# *Book of Abstracts*

## Thursday 7th June, 2012

## Concurrent Sessions (A)

### *1. Financial regulation 1: Room G77*

**Session Chair:** John Wilson

**1. Regulatory Change and Capital Adjustment of Financial Institutions (FEBS-142)**

John Goddard, Bangor University, UK
Donal McKillop, Queen's University Belfast, UK
John O.S. Wilson, University of St. Andrews, UK

**Discussant:** Kristina Lutzenkirchen

**Abstract**
We investigate the determinants of US credit union capital-to-assets ratios, before and after the implementation of the current capital adequacy regulatory framework in 2000. Capitalization varies pro-cyclically, and credit unions classified as adequately capitalized or below followed a faster adjustment path than well capitalized credit unions. Credit unions managed their capital more actively following the change in regulation. During the recent financial crisis, large credit unions experienced a smaller reduction in capitalization, on average, than small credit unions. The z-score risk measure was a more reliable predictor of survival or non-survival during the crisis than several other financial-health indicators.

**2. Capital adequacy and systematic risk of asset securitizations (FEBS-228)**

Kristina Lutzenkirchen, Leibniz University of Hannover, Germany
Daniel Rosch, Leibniz University of Hannover, Germany
Harald Scheule, University of Technology, Sydney, Australia

**Discussant:** Rob Nijskens

**Abstract**
This paper develops a framework to measure the exposure to systematic risk of asset securitizations. The paper measures empirically whether current ratings-based rules for regulatory capital of securitization reflect this exposure. The analysis is based on US data for asset securitizations for the time period between 2000 and 2008. The paper finds that the shortfall of regulatory capital during the Global Financial Crisis is strongly related to ratings. The paper shows empirically that insufficient capital is allocated to tranches with the highest rating. The problem is exacerbated by the fact that these tranches account for the greatest part of the total issuance volumes. Furthermore, this paper is the first to calibrate risk weights which provide sufficient capital charges to cover the exposure during economic downturns.
These policy-relevant findings suggest a re-calibration of RBA risk weights and may contribute to the current efforts to re-establish sustainable securitization markets.

**3. A dynamic analysis of bank bailouts and constructive ambiguity (FEBS-240)**

Sylvester Eijffinger, CentER and European Banking Center, Tilburg University and CEPR
Rob Nijskens, CentER and European Banking Center, Tilburg University

**Discussant:** John Wilson

**Abstract**

Bailout expectations have led banks to behave imprudently, holding too little capital and relying too much on short term funding to finance long term investments. This paper presents a model to rationalize a constructive ambiguity approach to liquidity assistance as a solution to forbearance. Faced with a bank that chooses capital and liquidity, the institution providing liquidity assistance can commit to a mixed strategy: never bailing out is too costly and therefore not credible, while always bailing out causes moral hazard. In equilibrium, the bank chooses above minimum capital and liquidity, unless either capital costs or the opportunity cost of liquidity are too high. We also find that the probability of a bailout is higher for a regulator more concerned about bank failure, and when the bailout penalty for the bank is higher; this suggests that forbearance is not entirely eliminated by adopting ambiguity.

## *2. Commodities - 1: Room G75*

**Session Chair:** Roderick McCrorie

**1. An investigation into the correct specification for volatility in the shipping freight rate markets (FEBS-76)**

Nikos Nomikos, Cass Business School, City University London, UK
Amir Alizadeh, Cass Business School, City University London, UK
Stefan Van Dellen, Westminster University, UK

**Discussant:** Carlos González-Pedraz

**Abstract**

The research aim has been to further investigate the structure of freight rate volatility. This paper examines the use of the FIGARCH, as well as other GARCH-type models, namely the standard GARCH and the IGARCH models. The best model was then selected on the basis of their Value-at-Risk. The models were estimated and then tested using weekly spot freight rate data, between 6 January 1989 and 29 December 2006, for VLCC, Suezmax and Aframax tankers, as well as for Capesize and Panamax bulk-carriers.

**2. Portfolio selection with commodities under conditional asymmetric dependence and skew preferences (FEBS-78)**

Carlos González-Pedraz, University Carlos III of Madrid, Spain
Manuel Moreno, University Castilla of Mancha, Spain
Juan Ignacio Peña, University Carlos III of Madrid, Spain

**Discussant:** Roderick McCrorie

**Abstract**
This article solves the portfolio selection problem for an investor with three-moment preferences, when returns follow a conditional asymmetric *t* copula with skewed and fattailed marginal distributions. The model can capture the impact on optimal portfolios of: time-varying investment opportunities, state dependence in the returns' correlations, and tail dependence. In the empirical test with oil and gold futures and equity from 1990 to 2010, the portfolios achieve better performance measures than they would under conventional alternatives. The factors explaining the significant differences among methods are the univariate process specification, the dynamic dependence, and the presence of tail and asymmetric dependence.

**3. The recent behavior of commodity prices: fundamentals, speculative bubbles and relation to the global economic environment (FEBS-79)**

Isabel Figuerola-Ferretti, University Carlos III of Madrid, Spain
Christopher L. Gilbert, University Studies of Trento, Italy
Roderick McCrorie, School of Economics and Finance, Scotland, UK

**Discussant:** Stefan Van Dellen

**Abstract**
This paper tests for the existence of speculative bubbles in five key commodities – crude oil, gold, silver, aluminum and copper – over the last decade or so, focusing on possible bubble characteristics around the time of the financial crisis. We utilize the new methodology of Phillips, Wu and Yu (*International Economic Review*, 52 (2011), 210-226), and Phillips and Yu (*Quantitative Economics*, 2 (2011), 455-491) that allows for date-stamping the origination and collapse of bubbles, but in a form where critical values are made robust to allow for possibly different data spans and sampling frequencies. We find evidence of bubble behavior in the copper, gold and silver markets in the first half of 2006. Results are less conclusive for the aluminum market. We fail to find convincing evidence for a 2008 crude oil bubble.

## *3. Exchange rates - 1: Room F52-B*

**Session Chair:** Philippe Dupuy

**1. The Crash Risk Premia of Efficient Carry Trades (FEBS-157)**

Philippe Dupuy, Grenoble Ecole de Management, France

**Discussant:** Nikolaos Voukelatos

**Abstract**
Carry trade strategies in which investors sell forward currencies that are at a forward premium and buy forward currencies that are at a forward discount are, on average, profitable. According to the uncovered interest rate parity they should not. A risk premia story might justify the high returns to the carry trades. In this paper we study the relationship between the cross section of excess returns of portfolios invested in carry trade positions and a renewed set of candidate risk factors. Asset pricing theory applies to the currency market:

those currencies that have larger loading on risk, especially crash risk, o_er a larger mean return in compensation. Also, we show that crash risk as measured by quantile based statistics such as VaR or CVaR prices better the return to the carry trades than moments based factors such as standard deviation or skewness. This result holds at the portfolio level and at the single currency level. As a result, we show that carry trade strategies that take account of the dispersion of interest rates dominate strategies in which bets are normalized.

## 2. Foreign Exchange Implied Variance and the Forward Premium Puzzle (FEBS-175)

Efthymios Pavlidis, Lancaster University, Lancaster, UK
Mark B. Shackleton, Lancaster University, Lancaster, UK
Nikolaos Voukelatos, University of Kent, Canterbury, UK

**Discussant:** Evgenia Passari

**Abstract**
We explore the hypothesis that Jensen's Inequality is related to the magnitude of the commonly observed difference between forward rates and the subsequent realizations of spot exchange rates. Compared to the standard specification, it is shown that using the option-implied variance of the spot rate as an additional regressor in the unbiased forward specification results in slope coefficients that are closer to their theoretical value of unity. Furthermore, implied variance is found to have a higher explanatory power over future spot returns compared to that of the forward premium. Our empirical findings are consistent with the hypothesis that the time-varying risk-premium documented in previous studies contains a Jensen's term of the future spot variance.

## 3. In Quest for a Robust Model of the Exchange Rate: A Collective Approach (FEBS-5)

Evgenia Passari, Cass Business School, City University London, UK

**Discussant:** Philippe Dupuy

**Abstract**
This paper assesses the predictive ability of a comprehensive set of empirical models of exchange rates, in addition to a standard technical trading strategy, on monthly exchange-rate returns for four developed and four emerging countries across different horizons. I implement a rolling window approach to the estimation and forecasting of the models, and construct an encompassing forecast. I also assess the economic value of the out-of-sample forecasting power of the empirical models using a simple dynamic allocation strategy, and find three key results: (1) the Taylor rule model consistently outperforms, economically and statistically, the interest rate parity, purchasing power parity, and monetary fundamental models as well as the technical trading strategy. (2) The technical rule has superior predictive power over the random walk benchmark. (3) There appears to be statistical gains from an unrestricted combined forecasting model. These results are robust across countries and horizons.

## *4. Mergers & Acquisitions - 1: Room G74*

**Session Chair:** Andrea Beltratti

### 1. Is M&A different during a crisis? Evidence from the European banking sector(FEBS-9)

Andrea Beltratti, Bocconi University, Italy
Giovanna Paladino, Intesa Sanpaolo, Italy

**Discussant:** Luca Viarengo

**Abstract**
The financial crisis has affected the landscape of the banking sector around the world. We use a sample of transactions taking place in Europe in 2007-2010 to study the acquirer's stock price market reaction to announcements and completions of acquisitions. We find that there are no significant abnormal returns around the announcement of an acquisition while there are positive abnormal returns at completions. We study the cross-sectional determinants of abnormal returns and find that announcement returns are mainly explained by the acquirer bank characteristics, while completion returns depend on opacity of the target and in large part on the drop in volatility associated with a reduction of uncertainty.

### 2. Earnouts: the real value of disagreement in mergers and acquisitions (FEBS-53)

Anna Battauz, Bocconi University, Italy
Stefano Gatti, Bocconi University, Italy
Luca Viarengo, Bocconi University, Italy

**Discussant:** Konstantinos N. Baltas

**Abstract**
Earnouts are contracts that link part of the payment of an acquisition to the future performances of the acquired company. Indeed, they are real options on the future value of the target, and should be valued as such. Unlike the cases of real options most commonly studied, however, they are affected by two peculiar issues that have an impact on their value: counterparty risk and tha fact that the underlying parameter is not measurable with certainty, which leads to litigation risk. These features are not taken into account by the previous literature. We present an evaluation model that includes these issues. Our findings indicate that counterparty risk and litigation risk may dramatically reduce the value of these contracts.

### 3. Liquidity creation through M&As. A viable solution for the Greek banking system? Evidence from a stress test under a VAR methodology (FEBS-118)

Konstantinos N. Baltas, Queen Mary University of London, UK
George Kapetanios, Queen Mary University of London, UK

**Discussant:** Andrea Beltratti

**Abstract**
The recent financial turmoil has distort the stability of the Greek banking sector and it's role as a financial intermediary. According to the deposit insurance hypothesis banks with higher levels of deposit insurance create higher level of liquidity around mergers. Employing new measures of liquidity creation and using a sample of all commercial banks for the period 1993-2010, we investigate whether potential M&As can be proved vital in alleviating the terms of the memorandum between Greece and the so-called Troika, enhancing the real economy, households and firms, with the creation of additional credit channels in the spectrum of a severe country default risk. We provide a comparative and an evaluating analysis of the "balance sheet forecasting method" with crucial implications regarding the trade of between share-holders, personal gains and society's economic prosperity, that triggers M&A activity. Lastly, we quote a stress test scenario in the spectrum of a vector autoregressive (VAR) framework, in order to examine thoroughly, the robustness of the Greek banking sector on liquidity creation due to adverse macroeconomic conditions, in line with recently implemented regulations on banking supervision under the Basel III Accord.

## *5. Stress testing : Room F52-A*

**Session Chair:** Max Gillman

### 1. Deriving the Taylor Principle when the Central Bank Supplies Money (FEBS-154)

Max Gillman, Cardiff Business School, UK
Michal Kejak, CERGE-EI
Ceri Davies, Cardiff Business School, UK

**Discussant:** Simon Dubecq

**Abstract**
The paper presents a human-capital-based endogenous growth, cash-in-advance economy with endogenous velocity where exchange credit is produced in a decentralized banking sector, and money supplied stochastically by the central bank. From this it derives an exact functional form for a general equilibrium 'Taylor rule'. The inflation coefficient is always greater than one when the velocity of money exceeds one; velocity growth enters the equilibrium condition as a separate variable. The paper then successfully estimates the magnitude of the coefficient on inflation from 1000 samples of Monte Carlo simulated data. This shows it is spurious to conclude that the central bank has a reaction function with a 'tough' inflation policy in a 'Taylor principle' sense, since instead it is only meeting fiscal needs through the inflation tax. The paper also estimates several deliberately misspecified models to show how an inflation coefficient of less than one can result from model misspecification. An inflation coefficient greater than one holds theoretically along the balanced growth path equilibrium, making it a sharply robust principle based on the economy's underlying structural parameters as consistent with the Lucas (1976) re- search agenda for policy rule formation.

**2. Shock on Variable or Shock on Distribution with Application to Stress-Tests (FEBS-172)**

Simon Dubecq, Bank of France, and CREST
C., Gourieroux, CREST and University of Toronto

**Discussant:** Max Gillman

**Abstract**
The shocks on a stochastic system can be defined by means of either distribution, or variable. We relate these approaches and provide the link between the global and local effects of both types of shocks. These methodologies are used to perform stress-tests on the portfolio of financial institutions by means of shocks on systematic factors, for which we distinguish the cases of crystallized and optimally updated portfolios. The approach is illustrated by an analysis of the risk of sovereign bonds of the Eurozone.

**3. A new method to estimate the risk of financial intermediaries(FEBS-166)**

Manthos D. Delis, Cass Business School, City University of London, UK
Efthymios G. Tsionas, Athens University of Economics and Business, Greece

**Discussant:** Dilek Bulbul

**Abstract**
In this paper we reconsider the formal estimation of the risk of financial intermediaries. Risk is modeled as the variability of the profit function of a representative intermediary, here a bank, as formally considered in finance theory. In turn, banking theory suggests that risk is determined simultaneously with profits and other bank- and industry-level characteristics that cannot be considered predetermined when profit-maximizing decisions of financial institutions are to be made. Thus, risk is endogenous. We estimate the new model on a panel of US banks, spanning the period 1985q1-2010q2. The findings suggest that risk was fairly stable up to 2001 and accelerated quickly thereafter and up to 2007. Indices of bank risk commonly used in the literature do not capture this trend and/or the scale of the increase.

## *6. Credit default swaps: Room F63*

**Session Chair:** Paola Zerilli

**1. The time varying properties of credit and liquidity components of CDS spreads (FEBS-33)**

Filippo Coro, ICMA Centre, University of Reading, UK
Alfonso Dufour, ICMA Centre, University of Reading, UK
Simone Varotto, ICMA Centre, University of Reading, UK

**Discussant:** Nadia Benbouzid

**Abstract**
This paper investigates the role of credit and liquidity factors in explaining corporate CDS price changes during normal and crisis periods. We find that liquidity risk is more important than credit risk regardless of market conditions. Moreover, in the period prior to the recent "Great Recession" credit risk plays no role in explaining CDS price changes. The dominance of liquidity effects casts serious doubts on the relevance of CDS price changes as an indicator of default risk dynamics. Our results show how multiple liquidity factors including firm specific and aggregate liquidity proxies as well as an asymmetric information measure are critical determinants of CDS price variations. In particular, the impact of informed traders on the CDS price increases when markets are characterised by higher uncertainty, which supports concerns of insider trading during the crisis.

**2. The impact of the recent financial crisis on Eurozone sovereign credit default swap spreads (FEBS-60)**

Christopher F Baum, Boston College & DIW Berlin
Paola Zerilli, University of York, UK

**Discussant:** Alfonso Dufour

**Abstract**
We evaluate the effects of the recent financial crisis on an important class of debt instruments: sovereign issues of Eurozone borrowers. Challenges to the stability of the Euro from threats of default by several Eurozone countries have raised serious concerns and led to unprecedented policy responses. We propose to study these effects by evaluating the risk premia embedded in sovereign credit default swap (CDS) spreads during periods of financial turmoil. These instruments provide insurance to their buyers, payable in the event of default. Their spreads over riskless instruments and spreads within the Eurozone CDS universe provide direct indications of market participants' valuation of risk associated with the underlying sovereign debt.

**3. Determinants of Credit Default Swap Spread in the banking sector: The role of house prices in driving credit risk in the UK (FEBS-61)**

Nadia Benbouzid, Queen Mary University of London, UK
Sushanta Mallick, Queen Mary University of London, UK

**Discussant:** Paola Zerilli

**Abstract**
The recent financial crisis that started from a housing bubble caused a dramatic increase in default risk. This paper investigates the determinants of the CDS spread in the UK banking sector considering the role of house price in driving credit risk, while taking into the standard financial determinants namely the yield spread, TED (difference between the three month UK T-Bill and the three month LIBOR) uncovering the liquidity channel, and the FTSE 100 index. Using corporate UK CDS spread related to the banking sector, covering the period from January 2004 to April 2011, we employ two different methods to analyse the long run relationship: the Johansen's method and the Dynamic Stock-Watson's (OLS) approach, and a

structural VAR model to investigate the short run effects. We found strong evidence that the house price dynamics has been the key driving factor behind the recent collapse of corporate CDS market, showing a negative relationship. Furthermore, there is a negative relationship between the CDS spread and the yield spread. As short term interest rate increases, investors will demand higher yield as a compensation for bearing extra risk, influencing credit risk. In addition, the FTSE 100 index is positive and significant under DOLS method, implying that as the stock price increases, both banks' capital and its borrowing capacity rises, resulting in a higher credit risk. Furthermore, liquidity (TED) was found to be positive and significant in the long run under the DOLS method, and in the short run in the structural VAR model. Therefore, as liquidity goes up, banks tend to lend more to less credit-worthy (subprime) borrowers; thus increasing credit risk and the overall CDS spread in the banking sector.

**10:45 – 11:00**

**Coffee break**

**11:00 – 12:00**

**Plenary Session A: Invited Speech by Prof. Lucio Sarno**
**Title: "Currency Fluctuations and Order Flow"**

**Abstract**
We study the information content of order flow for future exchange rate movements based on a unique dataset covering a broad cross-section of currency pairs and distinguishing key customer types in currency markets. We sort currencies into portfolios based on lagged order flows, and find economically and statistically significant excess returns of up to 15% per annum for a strategy going long in currencies with recent buying pressure and going short in currencies with recent selling pressure. However, there is substantial heterogeneity across customer types: trading by corporate and private clients is generally not informative and tends to generate negative payoffs. Order flow by asset managers generates the largest portfolio return and forecasts permanent exchange rate changes. Flows by hedge funds also generate a positive portfolio return but only forecast transitory exchange rate movements. Furthermore, currency trading by hedge funds is significantly exposed to default, liquidity, and global volatility risk, which explains part of the forecast power of hedge fund flows for future currency returns.

**12:00 – 13:00**

**Lunch**

**13:00 – 14:30**

## Concurrent Sessions (B)

### *7. Bank deposits and liquidity: Room F52-B*

**Session Chair:** Robert S. Hudson

**1. Customer Inertia, Decision Avoidance and Deposit Interest Rate Setting (FEBS-71)**

Robert D. J. Anderson , Newcastle University Business School, UK
John K. Ashton, Bangor University, UK
Robert S. Hudson, Newcastle University, UK

**Discussant:** Zuzana Fungáčová

**Abstract**
This study examines why banks offer multiple and similar deposit services with different interest rates. This question is examined both theoretically and empirically by considering the influence of discounting the costs and benefits of switching decision by depositors. The model examines if the number of deposit services and the levels of interest rates are influenced by banks awareness of depositors time inconsistencies in decision making. It is predicted banks aware of this bias can enhance profits by introducing duplicate deposit accounts with competitive interest rates for new customers and lowering interest rates on existing deposit accounts for active customers which are reluctant to switch deposit services. These predictions are tested empirically; high levels of duplicate accounts are reported, underperforming deposit accounts appear commonplace and the age or length of time a deposit account has been offered for investment is a significant determinant of the competitiveness of deposit interest rates.

**2. Bank Capital, Liquidity Creation and Deposit Insurance (FEBS-98)**

Zuzana Fungáčová, Bank of Finland, Finland
Laurent Weill, LARGE, University of Strasbourg & EM Strasbourg Business School, France
Mingming Zhou, University of Colorado, USA

**Discussant:** Krzysztof Jackowicz

**Abstract**
This paper examines how the introduction of deposit insurance influences the relationship between bank capital and liquidity creation. As discussed by Berger and Bouwman (2009), there are two competing hypotheses on this relationship which can be influenced by the presence of deposit insurance. The introduction of a deposit insurance scheme in an emerging market, Russia, provides a natural experiment to empirically investigate this issue. We use the difference-in-difference approach on a large dataset of all Russian banks. Our findings suggest that the introduction of the deposit insurance scheme has different effects on the relationship between capital and bank liquidity creation across different types of banks. It is those banks characterized by relatively high household deposit ratios that are most affected by the introduction of deposit insurance program. For these banks, deposit insurance reduces the impact of capital on liquidity creation. These findings have important policy implications as they suggest that deposit insurance and capital requirements should not be considered separately by bank regulators.

3. **How did depositors react to the recent crisis? Evidence from the Central European banking industry (FEBS-205)**

Iftekhar Hasan, Fordham University, USA
Krzysztof Jackowicz, Kozminski University, Warsaw
Oskar Kowalewski, Warsaw School of Economics, Warsaw
Łukasz Kozłowski, BGŻ SA, Warsaw

**Discussant:** Robert S. Hudson

**Abstract**
The Central European banking industry is dominated by foreign-owned banks. During the recent crisis, for the first time since the transition to a post-Communist era, foreign parent companies were frequently in worse financial conditions than their subsidiaries. This situation created a unique opportunity to study new aspects of depositor discipline. In this article, we investigate whether depositors flexibly accommodated to the changing sources of risk. We also analyse the informational foundations of depositors' decisions. Using a new and comprehensive data set, we find that in Central European countries, the recent crisis did not change the sensitivity of deposit growth rates to accounting risk measures. Additionally, we establish that depositors' actions are much more strongly influenced by press rumours concerning parent companies than by fundamentals and that public aid announcements are interpreted primarily as confirmation of a parent company's financial distress. Our results have policy implications and illustrate the importance of reputational capital during periods of crisis.

## *8. Commodities - 2: Room G75*

**Session Chair:** Constantin Mellios

1. **Optimal dynamic demands in commodity futures markets with a stochastic convenience yield (FEBS-106)**

Constantin Mellios, University of Paris 1 Panthéon-Sorbonne, France
Pierre Six, Rouen Business School, France

**Discussant:** Loretta Mastroeni

**Abstract**
The main objective of this paper is to address, in an intertemporal framework, the issue of using storable commodity futures as vehicles for hedging purposes when, in particular, the convenience yield as well as the market prices of risk evolve randomly over time. We derive optimal demands of an unconstrained investor endowed with a CRRA utility function. We suggest various decompositions of this demand allowing an investor to assess the impact of each and every state variable on optimal demands and to specify the role played by each risky asset. In particular, the convenience yield has a strong impact on the speculation and hedging components and its orthogonal risk is hedged by the futures contract. Moreover, optimal demands can be computed in a simple recursive way, which, combined with quasi-analytical solutions, may facilitate the use of our model for practical considerations.

2. **Evaluating the Operational Risk in the Transition from an Infrastructure Asset to a Commodity: the case of Cloud Storage (FEBS-216)**

Loretta Mastroeni, Department of Economics, University of Rome, Italy
Maurizio Naldi, University of Rome at Tor Vergata, Italy

**Discussant:** Xiaoye Jin

**Abstract**
The usage of third party storage facilities, known as cloud storage, is going to be a major commodity in information systems management. However, the transition from a privately owned infrastructure to a leased one is not always profitable. The economical risk associated to the transition is analysed through the Value-at-Risk indicator.

3. **The impact of oil price fluctuations on Greater China stock markets: Implication for portfolio management (FEBS-229)**

Xiaoye Jin, Cass Business School, City University London, UK
Sharon Xiaowen Lin, Cass Business School, City University London, UK
Michael Tamvakis, Cass Business School, City University London, UK

**Discussant:** Constantin Mellios

**Abstract**
Crude oil plays a pivotal role in modern economies. Stock markets, as a barometer of the state of our economy, are unlikely to escape the influence from oil market fluctuations. We investigate how and to what extent the information embedded in oil-price shocks is transmitted into stock markets in Greater China (China, Hong Kong and Taiwan). The focus of the research is on the volatility transmission between stock markets and oil markets within this region. We find that there is evidence of significant volatility transmission between oil and stock markets in Greater China at the sector-level, and that the intensity of volatility transmission varies across the stock sectors. These results imply that investors need to take into account additional source of uncertainty resulting from oil markets when investing in stock markets and should perhaps consider to incorporate oil assets into their portfolio designs to mitigate their investment risk. Our results are based on the VAR-GARCH framework with the DCC structure. The hedge effectiveness index indicates that this structure provides superior diversification benefits in terms of risk reduction when compared to the VAR-GARCH alternatives such as the CCC structure or the BEKK-structure.

## *9. Credit ratings: Room G74*

**Session Chair:** Isabel Figuerola-Ferretti

1. **Are size and location of banks related to their credit ratings? New evidence (FEBS-34)**

Eric van Loon, Bank of Nederlands, The Netherlands
Jakob de Haan, Bank of Nederlands - University of Groningen, The Netherlands and CESifo, Munich, Germany

**Discussant:** Michael Doumpos

**Abstract**
This paper examines whether credit ratings of banks are related to their size and location (i.e. inside or outside the euro area). We estimate a multilevel regression model for banks' credit ratings using data retrieved from Bankscope in 2011 and find that there is a hump-shaped relationship between size and the credit ratings of both Fitch and Moody's, suggesting that both credit rating agencies incorporate that a bank may become too-big-to-fail and too-big-to-be-rescued in their ratings. Our results also suggest that, controlling for other factors, banks located in euro area member countries receive a higher credit rating from Fitch than banks located outside the euro area.

## 2. Pairing Market Risk and Credit Risk (FEBS-257)

Isabel Figuerola-Ferretti, Business Department, Carlos III University, Spain
Ioannis Paraskevopoulos, Quantitative Development, Treasury, Bankia

**Discussant:** Andrea Resti

**Abstract**
This paper uses an exclusive proprietary data set of European Credit Derivatives and VIX markets, covering a sample of 5 to 7 years, to study the nature of the link between credit risk and market risk, widely acknowledged in the academic literature. This allows us to establish cointegration in the VIX and iTraxx/CDS markets in a framework where arbitrageurs exploit temporary equilibrium mispricing following pairs strategies. Expected profits, represented via VECM parameters, are positive in all strategies considered. Markets are integrated in that price discovery on both sides of the Atlantic reflect the same underlying information with predominant price leadership of the VIX market over the European CDS market.

## 3. Combining market and accounting-based models for credit risk rating (FEBS-270)

Dimitrios Niklis, Technical University of Crete, Greece
Michael Doumpos, Technical University of Crete, Greece
Kostas Andriosopoulos, ESCP Europe Business School, UK
Constantin Zopounidis, Technical University of Crete, Greece

**Discussant:** Chrysovalantis Gaganis

**Abstract**
Credit risk rating is a very important issue for both banks and companies, especially in periods of economic recession. There are many different approaches and methods which have been developed over the years. The aim of this paper is to create a credit risk rating model combining the option-based approach of Merton with an accounting-based approach which uses financial ratios. While the model of Merton is well-suited for listed firms, the proposed approach illustrates who it can also be useful for non-listed ones. In particular, the option-based model is implemented to a group of listed firms and its results are applied in order to develop a model for credit risk evaluation of non-listed firms, using financial ratios. This approach is tested on a sample of Greek firms and the results are compared to other already established models.

**4. Supervisors as Information Producers: Do Stress Tests Reduce Bank Opaqueness (FEBS-38)**

Giovanni Petrella, University Cattolica of Sacro Cuore, UK
Andrea Resti, Bocconi University, UK

**Discussant:** Isabel Figuerola-Ferretti

**Abstract**
Supervisory stress tests assess the impact of an adverse macroeconomic scenario on the profitability and capitalisation of a large number of banks. The results of such stress test exercises have recently been disclosed to the public in an attempt to restore confidence and to curb bank opaqueness by helping investors distinguish between sound and fragile institutions. In an unprecedented effort for transparency, the 2011 European Union stress test lead to the release of some 3,400 data points for each of the 90 participating banks. This makes it an ideal setting to investigate a number of hypotheses on the information role of the stress tests.
In this paper we examine the 2011 European stress test exercise to assess whether and how it affected bank stock prices. Our event study analysis shows that the test's results were considered relevant by investors. The market did not simply look at the detailed historical data which was released after the tests, but also attached considerable importance to variables measuring each bank's vulnerability to the simulated downturn scenario. The latter include proxies for liquidity risk and model risk. Information on sovereign debt holdings, while affecting market reaction on a univariate basis, is not statistically significant in a multivariate setting. We also find that the market is not able to anticipate the test results and this is consistent with the idea of greater bank opaqueness prior to the disclosure of the stress test results. Overall, our analysis shows that stress tests produce valuable information for market participants and can play a role in mitigating bank opacity.

## *10. Firm performance : Room F52-A*

**Session Chair:** P. Kalantonis

**1. Are Family Firms Better Performers during Financial Crisis? (FEBS-179)**

Haoyong Zhou, Department of Economics, Copenhagen Business School, Denmark

**Discussant:** Fotios Pasiouras

**Abstract**
This paper examines whether family firms are better performers during the global financial crisis. Using a dataset covering firms from S&P 500 (US), FTSE100 (UK), DAX 30 (Germany), CAC 40 (France), and FTSE MIB 40 (Italy) during the period 2006-2010, I find that broadly defined family firms do not outperform non-family firms during the crisis. However, family firms with founder presence (as CEO, a board member or a significant blockholder) outperform non-family firms by 18 percent in Operating Return on Assets (OROA). Tobin's Q of founder firms, by contrast, does not exhibit any difference. I interpret the attenuation of the market value premium of founder firms as the result of high volatility of stock prices and investors' overreaction during the crisis (Veronesi, 1999; Glode *et al.*, 2010). Further research shows that during the global financial crisis, founder firms incur less administrative costs than non-family firms. Founder firms also invest less and enjoy better

access to the credit market. My analysis suggests that the superior performance of founder firms is largely caused by less incentive to invest in risky projects with high likelihood of failure in order to boost earnings during the crisis. Furthermore, my results reveal that founder firms bear the least agency costs, and that Tobin's Q may not be the most appropriate measure of corporate performance during the financial crisis.

**2. Characteristics of the supervisory authorities and bank efficiency (FEBS-266)**

Chrysovalantis Gaganis, University of Crete, Greece
Fotios Pasiouras, Technical University of Crete, Greece

**Discussant:** P. Kalantonis

**3. 2-tier vs 3-tier Loan Guarantee schemes: which is the most successful? Empirical findings from an in depth analysis of the Italian System (FEBS-249)**

Roberta Artusio
Roberto Quaglia, ESCP Europe Business School, Italy
Davide Sola, ESCP Europe Business School, UK
Khaled Soufani, John Molson School of Business, Montreal, Canada
Mia Zalica, University of Torino, Italy

**Discussant:** Zeno Rotondi

**Abstract**

A large body of literature has shown that SMEs may find it difficult to gain access to the credit market. The reason relies on market imperfections, such as informational asymmetries, that can lead to small firms being credit rationed. Loan Guarantee Systems provide a guarantee for SMEs in order to encourage banks and other financial institutions to lend money when small firms are unable to raise conventional finance because of a lack of security or established track record. In the main European Countries two different models of Loan Guarantee Schemes prevail: the 2-ter model (banks and Mutual Guarantee Institutions) and the 3-tier model (banks, Mutual Guarantee Institutions and a Central Counter Guarantee Fund). The authors intended to test whether one of the two models is more successful than the other one. Italy has been chosen as a case study, since in the Italian Loan Guarantee System the two models coexist. A successful Loan Guarantee System is a system that minimizes the amount of capital requirement for banks and Mutual Guarantee Institutions while maximizing the amount of guarantees/lendings available for SMEs. The results of our analysis show that one of the two models seems to be more effective and more efficient than the other one, in other words one of the two models appears to be more successful.

## *11. Modelling – 1 : Room G77*

**Session Chair:** Gunter Meissner

**1. Volatility Modelling with Jumps: An Empirical Approach (FEBS-21)**

Angela Black, University of Aberdeen, UK
Jing Chen, Swansea University, UK
Oleg Gustap, University of Aberdeen, UK
Julian Williams, University of Aberdeen, UK

**Discussant:** Andrea Carnelli

**Abstract**
This paper presents a practical approach for calibrating jump models using historical data for the underlying instrument and forward looking information from the derivatives market. Our investigations reveal that the AR-Jump model outperforms most other models when applied to historical data. Additionally, a test data-set of options contracts indicates that, during 2008, jump models are most appropriate in calibrating the volatility forecasts to the actual prices of options contracts. A distinctive finding is that, in general, the best fitting model for historical data is not necessarily the model that best calibrates to the forward looking options data.

**2. Asset modeling, stochastic volatility and stochastic correlation (FEBS-50)**

Xiang Lu, University of Hawaii, USA
Gunter Meissner, University of Hawaii, USA

**Discussant:** Angela Black

**Abstract**
Financial correlation modeling is challenging, since financial correlations behave volatile and erratic. However, we build a simple stochastic volatility – stochastic correlation model, which fits empirical correlation properties well. In addition, the modeling of asset prices and the modeling of correlation is currently not unified in a coherent model. We integrate our model into the standard geometric Brownian motion (GBM) to create a unified asset price – asset correlation model. This model has a CAPM interpretation and replicates asset prices in reality significantly better that the standard GBM. We also apply a conditionally independent (CID) correlation approach between individual stocks in a portfolio approach. This portfolio approach improves asset modeling further.

3. **Predictability: the wrong way (FEBS-237)**

Andrea Buraschi, University of Chicago, USA
Andrea Carnelli, Imperial College London, UK

**Discussant:** Gunter Meissner

**Abstract**
We study the predictability of S&P500 returns using short term expected risk premia as a conditioning variable. We construct short term expected risk premia by combining dividend prices implied by futures markets with a simple model of dividend expectations. Regression results for forecasting horizons from 1 to 4 quarters show that time variation in risk premia captures time variation in realized excess returns, albeit with the wrong sign. Counter to the intuition that a high price of risk commands high returns, we find that high expected returns predict low returns. The economic significance is strong: a one standard deviation rise in expected risk premia decreases realized excess returns by 0.16 (0.34) standard deviations at quarterly (annual) horizons. No asset pricing model is able to generate these patterns of predictability.

## *12. Stock and bond markets - 1: Room F63*

**Session Chair:** Wolfgang Aussenegg

**1. Common factors in the performance of European corporate bonds – evidence before and after financial crisis (FEBS-191)**

Wolfgang Aussenegg, Vienna University of Technology, Austria
Lukas Götz, UNIQA Finanz-Service GmbH, Austria
Ranko Jelic, University of Birmingham, UK

**Discussant:** Bjarne Astrup Jensen

**Abstract**
This paper examines common risk factors in Euro-denominated corporate bond returns before and after recent financial crisis. Our results suggest that level and slope of interest rate and default spread term structures significantly improve the explanatory power of asset pricing models for the cross-section of corporate bonds. Further, we demonstrate that corporate bonds with maturities between one and three years continue to yield statistically significant abnor-mal returns even after controlling for the levels and slopes of interest and default spread term structures. The abnormal returns are up to 151 basis points annually for these short term bonds and are thus of considerable economic interest. The sensitivity of corporate bond re-turns to interest rate level and slope risk is quite stable over time, whereas the sensitivity to level and slope default risk factors changed during the period of recent financial crisis. Our results are robust to GRS-test, calendar seasonality, and use of alternative risk-free bench-marks.

**2. Taxation, transfer income and stock market participation (FEBS-252)**

Bjarne Astrup Jensen, Copenhagen Business School, Denmark
Marcel Marekwica, Copenhagen Business School, Denmark

**Discussant:** Marcela Valenzuela

**Abstract**
We study a redistributive tax system that taxes agents' income and redistributes tax revenues in such a way that relatively rich agents are net contributors to relatively poor agents. Our closed-form solution allows us to draw two main conclusions. First, even though the redistribution mechanism seeks to reduce the disparity in the distribution of wealth among agents, wealth levels are not harmonized despite ongoing transfers from richer to poorer agents. Second, both the level of tax revenues and the evolution of the stock market depend on the evolution of the economy. Hence, transfer income is subject to stock market risk, implying that poorer agents optimally reduce their exposures to equity. In particular, a redistributive tax system can thus contribute to explaining the empirically documented low equity exposures and stock market participation rates of poorer agents.

**3. Order Choice Strategies of Patient and Impatient Traders in a Pure Order Driven Market (FEBS-256)**

Marcela Valenzuela, London School of Economics, UK
Ilknur Zer, London School of Economics, UK

**Discussant:** Wolfgang Aussenegg

**Abstract**
We investigate how the information content of the limit order book affects the order choice of an investor. We show that although competition effect is present only at the best quotes while determining the arrival rate of orders, for a limit order trader, it is more persistent than the best quotes. Also, we find that when walking through the book is not allowed, the price information does not matter for an impatient trader in her decision of fitting the order size. Finally, that institutional traders' order submission strategies are less sensitive to the state of the limit order book compared to individual ones.

| **14:30 – 15:00** |
|---|

**Coffee Break**

| **15:00 – 16:30** |
|---|

## Concurrent Sessions (C)

### *13. Funds - 1: Room F52-A*

**Session Chair:** Katja Ahoniemi

**1. On the robustness of persistence in mutual fund performance (FEBS-39)**

Juan Carlos Matallín-Sáez, University Jaume I, Spain
Emili Tortosa-Ausina, University Jaume I, Spain
Amparo Soler-Domínguez, University Jaume I, Spain

**Discussant:** Katja Ahoniemi

**Abstract**
This paper analyzes the persistence of performance in US equity mutual funds over the period 2001-2011 for both net and gross returns. The aim of this study is to assess the robustness of persistence methodologies by means of a set of simulated passive funds. Firstly the results show, in general, how the funds' performance is close to zero. However, some funds exhibit significantly more negative (positive) performance when net (gross) returns are used. With regard to persistence, first we apply contingency tables and transition matrixes in accordance with the previous literature. Results show how these methodologies are biased towards finding evidence of persistence too easily. A recursive portfolio approach is therefore applied that assesses the performance of investing following past performance recommendations. Our results show the importance of estimating the persistence for each fund style group and of considering a cross-sectional simulated procedure to estimate the significance of persistence. Thus, the results do not support the evidence of persistence in performance. Only very scarce evidence is found in some cases, but this also conditioned by whether net or gross returns are considered.

**2. Flows, Price Pressure, and Hedge Fund Returns (FEBS-45)**

Katja Ahoniemi, Aalto University School of Economics, Finland
Petri Jylh, Aalto University School of Economics, Finland

**Discussant:** José Faias

**Abstract**
We study how capital flows affect hedge fund returns. The contemporaneous relation is positive: funds with high flows outperform funds with low flows during the month of the flows. This immediate reaction, combined with feedback trading, gives rise to a cycle: flows exert price pressure, this effect on returns induces more flows, and these flows cause further price pressure. The cycle is so strong that it takes almost two years before a full return reversal is witnessed. This flow-return cycle also contributes to the observed persistence in hedge fund performance. The impact of flows on returns also has implications for performance evaluation: roughly one third of the estimated hedge fund alphas are due to flows.

**3. How to Profit from Mutual Fund Performance Persistence? (FEBS-197)**

José Faias, Catholic University of Portugal, Portugal
David Wessling, Catholic University of Portugal, Portugal

**Discussant:** Amparo Soler-Domínguez

**Abstract**
This thesis demonstrates that mutual fund performance persistence can be profitably exploited with a simple investment strategy. Funds are invested based on the top decile of an ex-ante raw returns rank. Strategy was tested under diverse circumstances and in different fund categories. It is demonstrated that strategies with shorter estimation and rebalancing periods – up to 1 year and 6 months respectively – consistently outperform the respective benchmarks, reaching annualized returns and Sharpe ratios of up to 24.3% and 0.89

respectively. Results are robust across all fund categories with over 42% of the risk-adjusted results being statistically significant. Robustness was also confirmed in expansion and recession periods, with weaker results in the later. It was shown that with transaction costs strategy returns are partially eroded, being the shorter rebalancing strategies – 1 month - the most affected. However it is proved that under realistic circumstances the best performing strategies still outperform by far the respective benchmarks.

## *14. Value-at-Risk modelling - 1: Room F52-B*

**Session Chair:** Ana-Maria Fuertes

### 1. Hybrid Functional Autoregressive Modelling of Non-parametric Density for Improved Value-at-Risk Analysis (FEBS-17)

Charlie X. Cai, Leeds University, UK
Minjoo Kim, University of Glasgow, UK
Yongchoel Shin, University of York, UK
Qi Zhang, Leeds University, UK

**Discussant:** Ana-Maria Fuertes

**Abstract**
FAR modelling of the non-parametric density function is proposed to improve Value-at-Risk (VaR) analysis by taking into account the relative advantages of parametric and non-parametric models in a hybrid manner. In particular, this approach enables us to use the intraday information for forecasting the time-varying daily return density function. It is well-established that VaR forecasts obtained from parametric and non-parametric models involve a trade-off between minimising the associated economic costs and providing the valid coverage of VaR. The Monte Carlo simulation study and empirical evaluations of VaR, based on thirty components of the Dow Jones Industrial Average and their equal weighted portfolio, clearly demonstrate that the overall performance of the proposed hybrid model is superior to those of both the parametric and the non-parametric models in terms of several (sometimes conflicting) criteria. In particular, the proposed hybrid approach is shown to simultaneously increase coverage ability, reduce economic costs and enhance the statistical validity. Hence, it is recommended to use the hybrid functional autoregressive non-parametric density approach (along with another hybrid model called the filtered historical simulation approach) for improving an internal VaR model for both regulators and banks in a fair and satisfactory manner.

### 2. Overnight News and Daily Equity Trading Risk Limits *(FEBS-77)*

Katja Ahoniemi, Aalto University, Finland
Ana-Maria Fuertes, Cass Business School, City University London, UK
Jose Olmo, Centro University of Defensa, Spain

**Discussant:** Harald Kinateder

**Abstract**
This paper compares different approaches for incorporating overnight information into one-day-ahead equity trading Value-at-Risk (VaR) limits. We develop the continuous-time theory behind a novel bivariate modeling approach where conditional mean and (co)variance forecasts are constructed separately for the daytime and overnight returns. An alternative, widely-used approach consists of bundling together the overnight squared return and the open-to-close realized volatility. In a third approach, the VaR limits are generated at the market open, when the overnight return is known and can be included in the conditioning information set. Our empirical application endorses the last approach for the S&P 500 index, and bivariate modeling for the Russell 2000 index. The contrasting findings for the two indices shed light on the extent to which the open price efficiently reflects news accumulated during non-trading hours. Price discovery at the open is less efficient for small capitalization, thinly traded stocks.

### 3. Multifractality in EUR/USD Exchange Rates and Value-at-Risk Forecasting (FEBS-133)

Jonathan A. Batten, Hong Kong University and Technology, Hong Kong
Harald Kinateder, Passau University, Germany
Niklas Wagner, Passau University, Germany

**Discussant:** Minjoo Kim

**Abstract**
The empirical properties of risky asset returns typically reveal autocorrelation functions that decline rapidly and are statistically insignificant beyond a few lags. However, the autocorrelation functions of squares and absolute values of returns, typically decline slowly, and in fact may persist for many years. Assuming the return series are also stationary, then this behaviour indicates that the series is not independent, and is instead either short range dependent, or in some cases also long range dependent. These scaling properties are well known by financial market practitioners, although they are commonly ignored for modeling convenience.
This paper contributes to the empirical literature that investigates the risk scaling properties of financial asset returns. We do so by investigating the presence of complex, nonlinear behavior in the EUR/USD spot foreign exchange rate, which is the most important currency pair traded in over-the-counter (OTC) markets. Our findings demonstrate a strong case against the use of models that accommodate multifractality and instead favor those that address fat-tailed, or leptokurtic, features present in these distributions. Our findings also provide additional insights into the scaling properties of the spot returns. For example, the scaling functions are initially linear, although ultimately concave, which is consistent with returns' distributions of infinite low order moments. This result would support the need for modeling that addresses multifractality, although modifying commonly used models cannot readily meet these requirements. We then present evidence of a class of models that can incorporate the empirically observed features.

## *15. Competition : Room F63*

**Session Chair:** Vittoria Cerasi

**1. Impact of Mergers on the Degree of Competition: Application to the Banking Industry (FEBS-32)**

Vittoria Cerasi, Bocconi University, Italy
Barbara Chizzolini, Bocconi University, Italy
Marc Ivaldi, University of Toulouse, France

**Discussant:** Jung-Hyun Ahn

**Abstract**
This paper proposes an empirical test to evaluate the impact of horizontal mergers on the degree of competition in the banking industry. The test is based on a monopolistic competition model where banks compete in branching and market structure is endogenous. We apply a maximum likelihood approach on individual bank data in Italy and France to estimate the degree of competition in each local market and to simulate horizontal mergers between banks. We estimate the change in the degree of competition and find either cases of pro-competitive and anti-competitive mergers. This empirical test proves to be relevant as a tool for competition policy analysis. Thanks to its theoretical foundation, it encompasses more information than traditional measures of competition while it is parsimonious in terms of data requirements.

**2. Securitization, Competition and Incentive to Monitor (FEBS-44)**

Jung-Hyun Ahn, Rouen Business School, France
Régis Breton, Bank of France & University of Orléans.

**Discussant:** Tianshu Zhao

**Abstract**
This article analyzes the interaction between loan securitization and competition in loan market. We consider a two-period loan market competition model in which period 2-competition is affected by the winner's curse. This increases *ex ante* competition for a greater initial market share. Given that securitization transfers a part of the return from loans to other investors, banks can use it as a tool to signal that they will reduce monitoring, for the purpose of softening *ex ante* competition. Thus, securitization adversely affects loan market efficiency while it leads banks to increases collectively their profits. This effect is driven by primary loan market competition, not by the exploitation of informational asymmetries in the secondary market for loans. Our result suggests that current securitization reform exclusively focusing on informational asymmetries in securitization market would not be enough.

**3. Cross-Selling, Switching Costs and Imperfect Competition in British Banks (FEBS-66)**

Tianshu Zhao, University of Stirling, UK
Kent Matthews, Cardiff University, UK
Victor Murinde, University of Birmingham, UK

**Discussant:** Vittoria Cerasi

**Abstract**
This paper attempts to evaluate the competitiveness of British banking in the presence of cross-selling and switching costs during 1993-2008. It presents estimates of a model of banking behaviour that encompasses switching costs as well as cross-selling of loans and off-balance sheet transactions. The evidence from panel estimation of the model lends support to our theoretical priors on the cross-selling behaviour of British banks, which helps explain the rapid growth of non-interest income during the last two decades. We also find that the consumer faced high switching costs in the loan market in the latter part of the sample period, as a result of lower competitiveness.

## *16. Corporate governance and stability: Room G75*

**Session Chair:** Patrick McColgan

**1. The Impact of the Financial crisis on SEO fees (FEBS-94)**

Mario Levis, Cass Business School, City University London, UK
Michele Meoli, University of Bergamo, Italy
Katrin Migliorati, University of Bergamo, Italy

**Discussant:** Linh Nguyen

**Abstract**
This paper investigates the marked increase in underwriting fees for UK seasoned equity offerings after the recent financial crisis. We develop and test a number of hypotheses related to underwriters and to the issuer's corporate governance characteristics. We find that a substantial part of the simultaneous increases in fees and discounts relate to the bargaining power of underwriters and to the growing influence of institutional shareholders with short-term investment horizons. We also find evidence of conflicts of interest due to the dual role of institutional shareholders as investors and sub-underwriters. In contrast to the pre-crisis period, reputable underwriters charge higher discount and fees.

**2. Government ownership and bank stability - Bank-level evidence during period 1997-2010 (FEBS-97)**

Linh Nguyen, Monash University, Australia
Michael Skully, Monash University, Australia
Shrimal Perera, Monash University, Australia

**Discussant:** Patrick McColgan

**Abstract**
This paper employs system GMM estimation to examine government ownership of banks and bank-level stability over 1997-2010 across a sample of 101 countries. Using continuous variable to proxy for government ownership, we find that higher degree of government ownership is significantly associated with lower bank stability. This relationship, however, depends on a country's economic development land regulatory quality. In other words, the negative impact of government ownership on bank stability is less in countries with higher economic development and better regulation. We further observe that more government ownership is associated with larger banks in less competitive markets.

**3. Do banks really monitor? Evidence from CEO succession decisions (FEBS-245)**

Andrew Marshall, University of Strathclyde, UK
Laura McCann, University of Aberdeen, UK
Patrick McColgan, University of Strathclyde, UK

**Discussant:** Katrin Migliorati

**Abstract**
We demonstrate that bank lenders play an important monitoring role in CEO succession that is not observed for public bonds. Bank monitoring is associated with a greater likelihood of forced turnover, increased sensitivity of forced turnover to cash flow performance, and a greater likelihood a new CEO being hired externally. Our findings contribute to theories of relationship banking that propose a valuable monitoring role for well informed, incentivized bank lenders.

## *17. Financial regulation – 2 : Room G77*

**Session Chair:** Michael R. King

**1. The Impact of Regulatory Risk-Based Capital Requirements on Credit Crises (FEBS-74)**

Lara Cathcart, Imperial College London, UK
Lina El-Jahel, Imperial College London, UK
Ravel Jabbour, Imperial College London, UK

**Discussant:** Michael R. King

**Abstract**
There has been a lot of controversy surrounding the impact of regulatory standards, in particular the Basel framework, on crises that occurred soon after these standards were spread across the banking industry. Indeed, whereas it is at the heart of the Basel approach, sought by the Bank of International Settlements (BIS) and its committee on Banking Supervision (BCBS), to have a \level playing field" and make banks \safer" entities, the question of whether this goal can be attained through enforcing capital requirements is still contentious. In this research, we look into whether the capital cushions could have almost single-handedly affected the viability of banks during the 2007-2009 subprime crisis as they did during the

1990-1991 crunch. The alternative is whether factors such as leverage, liquidity, securitization and others overshadowed the purpose these cushions were set up for in the first place. Using a bank panel dataset obtained from the FDIC, our results support the alternative hypothesis by showing how capital requirements, when combined with some of these other factors, can have contrasting effects on a bank's behaviour depending on its capital position. This has strong policy implications with regard to the ongoing Basel III efforts as not taking these results into account could entail several more \Basels" before the intended goal is met.

**2. The Basel III net stable funding ratio and bank net interest margins (FEBS-134)**

Michael R. King, University of Western Ontario, Canada

**Discussant:** Romain Deguest

**Abstract**

The Net Stable Funding Ratio (NSFR) is a new Basel III structural liquidity requirement designed to limit liquidity mismatches between bank assets and liabilities. This study explains the NSFR and estimates this ratio for 603 banks in 17 countries. The average bank in the United States and Asia are estimated to meet the NSFR. Banks below the ratio need to increase stable sources of funding and to reduce assets requiring stable funding. The most cost-effective strategies are to increase holdings of higher-rated bonds and to extend the maturity of wholesale funding. These changes reduce net interest margins by 66 basis points on average, or 28% of their year-end 2009 values, with the biggest absolute declines for Swiss, French and German banks.

**3. Dynamic equity allocation for insurance companies in the presence of solvency II constraints (FEBS-243)**

Noel Amenc, EDHEC Business School, France
Romain Deguest, EDHEC-Risk Institute, France
Lionel Martellini, EDHEC Business School, France

**Discussant:** Ravel Jabbour

**Abstract**

This paper introduces a framework for designing dynamic asset allocation strategies that can be used by insurance companies within the Solvency II regulatory framework to achieve a substantial exposure to equity risk, and the associated premium, while taking into account the presence of stochastically time-varying risk and return parameters. Extensive numerical and empirical simulations confirm that the opportunity cost of static portfolio strategies ignoring return predictability is substantial in the presence of Solvency II constraints. Our results have important potential implications for the design of improved forms of dynamic investing solutions that could help insurance companies facing exceedingly high capital charges associated with equity investments.

## *18. Bank solvency: Room G74*

**Session Chair:** Lars Norden

### 1. Credit and Liquidity Support in Securitisations and Implications for Bank Solvency(FEBS-23)

Anna Sarkisyan, University of Essex, UK
Barbara Casu, Cass Business School, City University London, UK

**Discussant:** Amir Amel-Zadeh

**Abstract**
Using US bank holding company data for the period 2001 to 2007, this paper examines the relationship between banks' involvement in securitisations and insolvency risk. We find that the overall level of retained interests and guarantees increases bank risk. Breaking down retained interests by the form of the underlying facility, we find that credit enhancements and seller's interest have a risk-increasing effect, while the provision of liquidity support appears to lessen risk. Credit-enhancing interest-only strips have the strongest risk-increasing effect, consistently with their subordinated (first loss) position, while the effect of subordinated securities is positive although not statistically significant. This appears to (weakly) support the theoretical literature on the mitigating effect on bank risk taking of holding a subordinated/equity tranche. Finally, we find that that engagement in third-party securitisations does not have significant effect on bank risk.

### 2. Bank failure, mark-to-market and the financial crisis (FEBS-26)

Amir Amel-Zadeh, Judge Business School, University of Cambridge, UK

Geoff Meeks, Judge Business School, University of Cambridge, UK

**Discussant:** Lars Norden

**Abstract**
This paper is concerned with the allegation that fair value accounting rules have contributed significantly to the recent financial crisis. It focuses on one particular channel for that contribution: the impact of fair value on actual or potential failure of banks. The paper compares four criteria for failure: one economic, two legal and one regulatory. It is clear from this comparison that balance sheet valuations of assets are in two cases crucial in these definitions, and so the choice between "fair value" or other valuations can be decisive in whether a bank fails; but in two cases fair value is irrelevant. Bank failures might arise despite capital adequacy and balance sheet solvency due to sudden shocks to liquidity positions. Two of the most prominent bank failures cannot, at first sight, be attributed to fair value accounting: we show that Northern Rock was balance sheet solvent, even on a fair value basis, as was Lehman Brothers. The anecdotal evidence is augmented by empirical tests that suggest that mark-to-market accounting does not increase the perceived bankruptcy risk of banks.

3. **When Senior meets Junior: Information in Credit Default Swap Spreads of Large Banks (FEBS-246)**

Lars Norden, Erasmus University, The Netherlands
Martin Weber, University of Mannheim, Germany, and Centre for Economic Policy Research (CEPR), UK

**Discussant:** Anna Sarkisyan

**Abstract**
We investigate whether information in credit default swap spreads (CDS) is useful for assessing the default risk of large banks. Because of banks' special capital structure two liquid trading segments have emerged: one for CDS on senior bank debt, and one for CDS on subordinate bank debt. We find that both CDS spreads contribute significantly to price discovery but transactions costs (i.e., the relative bid-ask spread) are lower in subordinate CDS. After the onset of the financial crisis there is a lead-lag relation between senior and subordinate CDS, and subordinate CDS loose their transaction cost advantage. We further derive daily market-implied values for bank risk parameters. Comparing the pre- and postcrisis period, we show that the loss given default on senior bank debt increases from 57% to 62% and the probability of default increases from 0.32% to 1.23%. Our results indicate that the CDS market conveys differentiated information on banks' default risk that is suited to play an important role in enhancing market discipline in a new supervisory and regulatory framework.

| **16:30 – 16:50** |
|---|

**Coffee Break**

| **16:50 – 18:20** |
|---|

## *19. Correlation of Stock and Bond markets : Room G75*

**Session Chair:** XiaoHua Chen

1. **What causes a firm's stock and bond returns move together or decouple? - A UK market investigation (FEBS-72)**

XiaoHua Chen, University of Bath, UK

**Discussant:** Robert Kosowski

**Abstract**
This paper investigates the comovement of a firm's stock and bond returns within the classic option pricing framework. Using UK stock market data in the period prior to a firm's trading statement announcement and the period after a firm's financial year-end, we find that returns (earnings) on the firm cause a firm's stock and bond returns to move together, whilst volatility or a change in the volatility of returns (earnings) of the firm (proxying for the firm's business risk) cause the firm's stock and bond returns to decouple and move in opposite directions. In addition, a firm's leverage strategy plays a role in this comovement: a low

return (earnings) and high leverage strategy causes stock return goes down but bond return goes up; whereas a high return (earnings) and high leverage strategy causes stock return goes up but bond return goes down. These findings reveal the common and conflict of interests between a firm's stockholders and bondholders.

**2. Changing Expectations and the Correlation of Stocks and Bonds (FEBS-89)**

Farouk Jivraj, Imperial College London, UK
Robert Kosowski, Imperial College London, UK

**Discussant:** Rosa Rodriguez

**Abstract**
The aim of this paper is to empirically examine the economic mechanisms underlying the correlation of stock and bond returns. Using a Campbell-Shiller decomposition we express unexpected stock and bond returns into news components related to macroeconomic fundamentals. The variance and covariance of these news components should constitute the variance and covariance of stock and bond returns. We therefore attempt to use time varying comovement among the innovations to shed light on the economic mechanisms driving the time variation in the realised second moments of stock and bond returns. Using survey forecast data for the macroeconomic components we show that the uncertainty in cash flow and real short-term interest rate is able to explain the variation in excess stock variance up to an R2 of 16%. The variation in excess bond variance can be attributed to the uncertainty in the long-run inflation rate and real short-term interest rate up to an R2 of 16%. As for the covariance between stock and bond returns, through the interaction between several of the macroeconomic news components we are able to account for up to 26% of the variation. Our findings highlight the importance of the interaction between cash flow news and real short-term interest rate news for negative stock-bond correlation.

**3. The Determinants of the Correlation between Individual Stock and Corporate Bond Returns (FEBS-135)**

Ryan Monkerud, Repsol YPF
Belén Nieto, University of Alicante, Spain
Rosa Rodríguez, University Carlos III, Spain

**Discussant:** XiaoHua Chen

**Abstract**
We study the correlations between individual bond and stock returns issued by the same firm using TRACE prices. We analyze the sources of the variation in correlations by panel data including variables representing cycle indicators, firm characteristics and specific bond characteristics. The results show that the correlations are both time and cross-sectional varying. Specifically, the correlations are higher when the stock idiosyncratic risk and/or the firm financial leverage increase, while for low levels of firm risk the two assets move differently. Also the correlations increase when investors have positive expectations about the future economic conditions. Although this is only true for firms that present low probability of default.

## *20. Derivatives & the crisis : Room G77*

**Session Chair:** Rita D'Ecclesia

### 1. Are Firms Using Derivatives for Hedging or Speculation? The Effects of Derivative use on the Probability of Financial Distress (FEBS-128)

Vikram Finavker, Middlesex University, UK
Sylvia Gottschalk, Middlesex University, UK
Amrit Judge, Middlesex University, UK

**Discussant:** Ranko Jelic

**Abstract**
The question of whether firms are using derivatives for hedging or speculation is important in light of attempts by regulators to curb the use of OTC derivatives as a response to the 2008 financial crisis and concerns about systemic risk in the financial sector. This paper examines the effects of derivative use on the probability of financial distress using a sample of UK non-financial firms during the period 1999-2010. By employing a market-based measure of default probability we extend previous studies that rely heavily on measures such as leverage or accounting based proxies for the probability of financial distress. As a result these studies present mixed and rather unclear evidence on the link between derivative use and the likelihood of financial distress. After controlling for firm characteristics, endogeneity between hedging, leverage and the probability of default this study finds that hedging is associated with a lower probability of default. This result is important as it indicates that firms are using derivatives for hedging purposes rather than speculative ones. We also find that interest rate hedging has a greater impact on the probability of default than foreign currency hedging. Our results are robust to the use of alternative measures of hedging, methods of estimation and instrumenting for the possible endogeneity of hedging, leverage and default probability.

### 2. European Asset Swap Spreads and the Credit Crisis (FEBS-145)

Wolfgang Aussenegg, Vienna University of Technology, Austria
Lukas Götz, UNIQA Finanz-Service GmbH, Austria
Ranko Jelic, University of Birmingham, UK

**Discussant:** Vikram Finavker

**Abstract**
In this study we focus on asset swap (ASW) spreads as an increasingly important credit risk measure. In particular we investigate the determinants of ASW spreads for a set of 23 European corporate bond indexes during recent credit crisis. Our results suggest that ASW spreads display significant regime specific dynamics. During turbulent periods they are highly sensitive to equity market volatility whilst in calm periods they exhibit a significant association with stock returns. The level of interest rates affects ASW spreads in both regimes, whereas the difference between the swap curve and the government bond yield curve (i.e. swap spread) influences ASW spreads only in periods of increased volatility. We also find evidence of negative autocorrelation of ASW spreads in calm and positive autocorrelation in turbulent periods.

**3. The impact of sovereign credit signals on bank share prices during the European sovereign debt crisis (FEBS-255)**

Gwion Williams, Bangor University, UK
Rasha Alsakka, Bangor University, UK
Owain ap Gwilym, Bangor University, UK

**Discussant:** Rita D'Ecclesia

**Abstract**
The ongoing financial crisis has drawn considerable attention to the role of credit rating agencies in the financial system. We examine how the share prices of major European banks react to sovereign credit events by S&P, Moody's and Fitch during the financial crisis period (2007-11). The sample includes a stock market listed subset of the banks which were part of the EU stress test in 2011, and is drawn from 16 countries. We investigate how bank abnormal returns are affected by European sovereign rating changes, watchlist and outlook announcements, to capture how the crisis spills over among countries and also from the sovereign to the financial sector. We find that rating agencies' signals do affect bank share prices, although there is no evidence that rating agency actions are the dominant force leading to falling share prices during the crisis. The findings are important in enhancing understanding of the role of rating agencies and the market response to their signals.

**4. Credit quality and CDS volatility: the key signal (FEBS-271)**

Rita D'Ecclesia, University of Rome "La Sapienza", Italy
Rosella Castellano, University of Macerata, Italy

**Discussant:** Gwion Williams

**Abstract**
This paper investigates the role of CDS volatility in providing information concerning the credit quality of a company. In Castellano and D'Ecclesia (2011) a first analysis of how CDS quotes respond to rating announcements is provided and it is shown that market participants do not rely much on Rating Agencies, especially during periods characterized by very high volatility, i.e. during the financial crisis. Here, a more accurate analysis of the CDS's ability in providing timely information of the creditworthiness of reference entities is performed estimating the volatility of CDS quotes using Exponential GARCH(1,1) models. The event study methodology is then applied to a sample of CDS quotes for US and European markets, over the period 2004-2009. Results provide an accurate understanding of market behavior in presence of news released by Rating Agencies. Overall, market participants seem to provide timely reactions around the event date and we show that the key element of signaling is represented by the changing volatility in CDS quotes, before and after the rating event.

## *21.Investment strategies : Room F52-A*

**Session Chair:** Emilios Galariotis

**1. Liquidity and trading activity of equity options: time series and hedging cost effects. (FEBS-170)**

Thanos Verousis, Bangor University, UK
Owain ap Gwilym, Bangor University, UK

**Discussant:** James Grant

**Abstract**
This study utilises an extensive intraday dataset to examine the evolution of liquidity and trading activity in individual equity options for three European exchanges, namely NYSE LIFFE Amsterdam, London and Paris. Spreads, depths and trading activity vary considerably over time. The events surrounding the financial crisis had a substantial effect on liquidity and trading activity. There is little evidence that the inventory cost component of spreads is associated with decreases in liquidity. Instead we show that option open interest captures informed trading effects and that spreads are associated with economies of scale in order processing costs. Finally, we show that the derivatives hedging theory is an important determinant of spreads and depth. After decomposing the hedging costs to the initial and rebalancing costs, we show that it is hedge rebalancing costs that are more strongly associated with option liquidity.

**2. When is Herding not Herding? (FEBS-220)**

Emilios C. Galariotis, Audencia Nantes School of Management, France
Wu Rong, Durham University, UK
Spyros I. Spyrou, Athens University of Economics & Business, Greece

**Discussant:** Nitin Deshmukh

**Abstract**
This paper tests for herding effects in the prices of all S&P100 constituent stocks for the period between 1989 and 2011. We find herding only for the extremely volatile period related to the global financial crisis. This finding is robust to time-variation in slope coefficients, and to various sub-samples of stocks (value vs. growth, large vs. smaller). The paper shows that when the HML and SMB factors are included in the regressions, they pick-up the effect of the herding term, i.e. that what was thought to be herding in the paper (literature) is (may be) linear investor reaction to common fundamental risk factors.

**3. Does it pay to be Ethical – A Marginal Conditional Stochastic Dominance analysis of the FTSE4Good (FEBS-68)**

Nitin Deshmukh, Coventry University, UK
Ephraim Clark, Middlesex University, UK
Yacine Belghitar, Cranfield School of Management, UK

**Discussant:** Emilios Galariotis

**Abstract**
The empirical mean-variance evidence comparing the performance of ethical and non-ethical investments suggests that there is no significant difference between the two. This paper reexamines the problem in the context of Marginal Conditional Stochastic Dominance (MCSD). Comparing the performance of the ethical FTSE4Good Series of indices with that of similar conventional indices, it provides strong evidence that the conventional indices in the UK, US and Globally dominate the ethical FTSE4Good Series. Thus, there is a price for investing ethically – on average, investors can increase their mean returns by 233.16% and reduce their standard deviation by 3.23% by choosing not to invest ethically.

## *22. Modelling – 2: Room F52-B*

**Session Chair:** Olfa Maalaoui Chun

### 1. A New Convexity Adjustment for a CMS under a Multi-Curve Framework (FEBS-40)

John Hatgioannides, Cass Business School City University London, UK
Nikolaos Karouzakis, Cass Business School City University London, UK

**Discussant:** TBA

**Abstract**
The crisis that affected financial markets in the last years, leaded market practitioners to revise well known basic concepts like the ones of discount factors and forward rates. A single yield curve is not sufficient any longer to describe the market of interest rate products. On the other hand, using different yield curves at the same time, requires a reformulation of most of the basic assumptions made. We investigate how this approach of using different yield curves for discounting and forwarding is used to price a specific interest rate product, the Constant Maturity Swap (CMS). CMS are money market instruments whose valuation requires the use of a convexity adjustment. The standard convexity adjustment is derived under the assumption that the term structure of interest rates is at and has only parallel shifts. We develop a new convexity adjustment for the case when the term structure may tilt, under the new framework of different curves. We calibrate CMS spreads to market data and compare our adjustments with the SABR CMS adjustment widely used in the market.

### 2. Credit Spread Changes within Switching Regimes (FEBS-122)

Olfa Maalaoui Chun, KAIST, Graduate School of Finance, South Korea
Georges Dionne, HEC Montreal, Canada
Pascal François, HEC Montreal, Canada

**Discussant:** Nikolaos Karouzakis

**Abstract**
Empirical studies on credit spread determinants consider a single-regime model over the entire sample period and find limited explanatory power. We model the rating-specific credit cycle by estimating Markov switching regimes from credit spread data. Accounting for

endogenous credit cycles significantly enhances the explanatory power of credit spread determinants for all ratings and up to 67% for BBB spreads. The single regime model cannot be improved when conditioning on the NBER cycle. Our regime-based model highlights a positive relation between credit spreads and the risk-free rate in the high regime. Inverted relations are also obtained for other determinants including liquidity.

### 3. On the Fair Pricing of Financial Structured Products: A Compensating Variation Approach (FEBS-227)

Philippe Bertrand, GREQAM, University of Aix-Marseille and Euromed Management
Jean-Luc Prigent, THEMA, University of Cergy-Pontoise, France

**Discussant:** Manuel Moreno

**Abstract**
This paper deals with the fair pricing of financial structured products and their adequation both to investors attitudes towards risk and to rules of risk management for the issuers. First, we summarize main empirical results about the mispricing of structured financial contracts for US and various European countries. Using a geometric Brownian motion to model the risky asset dynamics with appropriate financial parameters, the average value of such mispricing lies between 3% and 6% according to product complexity. Second, we provide an explanation of such feature by introducing the notion of compensating variation. This latter concept allows to measure the monetary loss that a client or a financial institution can bear due to the utility loss of not having his best portfolio or due to significant risk exposure. We illustrate this notion for the most standard structured financial contrat, namely the Option Based Portfolio Insurance. Our results are in accordance with previous empirical studies.

### 4.Derivatives Pricing under a New Macro-financial Square-root Process for the Term Structure of Interest Rates (FEBS-120)

Manuel Moreno, University of Castilla La-Mancha, Spain
Federico Platania, The Complutense University of Madrid, Spain

**Discussant:** Jean-Luc Prigent

**Abstract**
This paper presents a new macro-financial continuous-time model for the term structure of interest rates assuming that the spot rate converges to a certain long-term level that depends on the business cycle. In addition, we consider that the interest rate volatility depends on the interest rate level. In short, both the mean reversion level and the interest rate volatility are modeled by using a harmonic oscillator. Under these assumptions, we compute closed-form expressions for the values of different fixed income and interest rate derivatives and for relevant risk management measures.

## *23. Information disclosure: Room G74*

**Session Chair:** Dimitris Andriosopoulos

1. **Managerial Discretion and Timeliness of Price Sensitive Information Disclosures: Evidence from the Alternative Investment Market (AIM) (FEBS-101)**

Isaac T. Tabner, University of Stirling, UK
Sinead Urquhart, University of Stirling, UK

**Discussant:** Silviu Glavan

**Abstract**
This study examines a managerial discretion hypothesis in which managers value their insider information advantage over and above their duty to disclose price sensitive information to stockholders. Their duty does not imply that the timeliness of bad news should be different to that of good news. We find that compared to late announcements, early announcements contain more price sensitive information, are more likely to contain good news and exhibit greater pre-disclosure information asymmetry. Stocks of early disclosers have enhanced liquidity relative to late disclosers suggesting the manifestation of market discipline in late disclosers.

2. **Mark-to-market Accounting and Implications for Banks Trading Portfolios: the case of IFRS adoption in Europe(FEBS-105)**

Silviu Glavan, University of Navarra & IE University, Spain
Marco Trombetta, University of Navarra & IE University, Spain

**Discussant:** Dimitris Andriosopoulos

**Abstract**
We analyze an extensive database of EU15 banks for 1999-2007. From the banks reports adopting IFRS in 2004 and presenting their results as both local and IFRS, we discover that fair value accounting application reveals riskier portfolios than the image presented if they would have been continued to present the results according to the historic cost accounting. The trading portfolios profits are higher with fair value accounting than with the historic cost accounting regime. After IFRS adoption, the banks are adjusting their portfolios year by year towards more conservative portfolios, coherent with the predictions of the recent analytical literature.

3. **Information Disclosure, CEO Traits and Share Buyback Completion Rates (FEBS-198)**

Dimitris Andriosopoulos, Swansea University, UK
Kostas Andriosopoulos, ESCP Europe Business School, London, UK
Hafiz Hoque, Swansea University, UK

**Discussant:** Isaac T. Tabner

**Abstract**
Open market buybacks are not firm commitments and there is limited evidence on whether firms repurchase the intended shares. We employ a comprehensive set of hand-collected data on information disclosure on open market share buyback announcements and the respective buyback trades in UK. We assess whether CEO traits can affect the buyback completion rates. We show that information disclosure is one of the major determinants of buyback completion rates. Like previous studies, we find that large and widely held firms, firms conducting subsequent buyback programmes, and firms which complete their previous programmes, have higher completion rates. Finally, we find that firms with senior CEOs, who hold external directorships and have received a business education, are more likely to complete their buyback programs. Our results suggest there is clear relationship between information disclosure, CEO traits and buyback completion rates.

## *24. Financial markets: Room F63*

**Session Chair:** Stefan Petry

### 1. Equity-Index Options and CDOs, before and after the Subprime Crisis (FEBS-85)

Gordon Gemmill, University of Warwick, UK
Yiran Yang, Deutsche Bank London, UK

**Discussant:** Sarah Draus

**Abstract**
Put options on equity indices and spreads on CDO-index tranches both reflect the downside risk on portfolios of firms. We test for the consistency of their behaviour before and after the subprime crisis, using weekly data from October 2006 to November 2007. To do this we develop an equity-implied copula model to price CDO tranches, in which the Gaussian distribution of the conventional copula is replaced by the left-skewed distribution from equity-index puts. We find that the new model is able to generate realistic spreads for CDO tranches without the need for an ad-hoc correlation skew (as used by traders to raise the frequency of default on more senior tranches). The model spreads on safer tranches of CDOs before the subprime crisis are significantly larger than those in the market, particularly for the senior (15-30) tranche for which model spreads are 12-18 basis points and market spreads are only 3-5 basis points. We conclude that information on downside risk available from the equity market was not being used correctly in setting spreads on CDO tranches before the subprime crisis.

### 2. Circuit Breakers and Market Runs (FEBS-147)

Sarah Draus, University of Naples Federico II, Italy
Mark Van Achter, Erasmus University, The Netherlands

**Discussant:** Gordon Gemmill

**Abstract**
This paper analyzes whether the application of a 'circuit breaker' to a financial market (i.e. a mechanism that interrupts trading for a predetermined period when the price moves beyond a predetermined level) reaches its intended goals of increased market stability and overall welfare. Our framework of analysis is a model in which investors can trade at several dates and might face a liquidity shock forcing them to sell immediately when the shock occurs. This setting potentially induces a 'market run' where investors commonly sell merely out of fear other investors are selling and not because they have current liquidity needs. We show that the introduction of a sufficiently tightly-set circuit breaker within this setting successfully prevents this market run from occurring. Even more so, it could induce the socially optimal state (in which trading only takes place when it is motivated by liquidity needs) to arise. However, this desirable equilibrium can only be reached under particular economic conditions. When these conditions are not met, installing a circuit breaker might even lower social welfare as compared to a setting without a circuit breaker as it impedes socially desirable trades and stimulates socially undesirable trades.

**3. Price discovery on common and preferred shares across multiple markets(FEBS-148)**

Cristina Scherrer, Queen Mary, University of London, UK
Marcelo Fernandes, Queen Mary, University of London, UK

**Discussant:** Stefan Petry

**Abstract**
We extend the standard price discovery model to estimate the information share (IS) accounting for the information content of both common and preferred non US stocks, their American Depositary Receipts (ADRs) counterparts traded on the New York Stock Exchange and ARCA, and the exchange rate. We gauge the significance of price discovery in the home and foreign markets, through common or preferred stocks. One of the main critiques on the IS methodology is that it does not deliver a single measure when there is contemporaneous correlation among markets. We propose an ordering invariant methodology that delivers a single measure of IS. We employ a tick-by-tick database from the leading exchange in Latin America, namely, Bolsa de Valores de Sao Paulo (BM&FBovespa). We find that foreign market is more important than the home market for the price discovery of Petrobras, the Brazilian stated-owned oil giant, and Vale, one of the largest mining companies in the world. Additionally, the Brazilian market has lost significant importance after the 2008/2009 financial crisis. During this period, common and preferred stocks shared a single common factor, with voting premium being a stationary process.

**4. Counterparty risk and market maker monopoly during the 2007-2009 financial crisis (FEBS-150)**

Stefan Petry, University of Melbourne, Australia

**Discussant:** Marcelo Fernandes

**Abstract**
This paper examines the pricing of counterparty risk in retail financial markets during the 2007-2009 financial crisis. I exploit the German Securities Law which treats retail structured products as unsecured bonds. Investors in those securities face the default risk of the underlying as well as the counterparty risk of the issuing bank. I focus on retail structured products that have an index as their underlying and analyze the margin between their actual quoted price and their theoretical value before and after the default of Lehman Brothers. My findings suggest that in the pre-Lehman period, counterparty risk was priced as evidenced by a significant negative relationship between the certificates' margin and the CDS spread of the issuing bank. In the post-Lehman period, the margin widens due to significantly lower bid quotes. However, the widening of the margin is unrelated to counterparty risk. Robustness checks rule out that the lower bid quotes are caused by higher selling pressure or hedging demands of the issuing bank. For example, I do not find a similar effect in a subsample of ETFs that are based on the same underlying indices. I hypothesize that the monopoly position of the issuing bank as a market maker could be one of the causes for the change in pricing retail structured products after the default of Lehman Brothers.

# Friday 8th June, 2012

**08:00 – 08:30**

**Registration and Coffee**

**08:30 – 10:00**

## Concurrent Sessions (E)

### *25. Exchange rates – 2: Room F52-A*

**Session Chair:** Rasmus Fatum

**1. The Intraday Effects of Central Bank Intervention on Exchange Rate Spreads (FEBS-37)**

Rasmus Fatum, University of Alberta, Canada
Jesper Pedersen, National Bank of Denmark, Denmark
Peter Norman Sørensen, University of Copenhagen, Denmark

**Discussant:** Shin-ichi Fukuda

**Abstract**
We investigate the intraday effects of intra-marginal intervention in a horizontal band on the exchange rate spread. Official intraday data on Danish intervention transactions in the ERM II, the Exchange Rate Mechanism of the European Union, facilitates our analysis. We show

that intervention purchases and sales both exert a significant influence on the exchange rate spread, but in opposite directions. Intervention purchases of the small currency, on average, narrow the spread while intervention sales of the small currency, on average, widen the spread. This is a novel finding that differs from those of existing studies that find intervention always widens the exchange rate spread and increases market uncertainty.

**2. Strong Sterling Pound and Weak European Currencies in the Crises: Evidence from Covered Interest Parity of Secured Rates (FEBS-127)**

Shin-ichi Fukuda, The University of Tokyo, Japan

**Discussant:** Natasha Burns

**Abstract**

In the post Lehman period, the interest rate of the US dollar became low on the forward contract because of its role as international currency. However, in the Euro crisis, the Sterling pound had equally low interest rate as the US dollar, while the other European currencies increased its liquidity premium. By using secured rates, the following analysis examines why the Sterling pound and the other European currencies showed such different features in the two crises. The regression results suggest that there was a structural break in the determinants of deviations from covered interest parity (CIP) condition across the European currencies during the crises. We find that Euro-specific money market risk was significant in explaining the deviations in the GFC. In contrast, EU banks' credit risk and sovereign risk were useful in explaining the deviations in the Euro crisis. However, in the Euro crisis, there are asymmetric responses between the Sterling pound and the Danish kroner. Strong Sterling pound in the Euro crisis might be attributable to liquidity in the London foreign exchange market which is the largest global money center.

**3.Foreign Currency Exposure and Hedging: Evidence from Foreign Acquisitions (FEBS-201)**

Söhnke M. Bartram, Lancaster University and SSgA, Management School, UK
Natasha Burns, University of Texas at San Antonio, USA
Jean Helwege, University of South Carolina, USA

**Discussant:** Rasmus Fatum

**Abstract**

While theoretical research suggests that many firms should have significant exchange rate exposure, empirical research has documented a low stock price reaction to exchange rate movements. In this paper we investigate the SEC filings of a sample of firms for which currency risk is important and we use these data to determine the extent to which hedging activity masks the relationship between firm value and exchange rates. Our sample consists of U.S. firms that have acquired foreign companies and thus have underlying exposure to at least one bilateral exchange rate. As with many previous studies, their stock returns are not strongly affected by exchange rate movements. We find that this result does not owe to the use of financial derivatives. In contrast, the evidence shows some support for a role for operational hedging in the currency exposure puzzle.

## *26. Mergers & Acquisitions – 2: Room F63*

**Session Chair:** Sailesh Tanna

### 1. Mergers and Acquisitions (M&A) in the Global Insurance Industry: Information Asymmetry and Valuation Effects (FEBS-260)

Paul Klumpes, EDHEC Business School, France
David Cummins, Wharton University of Pennsylvania, USA
Mary Weiss

**Discussant:** Panagiotis Dontis-Charitos

**Abstract**

The objective of this paper is to determine whether M&As in the Global insurance market create value for shareholders by studying the stock price impact of M&A transactions on target and acquiring firms. Various hypotheses motivating M&A transactions are advanced, ranging from assumed market efficiency (no gain) to market power and regulatory hypotheses. Each hypothesis is conditioned by the relevant regulatory and economic/political environment in which the M&A activity took place.

We report an event study analysis of M&A transactions where an insurance firm was either the target or the acquirer. M&A transactions were identified using the Thomson Financial SDC Platinum database for the period 1990-2006. The stock price effect of M&As is measured by looking at abnormal returns on the transaction event day and surrounding days, i.e., by measuring the stock price impact on target and acquiring firms beyond what is predicted using a market model of stock returns. We also examine the cumulative average abnormal returns (CAARs) which accumulate the abnormal returns over event windows surrounding the M&A transaction dates. The number of transactions is limited to those where there was a change in control, defined as transactions resulting in the acquirer's ownership share in the target increasing from less than 50% to 50% or more.

The transactions were classified in terms of size of the deal, number of transactions per firm. The analysis is presented for the overall sample as well as by region and country and by industry sector breakdown. The market model approach to event study was followed whereby all share price return data and corresponding market index data was analyzed over various event windows from -15 to +15 days surrounding the announcement.

The analysis reveals that global M&As created small positive CAARs for acquirers (generally less than 1%) on average across various windows surrounding the transaction date. Targets, however, realized substantial positive CAARs in the range of 12% to 15%. For acquirers, there is no clear difference in performance between cross-border and within-border (domestic) transactions. For targets, both cross-border and within-border transactions led to substantial value-creation, thus providing evidence that geographical integration of financial services markets has been successful. Given that cross-border transactions are value-neutral for acquirers and value-creating for targets, these transactions seem to lead to clear economic gains. Asian M&As, excluding Japan, destroy value for acquirers, whereas acquirers from other regions show small market value gains. Market value gains for targets are highest in the U.S., the U.K., and Japan. Insurers that acquire banks and securities broker/dealers sustain significant market value losses, but intra-insurance industry transactions generate significant gains for the acquiring insurers. Only Canadian and US firm targets benefit significantly from acquisition activity when results are further broken down by size.

Even after controlling for other explanations, cross-sectional analysis of acquisition by deal value that cross-border and product focusing are of particular relevance to European firms,

beta to UK firms and market value of equity to Asia-pacific firms. Post announcement abnormal returns immediately post take over announcements is negatively related to earnings, and positively associated with risk capital for UK and European firms. Thus, the results suggest that insurers should concentrate on product-focusing rather than product-diversifying transactions. Survivors of M&A activities reduce information asymmetry is related to probability of surviving a takeover and the cash position of the target firm.

**2. International Bank-Insurance Takeovers: The Risk-Return Effects on Bidders and Peer Institutions (FEBS-261)**

Elyas Elyasiani, Temple University, USA
Sotiris K. Staikouras, Cass Business School, City University London, UK and ALBA Graduate Business School, Greece
Panagiotis Dontis-Charitos, University of Westminster, UK

**Discussant:** Sailesh Tanna

**Abstract**
We investigate the impact of domestic and international bank-insurance mergers on risk-return profiles of the acquiring banks, peer banks and peer insurers within a GARCH framework. We find that the acquiring and peer firms experience positive abnormal returns with the effect on insurer peers being larger and more gradual. These results establish the prevalence of intra- and inter-industry contagion. Abnormal returns on bidders vary with leverage, relative size of the deal, growth opportunities, medium of payment and bidder location. The overall risks of the bidders and peer firms decline following the bancassurance deals, though the systemic risk may still increase.

**3. Market Pricing of Bank M&As and Efficiency in Europe (FEBS-268)**

Sailesh Tanna, Coventry University, UK
Hodian Urio, Arusha Institute of Accountancy, Tanzania

**Discussant:** Paul Klumpes

**Abstract**
This study investigates the impact bank mergers and acquisitions (M&As) on bank efficiency and shareholder value by examining the effect of banks' cost and profit efficiency on shareholder value upon bank merger announcement. We find some supportive evidence that the market takes into account pre-merger efficiency of target and bidder banks in adjusting the bank stock/share price at the time of announcement. Furthermore, in reacting to the announcement, the market also perceives the prospects for future enhancement of bank efficiency as a result of the current event. Thus, post-merger efficiencies are also found, to a degree, to contribute to shareholder value creation. In particular, the study finds evidence suggesting that post-merger profit efficiency has a positive effect on cumulative abnormal returns.

## *27. Credit risk: Room G74*

**Session Chair:** Peter Posch

**1. Estimating portfolio credit losses in downturns (FEBS-138)**

Fernando F. Moreira, Keele University, UK

**Discussant:** Mindy Leow

**Abstract**

We suggest formulas able to capture potential strong connection among credit losses in downturns without assuming any specific distribution for the variables involved. We first show that the current model adopted by regulators (Basel) is equivalent to a conditional distribution derived from the Gaussian Copula (which does not identify tail dependence). We then use conditional distributions derived from copulas that express tail dependence to estimate the probability of credit losses in extreme scenarios. Next, we use data on historical credit losses incurred in American banks to compare the suggested approach to the Basel formula with respect to their performance when predicting the extreme losses observed in 2009 and 2010. Our results indicate that, in general, the copula approach outperforms the Basel method in two of the three credit segments investigated. The proposed method is extendable to other differentiable copula families which gives flexibility to future practical applications of the model.

**2. Intensity models and transition probabilities for credit card loan delinquencies (FEBS-169)**

Mindy Leow, University of Edinburgh, UK
Jonathan Crook, University of Edinburgh, UK

**Discussant:** Peter Posch

**Abstract**

We estimate the probability of delinquency and default for a sample of credit card loans using intensity models, via semi-parametric multiplicative hazard models with time-varying covariates. It is the first time these models, previously applied for the estimation of rating transitions, are used on retail loans. Four states are defined in this non-homogenous Markov chain: up-to-date, one month in arrears, two months in arrears, and default; where transitions between states are affected by individual characteristics of the debtor at application and their repayment behaviour since. These intensity estimations allow for insights into the factors that affect movements towards (and recovery from) delinquency, and into default (or not). Results indicate that different types of debtors behave differently while in different states. The probabilities estimated for each type of transition are then used to make out-of-sample predictions over a specified period of time.

**3. Sovereign credit risk and the real economy: A risk-return framework (FEBS-218)**
Lars Norden, Erasmus University Rotterdam, The Netherlands
Peter Posch, University of Ulm, Germany

**Discussant:** Fernando F. Moreira

**Abstract**
We propose a framework to analyze the relation of risk and return at the country level. Our framework follows a top-down approach that combines information from financial markets and the real economy at three levels of aggregation. At the top level we consider sovereign CDS spreads and GDP growth, at the intermediate level the corporate sector's contribution to sovereign CDS spreads and to GDP growth, and at the bottom level the contribution of the non-financial and financial sector to the sovereign CDS spread and GDP growth. We apply these measures to 19 developed countries during the period 2004-2010. We find substantial cross-country differences in the importance of the real economy, lead-lag relationships between the return-risk measures and macroeconomic variables, and that risk has become more volatile than return. We also demonstrate how our framework can be used to identify contagion effects, analyze international investments, and to build CDS trading strategies.

## *28. Banking: Room G77*

**Session Chair:** Elyas Elyasiani

**1. Banking for the Public Good (FEBS-27)**
Andy Mullineux, University of Birmingham, UK

**Discussant:** Elyas Elyasiani

**Abstract**
Bank shareholders cannot be expected to provide good stewardship to banks because there is a conflict of interests between the shareholder owners and a non-mutually owned bank's depositors; who provide the bulk of the funds in traditional retail banking and are willing to accept a lower return on their savings than shareholders, in return for lower risk exposure. Regulation is required to protect depositors in the presence of partially funded deposit insurance schemes and taxpayers need to be protected from the resulting moral hazard under which insured banks have an incentive to take on more risk in pursuit of profit. Once some banks become 'too big (to be allowed) to fail' (TBTF), they enjoy additional implicit public (taxpayer) insurance that enables them to fund themselves more cheaply than smaller banks. This gives them a competitive advantage. The political influence of big banks in the US and the UK is such that they can be regarded as financial oligarchies that have successfully blocked far reaching structural reform in the wake of the 2007-09 Global Financial Crisis. The TBTF problem and associated moral hazard has been made worse by mergers of weaker banks with stronger ones during the crisis. Alternative solutions to making the banks small enough to be allowed to fail are considered in this paper, but it is difficult to see how they will deliver banks that promote the public good.

## 2. Large Capital Infusions, Investor Reactions, and the Return- and Risk-Performance of Financial Institutions over the Business Cycle (FEBS-119)

Elyas Elyasiani, Temple University, UK
Loretta J. Mester, Federal Reserve Bank of Philadelphia, and The Wharton School, University of Pennsylvania, USA
Michael S. Pagano, Villanova University, Spain

**Discussant:** Andy Mullineux

**Abstract**
We examine investors' reactions to announcements of large seasoned equity offerings (SEOs) by U.S. financial institutions (FIs) from 2000 to 2009. These offerings include private market infusions as well as injections of government capital under the Troubled Asset Relief Program (TARP). The sample period covers both business cycle expansions and contractions, and the recent financial crisis. We present evidence on the factors affecting FI decisions to issue capital, the determinants of investor reactions, and post-SEO performance of issuers, as well as a sample of matching FIs. Investors reacted negatively to the news of private market SEOs by FIs, both in the immediate term (e.g., the two days surrounding the announcement) and over the subsequent year, but positively to TARP injections. Reactions differed depending on the characteristics of the FIs, and the stage of the business cycle. More financially constrained institutions were more likely to have raised capital through private market offerings during the period prior to TARP, and firms receiving a TARP injection tended to be more levered, and more likely to be a commercial banking or a thrift institution than other type of firm. We find that TARP allowed FIs to increase their lending (as a share of assets), raise their credit risk, and lower liquidity risk, possibly by funding new loans with more stable financing sources such as traditional core deposits. However, we find no evidence that banks' capital adequacy increased after the capital injections. We find that the effects of capital injections on FI performance differed during the two recessionary periods, 2001 and 2007.

## 3. Derivatives-Hedging, Risk Allocation, and Cost of Debt: Evidence from Bank Holding Companies (FEBS-209)

Saiying (Esther) Deng, Southern Illinois University, USA
Elyas Elyasiani, Temple University, USA
Connie X. Mao, Temple University, USA

**Discussant: TBA**

**Abstract**
Consistent with Froot and Stein's (1998) model and Schrand and Unal (1998), we find evidence supporting the risk allocation hypothesis in bank holding companies (BHCs). Banks reduce their exposure to tradable risk (interest rate and foreign currency risks) via derivatives-hedging and simultaneously extend more loans and take greater credit risk in lending (their main area of expertise). This risk allocation strategy is associated with an increase in overall bank risk, measured by the cost of debt, before the 2007-2009 financial crisis but this relationship breaks down during the crisis. Moreover we find that hedging allows banks to extract greater rents from their bank-dependent borrowers, conditional on bank reputation and lending relationship.

## *29. Forecasting: Room F52-B*

**Session Chair:** Petros Kalantonis

**1. Spanish savings banks in the credit crunch: could distress have been predicted before the crisis? A multivariate statistical analysis (FEBS-18)**

Martí Sagarra, Autonomous University of Barcelona, Spain
Cecilio Mar-Molinero, Autonomous University of Barcelona, Spain, and University of Kent, UK
Miguel García-Cestona, Autonomous University of Barcelona, Spain

**Discussant:** Nashwa Saleh

**Abstract**
Spanish savings Banks (*Cajas de Ahorro*) have had a long and distinguished history over more than one hundred years of existence. They have served well the community and small businesses. However, they have been heavily affected by the banking crisis of 2007. Many of them had to merge with other institutions or were rescued. We show that, before the crisis, there were structural differences between successful *Cajas* and those that had to be rescued. The technical approach is based on Multidimensional Scaling Analysis (MDS). MDS has the advantage that the main characteristics of the study can be presented in a visual form, and thus facilitate communication of the results. We complete the study with the time path of four institutions: two that survived and two that had to be rescued.

**2. Towards a New Model for Early Warning Signals for Systemic Financial Fragility and Near Crises: An Application to OECD Countries (FEBS-193)**

Barbara Casu, Cass Business School, City University London, UK
Andrew Clare, Cass Business School, City University London, UK
Nashwa Saleh, Cass Business School, City University London, UK

**Discussant:** Petros Kalantonis

**Abstract**
The prohibitive historic cost of crises, the cost of the recent three year financial crisis with output loss estimates in excess of USD10.0 trillion of 'opportunity loss' global GDP and direct write downs of USD3.4 trillion by agents, and the pursuant *structural* changes which have taken place in the global economy highlight the importance of early warning systems for fragility. Previously existing models had failed miserably to signal warnings for the 2007-2010 crisis and this failure could be partly attributed to the dependent and independent variable specifications and empirical model design as this research demonstrates. Using a signal extraction framework and looking at OECD countries over a 30 year period this paper attempts to identify a number of variables significant in predicting near-crises as a pre-cursor to full-fledged crises. These include growth in pension assets as an indicator for the development of liquidity bubbles, equity market dividend yields as a proxy for corporate balance sheet health, banking sector assets growth and relative size to GDP. We also study the development of asset price bubbles through an equity markets indicator and a house price indicator. Finally we also look at a banking sector funding stability indicator and liquidity indicator on a micro-level. Simultaneously, a dynamic research design improves on previous

static set-ups and enhances the model predictive power and applicability to different time periods.
This paper shows that as early as 2004, clear signals were being given for a number of countries that vulnerabilities were building up with out-of-sample performance better than in-sample in terms of overall noise to signal ratios, showing a significant improvement compared to earlier work. EWS design has significant implications for financial stability and financial regulation.

### 3. The role of financial statements in the prediction of innovative firms. (FEBS-275)

Petros Kalantonis, Technological Educational Institute of Piraeus, Greece
Chrysovalantis Gaganis, University of Crete, Greece
Constantin Zopounidis, Technical University of Crete, Greece

**Discussant:** TBA

**Abstract**
This study was undertaken on the basis of reports in the international research literature that investments in innovation have a higher return compared to conventional investments, on the one hand and on the fact, on the other, that the corresponding information is not distinguisly reported on the financial statements.
Given however the absence of information regarding such investments on the financial statements these findings underline the inadequacy of the financial reporting and the negative effects on market efficiency from the apparent substitution of the financial statements for other non official and probably unsafe sources of financial information. The consequence could be more serious to those investors who are not in the position to seek and use efficiently alternative information sources. The purpose of this study is to investigate the efficiency of Electre Tri method in developing models for indentifying innovative firms.

## *30. Funds - 2: Room G75*

**Session Chair:** Axel Buchner

### 1. Private Equity Fund Fees: Valuation and Incentives (FEBS-262)

Axel Buchner, University of Passau, Germany
Niklas Wagner, University of Passau, Germany

**Discussant:** Alessandro Conciarelli

**Abstract**
Compensation of private equity fund managers typically consists of a fixed management fee and a performance-related carried interest that entitles them to option-like payoffs. We develop a comprehensive model to value carried interest based on risk-neutral pricing techniques. In this model, we assume that investors and managers display constant relative risk aversion (CRRA) and adopt an equilibrium framework in which investors earn zero abnormal returns. This model allows to study incentive effects. The results show that

managers have an incentive for excessive risk-taking in case they only consider fee income from their current fund. We also extend the model to the more realistic setting in which managers take into account potential fee income from follow-on funds. In this case risk-taking incentives depend on the managers level of skill, where highly skilled mangers even have an incentive to damp down risk. Our model also provides a number of other interesting results, including a possible explanation for the existence of the option- like contract that is standard in the private equity industry.

**2. A new framework for funds transfer pricing (FEBS-264)**

Alessandro Conciarelli, Bank of Italy, Italy
Pasquale La Ganga, Bank of Italy, Italy
Pasqualina Porretta, University of Rome "La Sapienza", Italy

**Discussant:** Juha Joenväärä

**Abstract**

In the wake of the financial crisis, one of the biggest failures observed in the financial system refers to the poor evaluation of the exposure to liquidity risk as well as to its pricing. The ideal funding environment preceding the turmoil (where liquidity was plentiful and cheap) led many banks to overlook liquidity and funding implications of deals, thereby encouraging an increase in leverage as well as an excessive maturity transformation to make record profits. In hindsight liquidity revealed itself as a scarce, expensive and strategic resource that requires to be effectively allocated and managed and its cost charged to different business units, products and counterparties accordingly.

According to the extraordinarly changes registered in the financial landscape, marked by more and more competitive markets where funding is available only for shorter periods and at a higher price, liquidity pricing frameworks in banks became an essential tool to measure the risk-adjusted profitability at a more granular level while addressing the impact of liquidity risk and other ALM risks on a financial firms' balance sheet structure, segregating them from operations. Failures to adequately apply liquidity transfer pricing processes, both on- and off-balance sheet, generated risks, due to the misalignment of the risk-taking incentives at individual level and consolidated one, leading to a wrong allocation of capital resource within the business units.

However, the growing importance of liquidity pricing largely derives not only from market events. More recently, worldwide regulators have been increasingly focused on pricing liquidity. The regulatory initiatives2 will pose challenges for banks to overhaul their existing funds transfer pricing (FTP) frameworks and to incorporate formally liquidity risks. As a result banks, especially the largest, cross-border and more sophisticated ones, are revising and reshaping their approaches to meet regulatory expectations as well as to take into account the multi-dimensionality of liquidity risk as well as its interconnections with the organizational structure, the balance-sheet items, etc. This process is underway and still not completed.

In such a perspective, after an introduction on the theoretical frameworks for FTP, the paper reviews some of the methodologies for pricing liquidity, implemented by cross-border banking institutions, pointing out their intrinsic weaknesses. In the light of empirical evidences that covers the period starting just before the crisis to nowadays, we analyze the evolution of the main different FTP components showing the most significant results from a macro and a micro-perspective as well. Some potential areas of improvements and challenges

will be highlighted. Finally, we describe a few benefits achievable through the adoption of a FTP approach.

**3. The Economic Value and Statistical Properties of Manipulation-proof Performance Measures (FEBS-265)**

Juha Joenväärä, University of Oulu, Finland
Jussi Klemelä, University of Oulu, Finland
Robert Kosowski, Imperial College London, UK

**Discussant:** TBA

**Abstract**
In this paper, we analyze the economic and the statistical properties of manipulation-proof performance measure (MPPM) proposed by Goeztmann, Ingersoll, Spiegel, and Welch (2007). Specifically, we propose a novel way to incorporate macroeconomic information into the accurate estimation of conditional MPPMs. Our approach extends and exploits the recent developments in nonparametric estimation methods that are used in portfolio choice literature. Using a large consolidated hedge fund database, we demonstrate that a strategy based on the standard MPPM delivers poor out-of-the sample performance with a significant downside risk. After allowing hedge fund MPPMs vary nonparametrically based on existing macroeconomic environment, we show that the conditional strategy delivers superior out-of-the-sample performance with a negligible tail risk. The performance of the conditional MPPM strategy is impressive relative to other strategies. It outperforms significantly strategies based on the traditional measures (e.g., the t-statistic of Fung and Hsieh (2004) alpha and Sharpe ratio) or recently proposed new measures (e.g., R2 and Strategy Distinctness Index). Our results are robust across hedge fund size groups, even after taking into account typical hedge fund data biases and redemption restrictions associated with portfolio rebalancing.

**10:00 – 10:15**

**Coffee Break**

**10:15 – 11:45**

## Concurrent Sessions (F)

### *31. Modelling – 3: Room F52-A*

**Session Chair:** Michael Doumpos

**1. Cojumps in Stock Prices: Empirical Evidence (FEBS-194)**

Dudley Gilder, Aston Business School, UK
Mark B. Shackleton, Lancaster University Management School, UK
Stephen J. Taylor, Lancaster University Management School, UK

**Discussant:** Alessandro Previtero

**Abstract**
We examine contemporaneous jumps (cojumps) among individual stocks and a proxy for the market portfolio. We examine two hypotheses. The first posits that there should be a tendency for stocks to be involved in (systematic) cojumps with the market portfolio (Hypothesis 1). The second posits that systematic cojumps should be associated with macroeconomic news announcements (Hypothesis 2). Evidence from a variety of daily and intraday cojump detection methods shows that although a small number of stocks are often detected to be involved in systematic cojumps, there is a tendency for stocks to be involved in cojumps with the market portfolio, supporting Hypothesis 1. We find only partial support for Hypothesis 2. There is evidence of an association between systematic cojumps and the news announcements concerning the Federal Funds Target Rate.

## 2. Stock Market Returns and Annuitization: a Case of Myopic Extrapolation (FEBS-248)

Alessandro Previtero, University of Western Ontario, Canada

**Discussant:** Michael Doumpos

**Abstract**
With the earliest cohorts of the Baby Boomers starting to retire, how to manage retirement wealth is a major financial decision that millions of individuals will soon face. In this setting, I provide novel evidence on the time-series determinants of the decision to annuitize. More specifically, I document a strong negative relationship between stock market returns and annuitization. Using a new dataset with more than 103,000 actual payout decisions, I find that positive stock market returns decrease the likelihood of employees choosing an annuity over a lump sum, and vice versa. More precisely, only recent market performance drives annuitization with almost no weight assigned to returns two years before the decision date. Several explanations can account for these findings: wealth effects generated by movements of the stock market; endogenous timing of retirement; volatility of stock market returns and time varying risk aversion; and expectations about labor income or inflationary periods. After addressing these explanations, I present evidence consistent with employees extrapolating from recent stock market returns. I conclude showing that this myopic extrapolation .based on very recent stock market performance .can bear serious welfare consequence and significantly reduce retirement wealth if, for example, individuals annuitize too early because of a market drop. Policy interventions focused at promoting voluntary annuitization as a potential retirement income solution should carefully account for this tendency.

## 3. Strategy evaluation in a business simulation game (FEBS-258)

Constantin Zopounidis, Technical University of Crete, Greece
Evangelos Grigoroudis, Technical University of Crete, Greece
Michael Doumpos, Technical University of Crete, Greece

**Discussant:** Dimitrios Niklis

**Abstract**
Business simulation games are widely used for educational purposes, since they may help students to form and develop their enterprising attitudes. Although different approaches may

be found in the literature, all these business games focus on the management of economic processes, usually in the form of a business. Usually students are part of a group that manages a company, which competes with other companies in the same marketplace that are managed by other groups in the class. Thus, it is necessary for students to take the financial risk of their own decisions. These decisions concern the areas of manufacturing (raw materials, production, staffing, inventory control, etc.), marketing (advertising, market research, etc.), or finance (e.g. short-term and long-term loans). After a predefined number of decision-rounds, the business results of students groups are evaluated, usually in terms of sales or market shares. The main aim of this paper is to present a framework for the evaluation of strategy adopted by students in a business simulation game. The proposed framework is based on a multicriteria decision analysis approach and takes into account the results of decisions made during all rounds. The evaluation process is based on four main criteria (profitability, solvency, performance management, and growth) and a total of 15 sub-criteria. A simple weighted-sum formula is used in the proposed approach, while the assessment of the value functions for these evaluation criteria/sub-criteria is based on experts' knowledge and relevant previous researches. The presented business game is able to improve the strategic and analytical thinking of students, their ability to work in a team, and their interpersonal communication. Moreover, students get used to working in a competitive environment, under time pressure, and without full information, while at the same time they have the ability to practice business theory.

## *32. Bank capitalization: Room G74*

**Session Chair:** Swarnava Biswas

### 1. In Good Times and in Bad: Bank Capital Ratios and Lending Rates (FEBS-86)

Matthew Osborne, UK Financial Services Authority, and City University London, UK
Ana-Maria Fuertes, Cass Business School, City University London, UK
Alistair Milne, Loughborough University, UK

**Discussant:** Glenn Schepens

**Abstract**
This paper examines the impact of bank capital on lending rates using a unique dataset on the 11 largest UK banks over the period 1998-2011. By means of an error correction modelling framework, both long-run effects and short-run dynamics are accounted for while also distinguishing between distressed and normal market conditions. The full sample long-run impact is positive but it weakens or even changes direction during stressed market conditions when well capitalised banks benefit from lower funding costs. There is no significant evidence of banks using higher lending rates to repair short-run deficits of capital. Our results inform the policy debate fuelled by Basel III about the impact of higher capital requirements on the broader real economy.

### 2. Bank reactions after capital shortfalls (FEBS-92)

Glenn Schepens, Ghent University, Belgium
Christoffer Kok Sørensen, European Central Bank

**Discussant:** Swarnava Biswas

**Abstract**
This paper investigates whether European banks have capital targets and how deviations from the target have an impact on a bank's equity composition and activity mix. Assuming that a bank's reaction to higher capital requirements will be similar to the reaction when it deviates from an internal, optimal capital ratio, our results could help in understanding the potential reaction of financial institutions to changes in capital requirements. Furthermore, by providing evidence on the behavior of banks during the recent financial crisis, we contribute to the debate on how banks tend to deleverage their balance sheets during economic downturns. Using quarterly data for a group of European banks between 2004Q1 and 2011Q3, we show that there are notable asymmetries in bank reactions to deviations from optimal equity levels. More specifically, overcapitalized banks prefer to reshuffle risk-weighted assets or increase asset holdings when deviating from their optimal Tier 1 ratio, whereas they rather try to increase equity levels or reshuffle risk weighted assets without changing asset holdings when being below target. Furthermore, when looking at a simple common equity ratio, we do find evidence for deleveraging and lower loan growth for undercapitalized banks during the recent financial crisis, whereas in the pre-crisis periods banks primarily react to deviations from their optimal target by adjusting equity levels, for example through changes in retained earnings.

**3. The beneficial coexistence of banks and markets: The role of Bank Capital and "Credit Lines" (FEBS-124)**

Swarnava Biswas, University of Warwick, UK
Kostas Koufopoulos, University of Warwick, UK

**Discussant:** Matthew Osborne

**Abstract**
We propose a model of financial system architecture that highlights the co-existence and positive interaction between banks and markets in a diversity of opinion setting. Banks emerge endogenously and their interaction with markets is facilitated by the use of credit lines (underwriting) and regulatory bank capital. Bank capital is used as a buffer stock to reassure market investors that the credit line contract will be fulfilled. This leads to an increase in market financing (more positive NPV projects are undertaken). The profits they make on the credit lines enable banks to fund more innovative projects in the future. Thus a two-way complementarity loop is achieved which results in the financing of positive NPV projects that were previously denied credit.

## *33. Financial crisis: Room G77*

**Session Chair:** Pramuan Bunkanwanicha

**1. Are bank loans still "special" (especially during a crisis)? Empirical evidence from a European country (FEBS-31)**

Christophe J. Godlewski, University of Haute Alsace & EM Strasbourg Business School, France

**Discussant:** Pramuan Bunkanwanicha

**Abstract**
We investigate bank loans' specialness with a particular focus on the recent boom and bust cycle. We perform an empirical analysis using event study methodology on a sample of 253 large loan announcements for French borrowers between January 2000 and December 2009.
We find a significant and negative reaction to bank loan announcements which is mostly driven by loan provided during the crisis period. We also document significant changes in bank behavior over the boom and bust cycle, with important contractual and organizational modifications reflecting a potential "wake-up call" of banks during the crisis.

## 2. Banks in Family Business Groups: Pyramid, Lending Behavior, and Financial Crisis(FEBS-52)

Pramuan Bunkanwanicha, ESCP Europe Business School, France
Jyoti Gupta, ESCP Europe Business School, UK-France
Yupana Wiwattanakantang, National University of Singapore, Singapore

**Discussant:** Taisei Kaizoji

**Abstract**
This paper investigates how banks and finance companies operate in a family business group. Using detailed ownership data from Thailand during the period prior to and after the 1997 financial crisis, we find that the controlling families extensively use pyramids to control their banks. The results show that the controlling family pursues different lending strategies across pyramidal tiers. Lower-tier banks tend to extend loans more aggressively and perform more poorly, while upper tier banks carry out more profitable investments. After the crisis hit, upper-tier banks survived and almost all lower-tier banks went bankrupt. Our results suggest that the multilayer structure of bank ownership can affect a bank's lending behaviour and its resistance to economic shocks.

## 3. A Behavioral Model of Bubbles and Crashes (FEBS-90)

Taisei Kaizoji, International Christian University, Japan

**Discussant:** Christophe J. Godlewski

**Abstract**
The aim of this paper is to provide one potential theoretical explanation for questions how asset bubbles come about, why it persists, and what causes a crash. To do this, we propose a new model of bubbles and crashes. We consider an asset market in which the risky assets into two classes, the bubble asset and the non-bubble asset, and the risk-free asset are traded. Investors are divided into two groups of investors who have the different rationality of decision-making respectively. One is rational investors who maximize their expected utility of their wealth in the next period following their rational assessment of the fundamental values of risky assets. Another is noise traders who maximize their random utility of binary choice: holding the bubble asset and holding the risk-free asst. The noise trader's behavior is modeled in a framework of the theory of discrete choice with social interaction (Brock and Durlauf (1999, 2001)), which can be considered as a model of Keynse's beauty contest

metaphor. We elucidate a mechanism that (i) noise-traders' herd behavior gives cause to a bubble, and (ii) their momentum trading prolongs bubble, (iii) a bubble is necessarily ended up with a crash, and (iv) the cycles of bubble and crash are repeated.

## *34. Banking risk - 1: Room F63*

**Session Chair:** Panagiotis Dontis-Charitos

### 1. Systemic Risk and Bank Consolidation: International Evidence *(FEBS-3)*

Gregor N.F. Weiß, Technical University of Dortmund, Germany
Sascha Neumann, Ruhr-University Bochum, Germany
Denefa Bostandzic, Ruhr-University Bochum, Germany

**Discussant:** Panagiotis Dontis-Charitos

**Abstract**
This paper analyzes the systemic risk effects of bank mergers in order to test the "concentration-fragility" against the "concentration-stability" hypothesis. As a unique feature of this study, we propose to measure the systemic risk of a financial institution by its Systemic Crash Probability (SCP), i.e. the lower tail dependence between the bidding bank's stock return and a relevant bank index. We then use the banks' SCP and their Marginal Expected Shortfalls (MES) in order to capture any (positive or negative) merger-related changes in systemic risk. In our empirical analysis on a dataset of 440 international domestic and cross-border mergers that took place between 1991 and 2009 we find clear empirical evidence for a significant increase in both the idiosyncratic default and the systemic risk of acquirers following bank mergers thus confirming the "concentration-fragility" hypothesis. Controlling for possible reverse causality, we show that idiosyncratic default risk is only one of several factors driving the increases in systemic risk caused by bank mergers. Finally, we show that a higher bidder profitability, cross-border diversification and mergers in less concentrated financial sectors shield bidders from increases in systemic risk.

### 2. Driving forces behind risk management in banking(FEBS-184)

Dilek Bulbul, Goethe-University Frankfurt, Germany
Hendrik Hakenes, University of Bonn, Germany
Claudia Lambert, Goethe-University Frankfurt, Germany

**Discussant:** Gregor N.F. Weiß

**Abstract**
This paper investigates the factors influencing banks' decision to engage in active risk management, from both a theoretical and an empirical perspective. In recent decades, credit risk management in banks has become highly sophisticated and banks have become more active in the management of credit risks. We identify two driving factors: bank competition and sector concentration in the loan market. We find empirical support for our hypotheses, using a unique data set of 249 German banks, partially raised by hand. Bank competition pushes banks to implement active risk management. Sector concentration in the loan market promotes credit portfolio modeling, but inhibits credit risk transfer.

3. **Technology and technical efficiency heterogeneity: the case of national development banks in Latin America (FEBS-212)**

Diego Landivar, ROAD, CERDI and ESC Clermont
Patrick Plane, CERDI, University of Auvergne, France
Mohammed Chaffai, University of Sfax, Tunisia.

**Discussant:** TBA

**Abstract**
This article explores the question of the heterogeneous rationales underpinning public intervention in the financial systems. Based on an analysis of the National Development Banks, this paper provides estimates of technical efficiency and technology differences among these institutions. It brings three innovative perspectives to empirical banking and finance literature.
First, long the subject of study, these banks have been paid very little interest since the 1980s as a focus of analysis in contemporary economic literature. However, actual economic context has brought back development banks in the debate on financial regulation. We begin by reviewing the main debate concerning the efficiency of these institutions before updating the issue in light of the current economic and management context.
Secondly, we examine the efficiency of the 29 Latin American national development banks from 11 countries, for which we have created a new database offering a conceptual framework analysed from the standpoint of the heterogeneous nature of these institutions (history, size, instruments, means of intervention, ownership structure, sectorial specialisation, etc.).
Finally, this question will be examined using an empirical latent class distance function model. In a first stage, Latent Class allows to estimate heterogeneous technology classes. In a second stage, we estimate a Stochastic Frontier for each technological regime and derive net measures of technical efficiency. Finally, we explore the determinants of technical efficiencies within each identified class. We have evidence for two technological classes for the sampled banks (61 % belonging to Class 1 and 39% to Class 2). Each class is characterized by a specific profile: Class 2 is defined by increasing return to scale and higher levels of efficiency. We also compare our results with those obtained by a common frontier model.

| **11:45 – 12:00** |
|---|

Coffee Break

| **12:00 – 13:30** |
|---|

## Concurrent Sessions (G)

### *35. Value-at-Risk modelling - 2: Room F52-A*

**Session Chair:** Mario Brandtner

1. **Forecasting Dynamic Hedge Ratios and Value at Risk Using GARCH Models: Evidence From SP 500 FTSE 100 and NIKKEI 225(FEBS-196)**

Mohammad S. Hasan, Kent Business School, UK

Taufiq Choudhry, University of Southampton, UK

**Discussant:** Mario Brandtner

**Abstract**
This paper investigates the behaviour of dynamic hedge ratios in three markets, using five principal variants of GARCH models and compares the forecasting performance of optimal hedge ratios across those models. More specifically, using daily data of the spot and futures contracts of SP 500, FTSE 100, and NIKKEI 225 within the framework of standard GARCH, GARCH-BEKK, GARCH-ECM, GARCH-X, and asymmetric GARCH models, we have estimated the time-varying hedge ratios and compared the forecasting performances of those hedge ratios. We have also computed the minimum capital risk requirement (MCRR) using those hedge ratios to ascertain the superiority of alternative hedging strategy that holds capital adequacy requirement of the fund at a minimum level. Results based on SP 500 data show that MCRR estimates obtained from the GARCH-BEKK performs best among the GARCH class of models in most cases both for short and long hedge. In the case of FTSE 100, GARCH-BEKK uniformly performs best for short hedge, whilst standard GARCH performs better for long hedge in most cases. In case of NIKKEI 225, GARCH-X outperforms other competing models for short hedge in most cases, whilst the standard GARCH performs better in most cases for long hedge. Our comparative results suggest that position in NIKKEI 225 contract is slightly more risky than SP 500 and FTSE 100 contracts.

## 2. On the (Mis)Use of Conditional Value-at-Risk and Spectral Risk Measures for Portfolio Selection – A Comparison with Mean-Variance Analysis (FEBS-247)

Mario Brandtner, Friedrich Schiller University of Jena, Germany

**Discussant:** Ilknur Zer

**Abstract**
We study portfolio selection under Conditional Value-at-Risk and, as its natural extension, spectral risk measures, and compare it with traditional mean-variance analysis. We do not focus only on the derivation of the efficient frontiers, but also consider the choice of optimal portfolios within an integrated framework. We find that spectral risk measures tend towards corner solutions. If a risk free asset exists, diversification is never optimal. Similarly, without a risk free asset, only limited diversification is obtained. The reason is that spectral risk measures are based on a regulatory concept of diversification that differs fundamentally from the reward-risk tradeoff underlying the mean-variance framework.

## 3. Model Risk of Systemic Risk Models (FEBS-253)

Jon Danielsson, London School of Economics, UK
Kevin R. James, London School of Economics, UK
Marcela Valenzuela, London School of Economics, UK
Ilknur Zer, London School of Economics, UK

**Discussant:** Mohammad S. Hasan

**Abstract**
Statistical systemic risk measures (SRMs) have been proposed by several authors. Those generally depend on established methods from market risk forecasting. The two most common SRMs, MES and CoVaR, along with VaR, are compared theoretically and then critically empirically analyzed. They are found to contain a high degree of model risk so that the signal they produce is highly unreliable. Finally, the papers discusses the main problems in systemic risk forecasting and proposed evaluation criteria fur such models.

**4.Risk Model-at-Risk (FEBS-59)**

Christophe M. Boucher, Variances and University of Paris-1 (CES/CNRS)
Patrick S. Kouontchou, Variances and University of Lorraine (CEREFIGE)
Jón Danielsson, London School of Economics, Variances and University of Orléans (LEO/CNRS and EIF).
Bertrand B. Maillet, University of Orléans, France

**Discussant: TBA**

**Abstract**
The recent experience from the global financial crisis has raised serious doubts about the accuracy of standard risk measures as a tool to quantify extreme downward risks. Risk measures are hence subject to a "model risk" due, e.g., to the specification and estimation uncertainty. Therefore, regulators have proposed that financial institutions assess the "model risk" but, as yet, there is no accepted approach for computing such a risk. We propose a general framework to compute risk measures robust to the model risk, while focusing on the Value-at-Risk (VaR). The proposed procedure aims empirically adjusting the imperfect quantile estimate based on a backtesting framework, assessing the good quality of VaR models such as the frequency, the independence and the magnitude of violations. We also provide a fair comparison between the main risk models using the same metric that corresponds to model risk required corrections.

## 36. Modelling – 4: Room F63

**Session Chair:** Laura Ballotta

**1. High-Frequency Exchange Rate Forecasting: An Autoregressive Conditional Multinomial–Autoregressive Conditional Duration Approach(FEBS-168)**

Charlie X. Cai, Leeds University, UK
Qi Zhang, Leeds University, UK

**Discussant:** Matthias Böhm

**Abstract**
We examine a practical application of the autoregressive conditional multinomial–autoregressive conditional duration (ACM–ACD) model (Russell and Engle, 2005) to high-frequency exchange rate forecasting. We have two prime objectives: to examine the model's forecasting performance and to assess the feasibility of constructing intra-day trading rules. Applying the model to three pairs of currencies, we find strong predictability in the high-

frequency quote change data, with the rate of correct predictions varying from 54 to 70 per cent. We demonstrate that filtering the data, by increasing the threshold of mid-price change for evaluating price movement events, can improve forecasting performance. However, over-filtering the intra-day data reduces its information content and lowers forecasting performance. Further, we find that a trading strategy following the predictions of the model can generate an average 5 to 15 per cent daily return. However, this quickly diminishes once transaction costs as low as one basis point are considered, since such a strategy requires on average eight transactions per minute.

## 2. Autocorrelated Returns, Time-Varying Higher Distributional Moments and the Cumulative Prospect Theory (FEBS-185)

Matthias Böhm, University of Ulm, Germany

**Discussant:** Laura Ballotta

**Abstract**

Trading mechanisms, time-varying risk factors and the reaction speed to new market information, among other things, promote autocorrelated returns and time-varying higher distributional moments of investment opportunities. This study provides a bootstrap approach to empirically implementing the cumulative prospect theory (CPT) while considering autocorrelation and allowing for time-varying higher distributional moments. An empirical analysis reevaluates the effect of myopic loss aversion and shows that the market portfolio gains significantly in attractiveness against the risk-free asset when applying the proposed approach. This gain in attractiveness is mostly attributed to the time variation of higher distributional moments of the market portfolio. Nevertheless, evidence demonstrates that more pronounced serial correlation patterns in the return series also affect the attractiveness of the market portfolio. Hence, the approach of this study should be applied when, for example, evaluating investment opportunities, which are based on time series data using the CPT.

## 3. Multivariate asset models using Lévy processes and applications (FEBS-263)

Laura Ballotta, Cass Business School, City University London, UK
Efrem Bonfiglioli, Mitsubishi UFJ Securities International PLC

**Discussant:** Charlie X. Cai

**Abstract**

In this paper we propose a multivariate asset model based on Lévy processes for pricing of products written on more than one underlying asset. Our construction is based on a two factor representation of the dynamics of the asset log-returns. We investigate the properties of the model and introduce a multivariate generalization of some processes which are quite common in financial applications, such as subordinated Brownian motions, jump diffusion processes and time changed Lévy processes. Finally, we explore the issue of model calibration for the proposed setting and illustrate its robustness on a number of numerical examples.

## *37. Emerging markets & Banking: Room G74*

**Session Chair:** Renatas Kizys

**1. Bank ownership, privatization and performance: evidence from a transition country *(FEBS-55)***

Chunxia Jiang, Middlesex University, UK
Shujie Yao, University of Nottingham, UK and Xi'an Jiaotong University, China

**Discussant:** Diego Landivar

**Abstract**
This paper combines the static effect of ownership and the dynamic effect of privatization on bank performance in China over 1995-2010 reporting a significantly higher performance by private intermediaries – joint stock commercial banks and city commercial banks – relative to state-owned commercial banks. However, publicly traded banks, subject to multiple monitoring and vetting in capital markets, perform better regardless of ownership status. The privatization of banks has improved performance with respect to revenue inflow and efficiency gains, both in the short- and long-run (initial public offerings). These results are more relevant and significant for banking institutions with minority foreign ownership.

**2. Do Speculative Bubbles Crowd Out International Equity Flows? - Some Empirical Evidence for South-East Asia (FEBS-244)**

Christian Pierdzioch, Helmut-Schmidt-University, Germany
Renatas Kizys, University of Portsmouth, UK

**Discussant:** TBA

**Abstract**
We analyzed the links between international equity flows and speculative bubbles in the equity markets of six South-East Asian countries over the period 1991–2006. Based on a cointegration analysis, we found significant equilibrium cointegration links between international equity flows and speculative bubbles. Before the Asian economic and financial crisis, an increase in speculative bubbles was accompanied by a decrease in net equity outflows. Our results are consistent with theories that predict that speculative bubbles absorb domestic savings and, thereby, crowd out capital outflows from financially underdeveloped countries.

## *38. Banking risk – 2: Room G77*

**Session Chair:** Emmanuel Mamatzakis

**1. Competition and Financial Stability of European Cooperative Banks *(FEBS-269)***

Franco Fiordelisi, University of Rome III, Italy
Davide Salvatore Mare, University of Edinburgh Business School, UK

**Discussant:** Miguel A. Duran

**Abstract**
We assess the dynamic relationship between competition and bank risk (both in the short and long run) in the European cooperative banking between 1998 and 2009. We obtain three main results. First, we show that bank market power negatively Granger-cause banks' stability meaning that there is a positive relationship (both in the short and long run) between competition and stability supporting the competition-stability view proposed by Boyd and De Nicolò (2005). Second, we do not find evidence that there is a statistically significant relationship between the Herding measure and the Z-Score. Third, we show that the financial crisis from 2007 have had a negative impact on cooperative bank stability, but it did not changed the relationship between competition and stability.

**2. Moral Hazard, Risk Shifting and Banks' Financial Structure (FEBS-215)**

Miguel A. Duran, University of Malaga, Spain
Ana Lozano-Vivas, University of Malaga, Spain

**Discussant:** Davide Salvatore Mare

**Abstract**
This paper analyzes the moral hazard conflict among banks' equity and debt holders. Specifically, we empirically study a straightforward risk shifting problem in banking institutions; that is, a bank's equity (debt) decreases (increases), but the overall risk position of that bank deteriorates. To perform this analysis, we divide the financial structure of banks into three categories: equity, deposits and other funding. This division considerably enriches the empirical analysis of moral hazard: it makes it possible to determine, not just whether shareholders are shifting risk or not, but, if they are, to whom risk is being shifted. Thus, we can establish a taxonomy of the types of moral hazard behavior based on the group of debt holders to which risk is transferred, and hence we can test the type of moral hazard problem that a banking sector is facing. The empirical exercise focuses on the first 15 members of the European Union in 2002-2009. Our main findings suggest that sample banks engaged in moral hazard behavior. The empirical analysis also indicates that the three Pillars of Basel II do not seem to have been effective to control for moral hazard incentives. Nevertheless, in tune with the new rules about conservatory buffers in Basel III, our results suggest that the incentives to engage in moral hazard behavior are weaker in banks holding capital buffers.

**3. Bank efficiency and regulations: Evidence from new EU member states (FEBS-112)**

Emmanuel Mamatzakis, Sussex University, UK
Psillaki Maria, University of Piraeus, Greece

**Discussant:** Khaled Soufani

**Abstract**
This paper investigates the relationship between cost efficiency and regulations and structural reforms in credit, financial, labor and business in a sample of banks from Central and Eastern Europe from 2004 to 2009. Moreover, we use an assortment of information, not used before such as indicators of the European Bank for Reconstruction and Development (EBRD), on the degree to which regulations/reforms in credit/financial labor and business market may impede competition and distort bank behavior and, as a result, generate cost inefficiency in

the mix of inputs used by banks. Cost inefficiency scores for banks in ten new EU member countries of Central and Eastern Europe are estimated using a stochastic frontier analysis. These are then employed in panel models, both static in terms of standard fixed effects models but also dynamic and panel-VAR models that count for endogeneity issues, to estimate the impact of regulation on bank specific efficiency in transition countries so as to determine the impact of regulation and liberalisation that accession to the EU requires. Overall, the results indicate that structural reforms exert a positive impact on bank efficiency.

**4. Are Islamic banks systemically riskier than conventional banks? An empirical investigation (FEBS-48)**

Mohammad Sabr, Concordia University, Canada
Khaled Soufani, Concordia University, Canada
Terence Tse, ESCP Europe Business School, UK

**Discussant:** Emmanuel Mamatzakis

**Abstract**
There has been an increased interest in the structure and growth of Islamic finance and banking over the past few years. This has been the cases especially after the financial crisis that hit the global banking and financial system, which resulted in one of the severest economic slowdown that we have had for many years. This paper will addresses the question to whether Islamic banks are systematically more risky than conventional banks and the impact of such a risk appetite structure on performance.

| **13:30 – 14:30** |
|---|

**Lunch**

| **14:30 – 15:15** |
|---|

**Plenary Session B: Invited speech by Prof. Ike Mathur**

**Title: "On the efficiency of the UPREIT organizational form: Implications for the subprime crisis and CDO's"**

**Abstract**
This paper studies optimal real estate organizational forms as a means of enhancing real estate values in the ongoing subprime crisis. We model the organizational response to stakeholder conflicts and regulatory changes to show how they evolve to an optimal form and undertake an optimal capital structure to enhance the welfare of investors. Using the examples of the REIT and RELP organizational forms, we show how the rivalry between taxable and institutional investors shapes the UPREIT form. We employ a two-period partial equilibrium model to demonstrate that UPREITs adapt to regulatory changes by (i) meticulously acquiring a hybrid form that contains the desirable features of both REITs and RELPs, and (ii) efficiently trading off debt claims between their

constituent investor bases. This adaptation enhances welfare by mitigating administrative costs, agency costs, bankruptcy costs, illiquidity costs and taxes.

**15:15 – 15:30**

**Coffee Break**

**15:30 – 17:30**

**Plenary Session C: "Banks, regulation and the current financial crisis",**
**Angela Knight, John Peachey, David Stack, Ike Mathur,**
**Patrick Gougeon**

**17:30 – 18:00**

**Coffee Break**

**18:00 – 19:30**

## *39. Volatility modeling: Room F52-A*

**Session Chair:** Paola Zerilli

**1. Optimizing Bounds on Security Prices in Incomplete Markets. Does Stochastic Volatility Specification Matter? (FEBS-54)**

Naroa Marroquin-Martinez, University of the Basque Country, Spain
Manuel Moreno, University of Castilla La-Mancha, Spain

**Discussant:** Paola Zerilli

**Abstract**
We extend and generalize some results on bounding security prices under two stochastic volatility models that provide closed-form expressions for option prices. In detail, we compute analytical expressions for benchmark and standard good-deal bounds. For both models, our findings show that our benchmark results generate much tighter bounds. A deep analysis of the properties of option prices and bounds involving a sensitivity analysis and analytical derivation of Greeks for both option prices and bounds is also presented. These results provide strong practical applications taking into account the relevance of pricing and hedging strategies for traders, financial institutions, and risk managers.

**3. Modeling the volatility of stock returns in periods of financial market stress (FEBS-129)**

Christopher F Baum, Boston College, USA and DIW Berlin
Paola Zerilli, University of York, UK

**Discussant:** Alejandro Bernales

**Abstract**
In this paper we evaluate the statistical properties of daily US stock index returns over more than three decades. The relationship between volatility of the stock return process and its fourth moments is shown to be time-varying over that horizon, which we model by identifying three subperiods with more stable properties. We find that subperiod-specific models of stochastic volatility offer superior performance to a single model fit to the entire period. During periods of high kurtosis, we propose a new model for stock returns pricing that can hold even in the event of severe financial market stress. For instance, implied volatility of the S&P500 index during 1987 was characterized by very sharp movements in both directions. Unlike existing models which only allow for dramatic increases in volatility, the proposed model allows the stock return volatility to wander about its path without any restrictions. This allows the volatility to either rise or fall violently while the entire process remains positive. The Efficient Method of Moments is used to estimate the parameters of the stock index returns process and its corresponding volatility. Improved modeling of volatility has important implications for option pricing.

**3. Can We Forecast the Implied Volatility Surface Dynamics of Equity Options? Predictability and Economic Value Tests (FEBS-199)**

Alejandro Bernales, Bank of France, France
Massimo Guidolin, Bocconi University, Italy - IGIER - University of Manchester, UK

**Discussant:** Manuel Moreno

**Abstract**
We examine whether the dynamics of the implied volatility surface of equity options contain exploitable predictability patterns. The option pricing predictability is expected due to the learning behaviour of agents in option markets. In particular, we explore the possibility that the dynamics of the implied volatility surface of individual equity options may be associated with movements in the volatility surface implicit in S&P 500 index options. We present evidence of strong relationships in the cross-section and the dynamics between implied volatility surfaces of equity options and S&P 500 index options. Moreover, we show that the predictability patterns of equity options are better characterized by the incorporation of information from the recent dynamics in the implied volatility surface of S&P 500 index options. Additionally, we analyse the economic value of the equity option predictability through trading strategies using straddle and delta-hedged portfolios, which produce abnormal risk-adjusted returns.

## *40. Risk management: Room G74*

**Session Chair:** Nikolaos Karampatsas

**1. Liquidity commonality and risk management (FEBS-4)**

Gregor N.F. Weiß, Technical University of Dortmund, Germany
Hendrik Supper, Technical University of Dortmund, Germany

**Discussant:** Nikolaos Karampatsas

**Abstract**
We propose to model the joint distribution of bid-ask spreads and log returns of a stock portfolio by using Autoregressive Conditional Double Poisson and GARCH processes for the marginals and vine copulas for the dependence structure. By estimating the joint multivariate distribution of both returns and bid-ask spreads from intraday data, we incorporate the measurement of commonalities in liquidity and comovements of stocks and bid-ask spreads into the forecasting of three types of liquidity-adjusted Value-at-Risk (L-IVaR). In a preliminary analysis, we document strong extreme comovements in liquidity and strong tail dependence between bid-ask spreads and log returns across the firms in our sample thus motivating our use of a vine copula model. Furthermore, the backtesting results for the L-IVaR of a portfolio consisting of five stocks listed on the NASDAQ show that the proposed models perform well in forecasting liquidity-adjusted intraday portfolio profits and losses.

**2. Valuation Effects of Credit Ratings in Mergers and Acquisitions (FEBS-161)**

Nikolaos Karampatsas, University of Surrey, UK
Dimitris Petmezas, University of Surrey, UK
Nickolaos G. Travlos, ALBA Graduate Business School at The American College of Greece

**Discussant:** Gregor N.F. Weiß

**Abstract**
We examine the valuation effects of credit ratings in M&As and find that in acquisitions of targets with high credit rating levels, higher synergy gains and bidder announcement returns are generated. This is attributed to lower discount rates applied in the valuation of the combined firm for acquisitions of high quality firms. Additionally, (highly) rated target firms realize larger announcement returns. Overall, the findings are explained by the information disclosure role of CRAs, which alleviates information asymmetry regarding target firm quality. Our results are robust after controlling for several characteristics, and endogeneity of the decision to obtain a credit rating.

**3. European macroeconomic stress testing (FEBS-241)**

Konstantinos A. Moutsianas, Aristotle University of Thessaloniki, Greece
Kyriaki Kosmidou, Aristotle University of Thessaloniki, Greece

**Discussant:** TBA

**Abstract**
The forces of deregulation, financial innovation, internationalization and the increasing competition have changed rapidly the banking system during the last years. In the new financial environment, the banking sector plays a dominant role in the smooth function of financial systems. Recently, the banking system has been at the heart of the global financial crisis and, therefore, the prudential assessment of the banking institutions is important in order to prevent systemic crises.
The monitoring of the banking institutions is related closely with the financial stability. The central banks, the supervisory authorities and the management of the financial institutions show particular interest in ensuring the necessary conditions for the normal operation of the

financial systems. In this framework, the assessment of the resilience of the banking systems to hypothetical adverse macroeconomic environment is attempted. A risk management tool for the evaluation of the consequences of the macroeconomic volatility has become the macro stress testing, a methodology that has been widely used by International Monetary Fund and the European Banking Authority.
Our research includes macroeconomic stress tests for the 15 EU banking systems. The objective is, firstly, the specification of the macroeconomic variables that affect the credit quality of the banking institutions and, secondly, the application of adverse values in order to estimate the change in the credit quality ratio. For this purpose, regression analysis is performed among loan loss provisions (LLPs) and macroeconomic variables such as GDP, gross national income, unemployment rate, foreign direct investment index, current account balance and inflation. In general, the results indicate that the macroeconomic environment affects the LLPs in different ways and intensity for each bank and each country.

## *41. Interbank lending: Room F52-B*

**Session Chair:** Andreas Krause

### 1. The Role of Interbank Lending in the Prediction of Individual Bank Failures during a Banking Crisis: Analysis of a Network Model of Systemic Risk (FEBS-93)

Andreas Krause, University of Bath, UK
Simone Giansante, University of Bath, UK

**Discussant:** Christian Eufinger

**Abstract**
We analyze the determinants of individual bank failures arising from solvency and liquidity shortages in a stylized banking system following Krause and Giansante (2012) where banks are characterized by the amount of capital, cash reserves and their exposure to the interbank loan market as borrowers as well as lenders. A network of interbank lending is established that is used as a transmission mechanism for the failure of banks through the system. We trigger a potential banking crisis by exogenously failing a bank and then investigate the likelihood of an individual bank failing. Most notably we find that the probability of a bank failing depends on the characteristics of the network of interbank loans and the market structure, while balance sheet relationships are of limited influence. We also establish different determinants for failures arising from solvency and liquidity shortages.

### 2. Interbank network and bank bailouts: Insurance mechanism for non-insured creditors? (FEBS-188)

Tim Eisert, Goethe University Frankfurt, Germany
Christian Eufinger, Goethe University Frankfurt, Germany

**Discussant:** Andreas Krause

**Abstract**
This paper presents a theory that explains why it is beneficial for banks to engage in circular lending activities on the interbank market. Using a simple network structure, it shows that if

there is a non-zero bailout probability, banks can significantly increase the expected repayment of uninsured creditors by entering into cyclical liabilities on the interbank market before investing in loan portfolios. Therefore, banks are better able to attract funds from uninsured creditors. Our results show that implicit government guarantees incentivize banks to have large interbank exposures, to be highly interconnected, and to invest in highly correlated, risky portfolios. This can serve as an explanation for the observed high interconnectedness between banks and their investment behavior in the run-up to the subprime mortgage crisis.

**3. The LIBOR rate: what does it look like during turmoil times? *(FEBS-210)***

Julien Fouquau, Rouen Business School, France
Philippe Spieser, ESCP Europe Business School, France

**Discussant:** TBA

**Abstract**
The aim of this paper is to study the dynamics of the interbank rates during the turmoil times. The reference we used is the Libor rate (1 and 3 months maturities), an essential benchmark for many contracts notably the CDS and derivative products. To achieve our goal, we used various types of econometric tests. After checking the non-stationarity versus the non linearity, we adopted four methodologies to test the presence of unit root tests versus breaks. Our main findings are, for the principal currencies Libor references (Us, Euro), that they are actually stationary with breaks. It confirms so the bias of classical tests, already stated by Perron 1989.

## *42. IPOs & Managerial discretion: Room F63*

**Session Chair:** Hafiz Hoque

**1. Loan loss provisioning behavior, income smoothing and the role of banks' ownership structure (FEBS-99)**

Vincent Bouvatier, Paris West University Nanterre La Défense, France
Laetitia Lepetit, University of Limoges, France
Frank Strobel, University of Birmingham, UK

**Discussant:** Stefano Bonini

**Abstract**
We empirically examine whether the way a bank might use loan loss provisions to smooth its income, potentially in order to obscure its risk taking, is influenced by its ownership structure. Using a panel of European commercial banks, we find evidence of such behavior for banks with a high level of ownership concentration. This behavior is less pronounced in countries with stronger supervisory regimes, but independent of the type of the majority shareholder and the level of shareholder protection. Banks with a low level of ownership concentration are found not to display this kind of discretionary income smoothing behavior.

**2. Grandstanding and Spinning in VC-Backed IPOs on AIM UK (FEBS-178)**

Alberto Dell'Acqua, Bocconi University, Italy
Antonio Guardasole, Bocconi University, Italy
Stefano Bonini, Bocconi University, Italy

**Discussant:** Hafiz Hoque

**Abstract**
We run regression analyses on a hand-collected dataset including 507 IPOs on the UK Alternative Investment Market (AIM) from FY 2004 to FY 2010 and provide new empirical evidence that venture capitalists (VCs) *do* grandstand firms and strike *quid pro quo* agreements with underwriters, thus increasing the underpricing level. The grandstanding and spinning hypotheses also hold when controlling for IPO years and industries. We document that when VCs behave in this way they do not assume any certification role with respect to managed firms.

**3. Role of Asymmetric Information and Moral Hazard in IPO Underpricing and Lockups (FEBS-272)**

Hafiz Hoque, Swansea University, UK

**Discussant:** Frank Strobel

**Abstract**
This paper analyses the role of asymmetric information and moral hazard on IPO lockups and underpricing. Evidence show that lockups emanate from moral hazard rather than information asymmetry. Consistent with previous studies, IPO underpricing is related to information asymmetry. Determinants of lockup expiration returns show that information asymmetry is one of the determinants of asymmetric information sample, but not for moral hazard sample for share price drop around lockup expiration. I further analyse the alternative signalling via lockups and/or underpricing and find evidence in favour of that.

## *43. Stock and bond markets – 2: Room G75*

**Session Chair:** Alain Chevalier

**1. Oil price shocks on stock market volatility in Europe (FEBS-6)**

Stavros Degiannakis, Athens University of Economics and Business, Greece
George Filis, University of Portsmouth, UK
Renatas Kizys, University of Portsmouth, UK

**Discussant:** Menachem Abudy

**Abstract**
Recent studies reveal that oil prices have an impact on aggregate and firm uncertainty as they raise doubts about future production costs and future sales volumes. Furthermore, it is argued that economic uncertainty can be approximated by the stock market volatility. In this light, we investigate the effects of oil price shocks on stock market volatility in Europe by focusing

on three measures of volatility. Those are the conditional and the realised volatility, which measure the current stock volatility and the implied volatility, which is a forward looking measure. The conditional and realised volatilities are estimated for both the aggregate stock market and industrial sector indices. This paper also considers the origins of the oil price shock. The findings suggest that supply-side shocks do not affect volatility, whereas, oil price changes due to aggregate demand shocks lead to a reduction in stock market volatility. The results are qualitatively similar for the aggregate stock market volatility and the industrial sectors' volatilities. Finally, we show that the aggregate demand oil price shocks have a significant explanatory power on both current- and forward-looking volatilities.

**2. Nonmarketability and the Value of Employee Stock Options (FEBS-19)**

Menachem Abudy, Bar-Ilan University, Ramat-Gan, Israel
Simon Benninga, Tel-Aviv University, Israel

**Discussant:** Alain Chevalier

**Abstract**
We adapt the Benninga-Helmantel-Sarig (2005) framework to value employee stock options (ESOs). The model quantifies non-diversification effects, is computationally simple, and provides an endogenous explanation of ESO early-exercise. Using a proprietary dataset of 26,843 ESO exercise events at 67 publicly-traded firms, we measure the non-marketability ESO discount. We find that the ESO value on the grant date is approximately 45% of a similar plain vanilla Black-Scholes value. The model is aligned with empirical findings of ESOs, gives an exercise boundary of ESOs and can serve as an approximation to the fair value estimation of share-based employee and executive compensation. Using the model we give a numerical measure of non-diversification in an imperfect market.

**3. The acquisition of non public firms in Europe: bidders' returns, payment methods and stock market evolution (FEBS-24)**

Alain Chevalier, ESCP Europe Business School, France
Etienne Redor, Audencia Nantes School of Management, France

**Discussant:** Renatas Kizys

**Abstract**
This paper studies the returns of non public firms acquisitions. Like the American studies do, we show the existence of a "non public firms acquisition effect" for the European multiacquirer firms: abnormal returns are much higher for non-public firms (subsidiaries or private held firms) than for public firms. Our results also show that the returns are influenced by the stock market cycles: the returns are significantly higher when the market is bullish than when it is bearish. According to us, this result is consistent with Shleifer and Vishny (1988) and with Amihud and Lev (1981) and can be explained by agency phenomena. Indeed, we think that when the market is bearish, managers have incentive to compensate for the decrease of their income if it is index-linked to the performance of the firm, thanks to deals that will maximize their own wealth, at the risk of destroying value for their shareholders.

## *44. Bank lending: Room G77*

**Session Chair:** Zeno Rotondi

**1. Bank Capital and Loan Takedown Risk (FEBS-51)**

Bryan Stanhouse, University of Oklahoma, USA
Duane Stock, University of Oklahoma, USA

**Discussant:** TBA

**Abstract**
During the financial crisis of 2008 not just one but many banks suffered sustained pressure on their reserves (primary and secondary) as credit lines were dramatically taken down by non-financial borrowers. As banks simultaneously sought to liquidate assets, intermediary losses were inevitable. For poorly capitalized intermediaries even a small loss on converted assets can lead to distress and potential insolvency. In an interconnected financial system, this can cause markets to freeze up and lead to severe repercussions for the rest of the economy. Because banks acting in their own best interests tend to pay too little attention to such "systemic risk," it becomes the responsibility of regulators to safeguard the functioning of the U.S. financial system. This paper investigates the relationship between intermediary capital and the stochastic usage of credit commitments under two circumstances. Our research provides insight into capital determination by profit maximizing intermediaries when they are, alternatively, constrained and unconstrained in their management of bank equity. Comparisons of the behavior of bank capital under these two schemes will hopefully lead to more effective regulation of our financial system by authorities.

**2. SME financing and the choice of lending technology in Italy: complementarity or substitutability? (FEBS-251)**

Francesca Bartoli, UniCredit Group
Giovanni Ferri, University of Bari, Italy
Pierluigi Murro, Luiss Guido Carli University, Italy
Zeno Rotondi, UniCredit Group

**Discussant:** TBA

**Abstract**
This paper investigates SME financing in Italy. The literature distinguishes between two main different lending technologies (LTs) for SMEs: transactional and relationship LTs. We find that banks lend to SMEs by using both LTs together, independently of the size and proximity of borrowers. Moreover, we show that when soft information is taken into account in transactional (relationship) lending it increases (decreases) the probability of firms being credit rationed. These results support the view that LTs can be complementary, but reject the hypothesis that substitutability among LTs is somehow possible for outsiders by means of hardening of soft information.