sector out of fifteen in all studied conditions. These results are consistent with the results of many studies that indicate to rational behavior of investors and their risk averse in some stock market. Also these results may be due to the high proportion of institutional and foreign investors in the Egyptian stock market that previous studies agreed and described them more degree of rationality in investment behavior

**Keywords:** financial behavior, herding behavior, Egyptian stock market.

### **Session ORM4:**

*Nikolai Haring, Oliver Pichler*

## **Risk management in the context of value based management - Results of an empirical study in Austria**

The ensuing article discusses the significance of risk management in the context of value based management. The focus lies on an empirical study, which was performed in Austria, concerning the topic mentioned just above. This study examined, which instruments are being applied for the purpose of risk measurement, how risks are being integrated into value based management and if risk management itself can be regarded as a value generator. In order to gauge the latter, the ex ante- as well as the ex post-satisfaction of managers was included in the investigation.

**Keywords:** Austria, empirical study, risk management, value based management, interdependency between risk and value based management

*Wolfgang Aussenegg, Bernhard Kronfellner*

## **A Soft Bail-Out Concept to Reduce Contagion in Financial Systems**

Current financial systems are characterized by a high degree of interconnections and consequently a high amount of system risk. To reduce systemic risks, regulators have to understand their main drivers. We model the financial system with its interactions as stochastic processes and simulate the two main reasons for systemic risks – macroeconomic shocks and contagion – at the same time. Based on this modeling we propose the new concept of 'soft-bail-outs'. Compared to the current best practice of bail-out approaches,

soft-bail-outs tend to reduce the default probability of the whole financial system, lower bail-out costs, and decrease bail-out cost volatility.

**Keywords:** Systemic Risk, Contagion, Bail-Out, Financial Crisis, Financial Stability

*Olga Kolokolova, Achim Mattes*

### **Recovering Managerial Risk Taking from Daily Hedge Fund Returns: Incentives at Work?**

This paper tracks how hedge fund management's risk-taking varies across time and fund value. Analyzing a sample of 714 hedge funds that report daily returns to Bloomberg through 2001-2011, we show that managers significantly adjust fund risk in response to the complex incentive schemes faced. The measured risk adjustment is highly nonlinear, varies within a year, and accounts for risk persistence. No risk shifting is documented when fund values lie close to the high-water mark, which is consistent with the view that fund managers are not myopic and show little sensitivity to the nearest incentive option. In line with the theoretical prediction of multiperiod models, only fund values substantially below the high-water mark induce a significant risk increase. However, while extant theory predicts a risk increase at such low fund values throughout the whole year, we observe it only during the latter and not the earlier months of the year.

*Dehghani Pegah, Sapian Ros Zam Zam*

### **Sectoral Herding Behavior in the Aftermarket of Malaysian IPOs**

Malaysian IPO market is certainly characterized by substantial uncertainties due to pricing restraints applied by the Capital Issues Committee, fixed-price pricing mechanism and cognitive biases of Asian investors. Hence, all of these characteristics might induce investors to engage in herding behavior in the aftermarket of IPO. This study investigates investors' herding behavior in the IPO aftermarket from 2001 to 2011 using Christie and Huang (1995) method. The findings of this study show that for non-private placement category, a negative and insignificant  $\beta_1$  coefficient, as an indication of herding is reported for Technology sector. The herding behavior that is only constrained to technological firms during down market may be due to the risky nature of the new issues in the down market, than the uninformed characteristic of the individual investors. The findings of this study also show that for the private placement category, negative and insignificant coefficients of  $\beta_1$  and  $\beta_2$  are reported for Consumer Product and Technology sectors respectively. Since the negative coefficients are not limited to the down market, risky and uncertain shares, the results could be an indication of the herding of informed investors in the two mentioned sectors.

**Keywords:** behavioral finance, herding, behavioral (cognitive) decision theory, IPO aftermarket, private placement, non-private placement, cross-section dispersion of return, Bursa Malaysia.

## **Session ORM 6:**

*Sapian Ros Zam Zam, Auzairy Noor Azryani*

### **Foreign Equity Flows and Market Return Linkages: Evidence of Malaysian Stock Market**

This study examines the linkages between foreign equity flows and stock market returns of Bursa Malaysia. Specifically this paper intends to investigate whether past stock returns influence foreign equity flows or vice versa in short term time horizon. To explore the linkages between these two variables, this study employs bivariate vector autoregressive model. In addition, to determine the causal relation between stock returns and foreign equity flows, this study utilizes VAR Granger Causality test. The findings of this study provide evidence that foreign institutional investors are momentum traders while foreign retail investors are contrarian traders with regards to the return of Malaysian equity market. Another main finding is that domestic equity returns have an effect on fund flows of foreign retail investors and vice versa meanwhile there is positive causal relation between domestic equity returns and foreign institutional investors fund flows.

**Keywords:** foreign equity flows, stock market return, feedback trading strategies, momentum strategy, momentum and contrarian traders, foreign institutional and retail investors, VAR model, emerging stock market, bi-directional relationship, Bursa Malaysia.

*Kraus, Verena*

### **Enterprise Risk Management evolving in a new bank structure "Association of Volksbanks (Volksbanken Kreditinstitute-Verbund)": The path towards a bank-wide risk management between regulatory compliance and challenges of a newly formed institution**

Enterprise risk management or bank-wide risk management has emerged as an indispensable approach for managing the portfolio of risks which banks are facing today. Basically, the development of a comprehensive bank-wide risk management is already associated with diverse challenges. For the newly formed Association of Volksbank this is only magnified by increasing regulatory pressure and the reorganization of individual Austrian Volksbanks. Based on a case study and the use of existing literature, the author aims to identify the challenges towards a bank-wide risk management in the Association of Volksbanks arising from regulatory compliance and the newly formed structure. The author examines (1) the different perspectives of the new Association and (2) current regulatory requirements on a bank's risk management. The author finds 12 distinct challenges for the bank-wide risk management in the Association of Volksbanks. Challenge No. 1 „The development of a risk strategy applicable for the whole Association on a consolidated level and risk strategies for the individual Volksbanks“. Challenge No. 2 „The definition and communication of an institution-wide risk culture and risk policy principles“. Challenge No. 3 „The distribution of roles in risk management between the central organization (CO) and individual primary banks, standardized systems and processes as well as the arrangement of robust governance structures“. Challenge No. 4 „The definition of a risk appetite statement, which is then broken down to a target risk profile on a consolidated and individual level using an integrated limit system (risk capital allocation)“. Challenge No. 5 „The consideration of risk-return aspects (risk adjusted performance measures RAPM) in the risk appetite statement and risk capital allocation“. Challenge No. 6 „The risk identification on an individual

and consolidated level as well as the development of a common understanding of risk definitions“. Challenge No. 7 „The standardization of methods for the quantification of risks and coverage capital“. Challenge No. 8 „The consideration of inter-risk concentration and diversification effects at risk aggregation“. Challenge No. 9 „The establishment of an integrated reporting structure and action plans“. Challenge No. 10 „The development of a stress testing programme composed of a multi-layered approach from simple sensitivity analysis on single portfolios or specific types of risks over complex macroeconomic scenarios on a firm-wide basis to reverse-stress testing“. Challenge No. 11 „The application of the proportionality principle in terms of risk identification, methods of risk quantification, reporting or stress testing due to widely varying sizes of associated Volksbanks“. Challenge No. 12 „Consistent documentation of methods, systems and processes as well as an open communication to all associated institutions“.

*Monda, Barbara*

### **An Enterprise Risk Management Maturity Model developed through a Delphi procedure**

*Azlul Khalilah Zaghlol, Saadiah Mohamad*

### **Exchange Market Pressure in Malaysia**

This paper investigates into the exchange market behaviour pertaining to exchange market pressure and foreign exchange intervention. It focuses on a case study for Malaysia's experience that centers upon incidences of market pressures against the Malaysian ringgit. It is measured during the last three decades between 1976 and 2011 using the most widely adopted index called exchange market pressure (EMP). It begins with analyses on the EMP index series gathered by employing the popular augmented model-independent introduced by Eichengreen, Rose, and Wyplosz (1995, 1996). It continues with the examination of the role of foreign exchange intervention using the degree of intervention (DI) index. Although there are some concerns relating to the EMP measures, this study has found relatively plausible description to pressures on the Malaysian ringgit. Drawing on the EMP index, our main findings conclude that the ringgit did not experience sustained episodes of severe pressures in the market with the exception of the Asian crisis period in 1997-98. Although it has been affected by nasty speculative attacks, the Central Bank of Malaysia's interventions were fairly conducted which was timely and hence successful in mitigating exchange market pressure. Our results reveal the importance of maintaining and understanding the impact of exchange market pressures and the required interventions by monetary authorities.

**Keywords:** EMP, RER, DI, speculative attack, and foreign exchange market.