Econometric Research in Finance Workshop 2017

Workshop program

15.09.2017

Session 1: Aula I (9:00-10:30)

Ekaterina Kazak, **Winfried Pohlmeier**
Testing Out-of-Sample Portfolio Performance.

This paper studies the quality of portfolio performance tests based on out-of-sample returns. By disentangling the components of out-of-sample performance we show that observed differences are to a large extent driven by the differences in estimation risk. Our Monte-Carlo study reveals that the puzzling empirical results of inferior performance of the theoretically superior strategies based on the out-of-sample comparison mainly result from the low power properties of these tests. Thus our results provide an explanation why the null hypothesis that the simple equally weighted portfolio cannot be outperformed by theoretically superior portfolio strategies is not rejected in many out-of-sample horse races regardless of the underlying testing strategy. For the applied researcher we provide some guidance to cope with the problem of low power. In particular, we show how despite their low power out-of-sample performance tests can be optimally used for a pretest-based portfolio strategy

Soohun Kim, **Robert A. Korajczyk**
Large Sample Estimators of the Stochastic Discount Factor.

Pukthuanthong and Roll (2016) derive an "agnostic" candidate stochastic discount factor (SDF) that relies on the use of a large sample of individual security returns. They show that the estimated SDF converges to the true SDF as both the cross-sectional sample size, *N*, and the time-series sample size, *T*, approach infinity. The candidate SDF is agnostic in the sense that no assumptions are required about agents' utility functions or about the nature of systematic risk in the economy. We argue that being slightly less agnostic by imposing a more restrictive factor structure on the SDF leads to significant improvement in the performance of the estimated SDF and propose two alternative estimators.

Christian Brownlees, Eulalia Nualart, Yucheng Sun
Realized Networks.

We introduce LASSO -- type regularization for large dimensional realized covariance estimators of log -- prices. The procedure consists of shrinking the off -- diagonal entries of the inverse realized covariance matrix towards zero. This technique produces covariance estimators that are positive definite and with a sparse inverse. We name the estimator realized network, since estimating a sparse inverse realized covariance matrix is equivalent to detecting the partial correlation network structure of the daily log-prices. The large sample consistency and selection properties of the estimator are established. An application to a panel of US bluechips shows the advantages of the estimator for out -- of -- sample GMV asset allocation.

Session 2A: Aula I (11:00-13:00)

Antoni Vaello-Sebastià, Magdalena Vich-Llompart
Can we really discard forecasting ability of risk-neutral densities?

Option-implied Risk-Neutral distributions (RNDs) are of major importance in many applications. Their forward-looking feature makes them more informative about future movements, but at the same time they do not incorporate any risk premium being biased with respect to physical distributions. This encourages us to assess their forecasting ability, which to date has been proved to fail. Estimation of RNDs is not standard in the literature, there are different approaches, parametric and non-parametric, which has been used but no method has been proved to be the most accurate. To avoid the effects of the method chosen for the estimation of the RNDs, the current paper analyzes the forecasting ability of RNDs estimated using either parametric (mixture of two Log-Normal distributions) and non-parametric (kernel and splines) methods. In order to assess the forecasting ability of our RNDs, we run block-bootstrap simulations. In this paper we consider three major index, S&P500, Nasdaq 100 and Russell 2000 for which we have a long series of data, ranging from 1996 to 2015, which is of special interest since it encompasses two major crisis; and the tail area is considered. Difrerently to existent literature, our results conclude failure to reject their forecasting ability, being these results are consistent across the different indexes and methodologies

Carlos Diaz
Extracting the Information Shocks from the Bank of England Inflation Density Forecasts.

This paper shows how to extract the density of the shocks of information perceived by the Bank of England between two consecutive releases of its inflation density forecasts. These densities are used to construct a new measure of ex ante inflation uncertainty, and a measure of news incorporation into subsequent forecasts. Also dynamic tests of point forecast optimality is constructed. It is shown that inflation uncertainty as perceived by the Bank was decreasing before the financial crisis, increasing sharply during the period 2008-2011. Since then, uncertainty seems to have stabilized, but it remains still above its pre-crisis levels. Finally, it is shown that forecast optimality is lost at some points during the financial crisis, and that there are more periods of optimal forecasts in long term than in short term forecasting.

Zuzanna Karolak
Commodity prices forecasting using autoregressive nonlinear models.

The study verifies the hypothesis whether using nonlinear methods helps to outperform no-change forecast for selected group of commodity prices. Four class of nonlinear models are tested: threshold, smooth transition, Markov switching and neural network models. The forecasting competition is designed to simulate real-time forecasting scheme. The research shows some evidence for predictive capabilities of nonlinear methods but only in short-term horizon.

Gazi Salah Uddin, Ramazan Gençay, Maziar Sahamkhadam
Does multi-scale decomposition improve forecasting horizons in crude oil market?

Session 2B: Room 1B (one floor above the ground floor) (11:00-13:00)

Fatma Pinar Erdem, Etkin Ozen, Ibrahim Unalmis
Are Macroprudential Policies Effective Tools to Reduce Credit Growth in Emerging Markets?

Macroprudential policies (MPPs) have become a part of the policy toolkit, especially in the aftermath of the 2008 global financial crisis both in advanced and emerging market economies. Main objectives of MPPs are mitigating systemic risks and enhance financial stability. Since MPP implementations are rather new and generally considered as uncharted territory of macroeconomic policies, a new literature on the implementation and effects of MPPs have been emerged. In this paper, using a data set of 30 countries and panel VAR approach, we contribute to this literature by testing whether MPPs are effective in controlling domestic credit growth in emerging markets and developing countries in the wake of a positive global liquidity shock. Results indicate that MPPs are effective to limit domestic credit growth especially during the expansion phase of the credit cycle. Second, the number of MPP tools matter to better manage the domestic credit growth. We argue that combination of MPPs prevent leakages and improve the effectiveness of MPPs under a global liquidity shock.

Mihir Dash
Capital Adequacy and Systemic Risk of Banks in India.

This study examines the role of capital adequacy in systemic risk for banks in India. The moderator variables considered for the study include bank size, non-performing assets, leverage, deposits, loans & advances, and investments. A fixed-effects panel regression model was applied, with bank fixed effects and year fixed effects. The study contributes to the literature by proposing the concept of minimum level of capital adequacy for neutral systemic risk, which is the level of capital adequacy for which the systemic risk is non-positive. The results of the study indicate that bank size, non-performing assets, leverage, and loans & advances have a significant impact on the minimum capital adequacy for neutral systemic risk. Further, the results of the study suggest that the role of capital adequacy in systemic impact was different for public sector and private sector banks. The study suggests that, instead of setting a fixed capital adequacy level for all banks, the model can be used to set capital adequacy targets for individual banks with estimates or projections of the bank's characteristics. This can be used in conjunction with the Basel III framework in order to rationalise capital adequacy targets.

Oskar Krzesicki, Marcin Borsuk
Multimarket Competition and Profitability: Evidence from Ukrainian banking.

Satellite models that translate macroeconomic shocks into changes in banks conditions are the key component of stress testing process. To capture banks sensitivity to adverse economic conditions it is necessary to map macroeconomic variables into indicators that describes banks financial conditions. Macroeconomic shocks affects banks' balance sheets in a variety of ways Directly they increase credit risk leading to rise in loan losses and fall of net interest margin. Macroeconomic shocks tent to coexist with market and liquidity shocks. Market shocks in our framework are modeled by capital outflows that lead to interest rate shock and FX shock. Interest rate increase influences banks by reduction in their sovereign bonds valuation while depreciation of PLN influences households that have loans denominated in foreign currencies. The share of households that would default on their mortgages due to FX changes is calculated using data on households income buffers. The result is added to the credit risk costs increase caused by other macroeconomic shocks. Liquidity shock is accounted for by liabilities outflow and margin calls on FX hedging transactions. Those two together with liquid assets shrinkage resulting from fall in sovereign bonds valuation may lead to insufficient coverage of liquidity outflows. In the final stage banks that may not be able to fulfill capital adequacy ratios are identified and effect of their inability to repay debts to other financial institutions is accounted for (contagion effects).

Axel Hedström, Nathalie Zelander, Juha Junttila, Gazi S. Uddin
Emerging Market Contagion under Geopolitical Uncertainty.

This paper studies the spillover effects in ten emerging markets and their reaction to several uncertainty variables. We find that the emerging markets have high risk of contagion amongst themselves but lower spillover with respect to the global markets. Hence there is a potential for diversification benefits between emerging and global markets. The regional market integration seems to in our view be caused by trade integration, which has a policy implication for trade agreements systemic risks in financial markets. Using a spillover index based on a vector autoregressive model with a generalized variance decomposition model as in Diebold and Yilmaz (2014) and controlling for the uncertainty measures in the form of: geopolitical risk (GPR), financial risk (VIX) and commodity risk proxy (Oil prices), we find that GPR shows no impact on either return or volatility spillover. However VIX shows high interdependence especially with volatility, while the oil market is largely receiving the spillover effects from other markets, indicating e.g a consistent relationship running from stock to oil markets.

Session 2C: Aula II (11:00-13:00)

Maryna Brychko, Hassan Obeid

Stakeholder's financial relations and bank business management efficiency: evidence from Ukraine.

The paper is devoted to development of evaluation of the bank business management efficiency in the system of financial relationships of their stakeholders. Non-achievement the required level of value-added banking business we divided into two groups: 1) associated with irrationality of constructing system of financial relations with their stakeholders; 2) related to the common for homogeneous group of banks problems with adaptation to national conditions of conducting banking business. In a sample of 1228 Ukrainian banks, we find that domestic banks are more adapted to the conditions of banking system although in long run foreign banks are more efficient.

Michał Chojnowski, **Piotr Dybka**, Mariusz Kapuściński

Measurement of economic sentiments on the housing market and their impact on monetary policy transmission mechanism.

Carlo Milani

Are foreign banks better at measuring and managing risks? Evidence from European credit markets.

Do foreign banks have lower credit default rates? The existing literature and the recent evidence from the European Banking Authority given after the EU-wide stress testing in 2016 provide a positive answer. Considering several possible mechanisms that may be responsible for this evidence, I find that foreign banks seem to be better at measuring and managing risks, thanks to i) higher technology availability; ii) lower susceptibility to political pressures; iii) better corporate governance; and iv) the possibility to export more stringent financial regulation. Moreover, I find that the advantages of banking integration are greater in banking markets in which i) the degree of competition is low; ii) there are better legal and institutional characteristics; and iii) the moral hazard is limit by avoiding too much state aid granted after the 2007–2008 financial crisis. The evidence of this paper supports the idea that the European Banking Union will increase financial stability.

Georgios P. Kouretas, **Małgorzata Pawłowska**

Does the market structure have an impact on the supply of alternative bank loans in the EU?

Session 2D: Room 1A (one floor above the ground floor) (11:00-13:00)

Danilo Carità, Giovanni De Luca, Giampiero Maria Gallo
The evaluation of combination of forecasts for realized volatility using asymmetric loss functions.

In this work we provide the findings of a forecast combination analysis carried out on the realized volatility series of three market indexes (DAX, CAC, AEX). Two volatility types (5 minutes, kernel) have been considered. Different loss functions suggest that forecasts computed through combining models are generally more accurate than those provided by single models. However, the choice of the latter can affect significantly the goodness of the results.

Katarzyna Bień- Barkowska
Extensions of the ACD-augmented peak-overthreshold method for assessing value at risk.

We propose a new dynamic peak-over-threshold (POT) model for extreme events in financial markets. The random times when the sizes of negative financial returns exceed given threshold are modeled in line within the marked point process theory, where the marks correspond to the magnitudes of extreme losses. We develop a multivariate version of the autoregressive conditional duration (ACD) model, where the conditional intensity of extreme negative returns has not only the self-exciting form, but also the cross-exciting structure, since it can instantaneously react to the time-varying covariates such as large positive returns or volatility peaks. In our approach the observed timing of all these intervening events can accelerate or decelerate the awaited occurrence of extreme losses. We apply the extended version of the ACD model to six major stock indexes and show that it outperforms the baseline ACD-based POT methods for forecasting value-at-risk.

Krzysztof Borowski
Normal distribution of returns of 65 stock exchange indexes.

The paper verified the hypothesis regarding normal distribution of returns of 65 equity indexes for the following time intervals: daily, weekly, monthly, quarterly and yearly. The analyzed rates of return were calculated in the following outline: closing-closing, opening-opening, opening-closing and overnight. The analyzed indexes were ranked due to the convergence of their return to normal distribution with the use of the following tests: Jarque-Bera, Shapiro-Wilk and D'Agostino-Pearson.

Anmar Al Wakil
Do Hedge Funds Hedge? Evidence from Tail Risk Premia Embedded in Options.

This paper deciphers tail risk in hedge funds from option-based dynamic trading strategies. It demonstrates tradeable tail risk premia strategies as measured by pricing discrepancies between real-world and risk-neutral distributions are instrumental determinants in hedge-funds performance, in both time-series and cross-section. After controlling for the Fung-Hsieh factors, a one-standard deviation increase in volatility risk premia is associated with a substantial decline in aggregate hedge-funds returns of 25.2% annually. The results particularly evidence hedge funds that significantly load on volatility (kurtosis) risk premia subsequently outperform low-beta funds by nearly 11.7% (8.6%) per year. This findings suggest to what extent hedge-funds alpha arises from selling crash insurance strategies or from managerial skills. Indeed, we evidence some hedge-funds styles can particularly time tail risk by actively mitigating their exposure before new market crashes. Hence, this paper paves the way for reverse engineering the performance of sophisticated hedge funds by replicating implied risk premia strategies.

Poster Session: Entresol (13:45-14:30)

Aleksandra Wójcicka
The dynamic approach to financial ratios analysis: an experimental approach.

In credit risk assessment many models and methods are used. They base on various input (endogenous and exogenous data). Many approaches use financial ratios to establish company's performance and condition as the data is relatively homogenous and easily accessible. It is believed that they are the best source of information on company's standing. Usually, the assessing institution (e.g. bank) sets a specified range for a given financial ratio. The level of ratio within that range is desirable and is supposed to prove that company is in good condition. Yet, many companies permanently reach the level out of the range (which is regarded as unfavorable) but still manage to survive and, on the other hand, some companies have exemplary levels of financial ratios and still are eventually declared bankrupt (in a long-term horizon). Therefore, the idea that it is not the absolute level of the ratio or the range they fall into, that is informative but the change (quarterly or annually) that brings the most important hints regarding actual situation of the company, is considered. The paper investigates the changes (positive/negative) between the values of chosen annual financial ratios and their influence on the future performance of the company in one- and two-year horizon as well as their ultimate survival.

Rafal Raciborski
Structural and financial cycle.

This paper develops a methodology which, in contrast to conventional methods, uses both, structural and financial indicators for estimating output gaps. Output gap is assumed to be driven by two latent cyclical components, one with a typical business cycle periodicity, associated with movements of "real economy" variables, and one with a much longer medium-term periodicity, associated with financial variables. The baseline model, which contains three variables (output, total credit and capacity utilization) has been estimated for 7 countries (Germany, Spain, France, Italy, Portugal, Japan and US). It is found that output gaps that are identified using financial variables tend to be longer and have larger amplitude than the conventional 'business cycle'. In line with the literature, it is found that the current slow recovery in many of the considered countries coincides with a negative cycle associated with its financial component. However, with the exception of Spain, both components have substantially contributed to the dynamics of output gap since the 70ies. This gives credence to the proposed here methodology.

Larysa Zomchak, Veronika Marusina
MIDAS-model of Ukrainian GDP forecasting on the basis of mixed social-economic development data.

The article investigates the dependence of Ukraine's GDP of the 13 social-economic indicators, predicts the quarterly GDP of Ukraine with modifications of the MIDAS model, which allows working with mixed data. The work presents forecasts of the dynamics of GDP of Ukraine on the basis of MIDAS regression using quarterly gross domestic product data in actual prices from Q1 2009 to Q4 2016 (UAH million) and monthly data of macroeconomic indicators for the period from January 2009 to March 2017. The quality of the proposed models is evaluated and a conclusion are made about their reliability and expediency of practical application. Proposed methods are implemented in the software environment R.

Rumiana Górska
Decomposition of sovereign CDS spread using the concept of factorization.

Sovereign CDS (Credit Default Swap) is a derivative that provides insurance of repayment of the government's loans and may be considered as a market indicator of the insolvency risk of a country. CDS spread depends both on the so-called economic fundamentals (i.e. macroeconomic variables such as level of indebtedness, debt structure, the cost of servicing the debt, debt to GDP relation, the rate of GDP growth etc.), as well as global factors (global financial market conditions, market liquidity, investor expectations etc.)
The objective of the study is to identify factors affecting the sovereign CDS spreads of selected countries: Germany, France, United Kingdom, Italy, Spain, Portugal, Greece, Czech Republic, Hungary and Poland for the period from 2008 to 2016. In general, factor models postulate that observed variables can be expressed as

a linear combination of factors that are sources of systematic risk and the random component that reflects the unsystematic risk. Factor analysis shows that there are two common factors that have explained about 90% of the variation of the CDS spreads. After identifying these factors, a decomposition of the spreads are made using the concept of factorization, which allows the measuring of the response of individual countries to the change of risk factors. The idea of factorization was introduced by Ho (1999), who used it for the decomposition of the total rate of return in the model CAPM for the bond market. The decomposition presents the influence of the systematic and specific risk factors on CDS spreads of the surveyed countries.

Aneta Maria Kłopocka
Does the Buffer Stock Model Explain the Household Saving Rate in CEE Countries? An empirical analysis of Poland.

Following the reduced-form buffer stock saving model proposed by Carroll et al. (2012), three determinants of the household saving ratio are identified: household net financial wealth, credit conditions, and the unemployment risk faced by households. An analysis of the household saving rate in Poland finds that although all three explanatory variables play a statistically significant role, they do not necessarily provide a full explanation of changes in the household saving rate.

Ali Aga Ismayilzade Atxam
Human resources as the most important production and investment resource.
Theoretical and practical issues of interrelation of incomes and expenditures of the population with industrial investments are considered in the article. In the theoretical aspect, special attention is paid to the consideration of J. Keynes's concept of the ratio of the propensity of the population to consumption or accumulation, depending on the specific economic situation. In practical terms, the dynamics of the development of aggregate savings in two developing countries over the past 18 years and its impact on aggregate accumulation are examined.

Alba Kruja
Non-linearity of the debt-growth relationship. Alabanian empirical evidence.

Debt is a two-edged sword. Understanding debt trajectory can be as important as the debt level in understanding future growth prospects. Albania was able to maintain a positive growth level, but high level of its public debt, so it is viewed as necessary to see how costly is it in terms of economic growth, when debt is above the threshold, through using the econometric regression analysis over time series (OLS), for the period 1997-2015. To determine the non-linearity that exists between public debt and economic growth, data for Albania, it is used quadratic function of debt. Identifying a within-country threshold effect would indeed inform policy makers of the presence of a country-specific tipping point, which may guide macroeconomic policies and fiscal adjustments. The results shows that coefficient of the debt variable possesses a positive sign whereas the coefficient of the debt squared variable possesses a negative sign. This would imply that public debt at lower levels has a positive impact on growth, while at higher levels a negative impact prevails. The model of quadratic function is one of the endogenous models that allows only the determination of a debt regime, by using the first derivative. The second derivative of the quadratic function demonstrates the presence of functional form U-shaped, with a maximum level reached at 52.66 %.

Larysa Zomchak, Andriy Skrypnyk, **Maryna Nehrey**
An analysis of deposit portfolio in macroeconomic instability.

In 2014 the main tendency of Ukrainian economy was the losing of great deposit value. In this article we wish to explore a deposit portfolio structure in macroeconomic instability. We applied two approaches to the standard optimization portfolio: risk minimization for a given maximum return and return maximization for a given maximum risk. Of the two approaches to the standard optimization problem of portfolio: risk minimization at a given minimum return and return maximization for a given maximum risk the advantage was given the latter. The exchange rate risks are the main factors that have a significant impact on the end result. The optimum structures deposit portfolio was calculated for six different situations in national and world financial markets. Comparison of the optimal portfolio structure with real historical data showed that customers of the banking system over evaluate the reliability of the financial system.

Tchai Tavor
A Modified Baumol Approach.

The main reason for holding money is to use it as a means of payment in commodity and service transactions. However, holding cash money can lead to spontaneous spending and possibly monetary loss. The traditional Baumol approach is essentially concerned with the tradeoff between the need for holding cash money as a means of payment for transactions and the cost of holding money balances - the loss of yield or interest. The psychological element of spontaneous and emotional purchases caused by holding cash is not considered. For this reason, although there are definitely benefits to holding cash, many individuals, as a precautionary measure, tend to reduce the amounts of money in their pockets. We present a modification to the original Baumol equation by introducing into the equation a third element relating to undesired and non-valuable purchases due to money availability/accessibility. This additional element shrinks the attitude to hold money by private customers.

Worku R. Urgaia
Impact of foreign direct investment on GDP growth in the East Africa.

This paper is an empirical investigation of the impact of Foreign Direct Investment (FDI) on Economic Growth in East Africa for the period 1970-2015. The FDI inflow is a key element in providing a means for creating stable and long-lasting Economic Growth or real GDP. FDI is one among various dynamic resource inflows into developing countries which plays an important role in economic development by supplementing domestic savings in capital accumulation, creating innovation and income growth, transferring modern technology and employment generation. Examining the correlation between FDI and Economic Growth cannot identify the direction of causation between the two, in different time horizons using traditional approaches such as dynamic panel ARDL. However, the time scaling wavelet decomposition method can help to recognize the dynamic causality in time horizons. The Granger causality of wavelet analyses of each country for a panel indicates that there is a bi-directional dynamic relationship between real GDP and FDI in the short-term, medium-term and long-term. According to the empirical evidence, the long run estimated coefficients reveal that a one percentage increase in FDI significantly increases the real GDP by about 0.16 percent for a panel of seven East African countries

Mohd Afjal
Testing Causal relations of Macroeconomic Determinants with the Stock Market in India: A Time Series Analysis.

The present study examine the relationship between the stock market (BSE Sensex) of India and eight macroeconomic variables, namely, M3 Money Supply, Call Money Rate, Exchange Rate, FII, WPI, IIP, Crude Oil and GDP using monthly data of 22years from April, 1994 to March 2016. The major objective of the study is to investigate the dynamics of short run and long run linkages between macroeconomic indicators and stock prices. Johansen's co-integration and vector error correction model (VECM) have been applied to explore the long-run equilibrium relationship between stock market (BSE) index and macroeconomic variables. The investigation reveals that macroeconomic variables and the stock market index are co-integrated and, therefore, a long-run equilibrium relationship exists between them. It is perceived that the stock prices positively relate to variables except M3 Money supply, WPI and call money rate. The coefficient of the Error Correction Term (ECT), as shown in the table is positive and statistically insignificant at 5% level. The granger causality test results indicate the presence of causality between the variables. Though the results rule out the possibility of any bidirectional causal relationship, it explores two unidirectional relations which Sensex shares with crude oil price and exchange rate and rest shows no relation. Therefore, it could be inferred that stock market of India is volatile both in the short run and in the long run due to shocks in the macroeconomic indicators. Greater macroeconomic stability will ensure lesser volatility in the stock market. As the macroeconomic variables of the country grow, stock market would be more matured. Effective government policies for attracting FIIs, stabilizing exchange rate and keeping crude oil price in control are awaited for strengthening the stock market.

Peterson Owusu Junior, Adam Mohammed Anokye, George Tweneboah
Comovement of real exchange rates in the West African monetary zone

In three different ways of lead-lag causal relationship, covariance/correlation, and coherence we apply the wavelets analysis via the Continuous Morlet Wavelet Transform to delineate the significant frequency-time domain lead-lag relationships for the West African Monetary Zone member countries for real US dollar exchange rates and their absolute log returns from January 2001 to April 2015. The results indicate that lead-lag bilateral associations at different periodicities vary across the pairs of countries. No one country comes off as leading conveniently for both real and absolute returns of the exchange rates. Our results corroborate other evidences of non-convergence of exchange rates in the monetary zone, which hinders the eventual implementation of the single currency in the ECOWAS region.

Alexandra M. Espinosa
The Cournot-Ricardo Solution under Domestic Free Movement of Labour.

This paper proves the non-stability of monopolistic competitive solution if workersmove from low to high prot industries. Thus, the labour rationality matters, since these movements are shown to contribute to increase the degree of international competitiveness. However, the properties of that convergence depend on the characteristics of the labour market. In that, if workers of only one country can move, the convergence to the competitive Ricardo-Mill solution strongly depends on which country isassumed to have free movement of workers. Also, if workers of both countries can freelymove, that solution does not converge. In conclusion, under interindustry movement of labour, economies reach a specialization which could not coincide with that predicted by the competitive solution.

Jugnu Ansari
Financial Constraints and Financing Distress of Corporate.

We characterize the changes in credit quality of a large sample of listed Indian corporates. Multiple indicators suggest that credit quality declines sharply between 2010 and 2015, creating a thick tail of vulnerable corporate debt. Stress is primarily due to a sharp contraction in aggregate corporate growth, a modest drop in profitability, and imbalanced financing patterns. Market models of default risk show that the stress has an asymmetric pass-through with greater effects on state-owned banks than on private ones. Remedies for corporates hinge on reviving growth and external equity cycles while those for banks pose more difficult choices.

Chinmaya Behera, Biswashree Tanaya Priyadarsin
Nexus between Monetary and Fiscal Policies in India: Role of Central Bank and Government.

Fiscal and monetary policies are macroeconomic stabilization tools often used independently to anchor the uncertainty in any given economy. Studies across economies find that both the policies complement each other. The prime objective of this study is to examine nexus between monetary and fiscal policies in India. Four major variables such as output gap, gross fiscal deficit, inflation and repo rate are taken into the consideration for the study. Quarterly data set from 2001-02Q1 to 2016-17Q4 are obtained from the Reserve Bank of India data base. Using Vector Autoregressive (VAR), Impulse Response Function (IRF) and Variance Decomposition techniques, the study finds that the response of inflation to output gap shocks is negligible. Therefore, central bank must avoid taking any counter cycle action whenever government acts pro-cycle manner on output gap. Similarly, government should avoid taking any pro-cycle action whenever central banks act counter cycle manner on policy rate as the response of output gap is to policy rate shocks is negligible.

Session 3A: Aula I (14:30-16:00)

Jana Ohls
Moral Suasion in Regional Government Debt Markets.

In the context of the German regional government bond market, this paper studies the hypothesis that governments use moral suasion to persuade home (state-owned) banks to hold home government debt. The empirical approach makes use of heterogeneity in German banks' state bond holdings between and within banks across different issuers over time. Results show that home (state-owned) banks hold a significantly higher amount of home state bonds when fiscal fundamentals of the home state are weak. Banks located in other German states hold fewer state bonds in these situations. These findings are in line with moral suasion by state governments and are robust against controlling for alternative hypotheses such as risk-shifting by banks, political endearing, lending opportunities or information asymmetries.

Karolina Konopczak, Michał Konopczak
Impact of international capital flows on emerging markets' sovereign risk premium – demand vs. vulnerability effect.

In recent years many developing economies attracted significant foreign capital. An increased share of non-residents in public debt affects sovereign bond yields in two opposing ways: triggering a downward pressure on yields in reaction to increased demand, and an upward pressure reflective of overreliance on external funding and greater vulnerability to sudden stops of capital inflows. Based on panel cointegration analysis of 14 emerging economies, this study – contrary to previous empirical literature – indicates that in the long run the positive-signed vulnerability effect may prevail over the negative-signed demand effect, though with significant heterogeneity across countries.

Andreas Tsopanakis, Meilan Yan, Dalu Zhan
Financial stress relationships among Euro area countries: An R-vine Copula approach.

Since the European sovereign debt crisis, one of the biggest challenges of keeping Euro area financial stability is the negative co-movement between the vulnerability of public finance, the financial sector, security markets stresses as well as economic growth, especially in peripheral economies. This paper utilities a ARMA-GARCH based R-vine copula method to explore tail dependance between the Financial Stress Indices of eleven euro area countries with an aim of understanding how financial stress are interacting with each other. Understanding such relationship between countries' financial stress will help policy makers to identify a more ecient route towards recovery. In this research, we find larger economies in the Euro area tend to have closer upper tail dependence in terms of positive shocks, while smaller economies tend to have closer lower tail dependence with respect to negative shocks. Finland is generally tail independent with other countries in terms nancial stress in extreme situation. Our estimated R-vine shows Spain, Italy, France and Belgium are the most inter-connected nodes which underlying they might be more efficient targets to treat in order to achieve a quicker stabilizing.

Session 3B: Room 1B (one floor above the ground floor) (14:30-16:00)

Krystian Jaworski
Density forecasts of emerging markets' exchange rates using Monte Carlo simulation with regime switching.

We develop a novel method to produce density forecasts of foreign exchange rates using Monte Carlo simulation with regime-switching depending on global financial markets' sentiment. Using multiple density forecast evaluation tools the proposed approach have been examined in one month ahead forecasting exercise for 22 emerging markets currencies rates vs. dollar. According to the log predictive density score criterion, in case of the majority of emerging markets' foreign exchange rates, the forecasting performance of the proposed approach is superior to the random walk forecast and AR-GARCH benchmarks. Full-density evaluation approach and Value at Risk backtesting analysis indicate correct calibration of the model. The conducted evaluation of the proposed approach indicates that such tool can be suitable for economists, risk managers, econometricians, or policy makers focused on producing accurate density forecasts of foreign exchange rates. The proposed approach is a valuable contribution to the existing literature on foreign exchange density forecasting.

Konrad Kostrzewa, Tomasz Szabluk, Maciej Kowalczyk
Sovereign bond CDS portfolio risk modeling with copulas

We present a method for estimating Value at Risk of a portfolio consisting of a sovereign bond and the CDS issued on that bond using static copula functions. The paper shows that for European countries using copula functions with tail dependence can significantly improve 1-day VaR forecasts.

Yongli Wang
Optimal Window Selection for Forecasting in The Presence of Recent Structural Breaks.

This paper proposes two feasible algorithms to select the optimal window size for forecasting in rolling regression. It develops the framework of Inoue, Jin, and Rossi (2017), keeping the desired properties, like the weak dependence, multi-step ahead forecasting and asymptotic validity. The Monte-Carlo experiments show that the proposed bootstrap method in this paper outperforms their original algorithm in almost all cases. It is also shown that the forecasts from the proposed methods are superior to those from other existing methods in some cases, and close to the best forecasts in other cases. However, when the break occurs far before the time of making forecasts and the break size is significant, using only post-break data is almost always the best strategy.

Session 3C: Aula II (14:30-16:00)

Tho Pham, Oleksandr Talavera, Mao Zhang
Self-employment, financial development and well-being: Evidence from developing countries.

This paper investigates the degree of well-being among entrepreneurs in Ukraine, China and Russia and to what extent financial development can facilitate the entrepreneurs' satisfaction. Our findings suggest that Chinese and Russian entrepreneurs experience a higher level of wellbeing while the self-employed in Ukraine are prone to dissatisfaction. Furthermore, financial development does not play an important role in Chinese entrepreneurs' satisfaction, as they tend to rely more on informal credit. Differently, greater financial development could enhance entrepreneurs' satisfaction in urban Ukraine and rural Russia by easing their financial constraints. In addition, the improvement in financial sector could also raise the probability of switching to self-employment among Russian individuals, which might lead to higher competition faced by entrepreneurs in urban centers. As a result, the satisfaction level of entrepreneurs in urban Russia declines with financial development.

Andreas Stephan, **Aleksandar Petreski**
Spatial dimension of the credit risk: spatial filter approach.

In this research it was shown that, in general, spatial filter enhance the fit and moderately improve the prediction of the logit credit risk model. It was observed that the fit and prediction results depend on the created weight matrix when using spatial filtering. With the increase of the neighbor links, the prediction by the spatial model increase and slightly outperform the base model. Detected positive autocorrelation indicate the existence of clusters of defaults within geographical area, which could confirm the need for use of spatial filter or other spatial techniques. Also, existence of positive spatial pattern in the credit risk assessment could be taken in consideration by the national banking regulators (central banks) and appropriately treated in the regulation, so that estimated credit risk parameters reflect the true risk condition of the companies and their microeconomic surrounding.

Dorota Skała
Does shareholder structure affect income smoothing in Central European banks?

The aim of this paper is to analyse the link between bank income smoothing and shareholder structure, using a sample of Central European banks. Using data for 2004-2014, we demonstrate that foreign banks incite their subsidiaries to use loan loss provisions for income smoothing purposes. This process intensifies after the outbreak of the financial crisis and persists after the crisis. State banks show varying degrees of income smoothing, with more intense smoothing before the crisis and a diminished link between provisions and income during- and after the crisis. Overall, we provide important evidence for an effect of foreign bank ownership upon loan loss reserve policy in subsidiary banks, extending the existing evidence on shock transmission from home to host countries only through the credit supply channel.

Session 3D: Room 1A (one floor above the ground floor) (14:30-16:00)

Christoph Sulewski
The Impact of Long-Short Speculators on Agricultural Commodity Futures Prices.

Adam Zaremba, Anna Czapkiewicz, **Barbara Będowska-Sójka**
Idiosyncratic Volatility, Returns, and Mispricing: No Real Anomaly in Sight.

Recent empirical evidence has shown that the relationship between idiosyncratic volatility and a stock's expected return depends on the pricing of the stock: it is negative among overvalued stocks and positive among undervalued ones. We provide both theoretical and numerical evidence that this risk-return relationship might be driven purely by mathematical properties of return distributions. Using a simulation-based approach, we document that even in completely random samples the correlation between idiosyncratic risk and mean returns depends on the ex-post estimation of abnormal returns.

Po-Lin Wu, Wasin Siwasarit
Capturing the order imbalance with hidden Markov model: a case of SET50 and KOSPI50.

Based on the empirical evidence of the recent strand of the literature, Market Efficiency creation process is not instantaneous, but rather attains over short-horizon of time. With the low liquidity market, the price movement of financial assets can be predicted by order imbalance indicators. In contrast, in a more liquidity market, the predictability of return is significantly decreased. In this study, we implement one of the well-known machine learning models for pattern recognition known as the Hidden Markov Model (HMM) with order imbalance to forecast the price movement of selected stocks in markets with different levels of liquidity which are the Stock Exchange of Thailand (SET) and Korea Exchange (KRX). As the consequence, we can create an algorithmic trading strategy based on the states of risky assets captured by the models. The result is consistent with the previous literature that both the predictability of the models and the profitability of the strategy diminish as the frequency decreases and market liquidity increases. Remarkably, our model in the market with lower liquidity is able to generate signal that achieves average hit ratio of 83.38% in predicting the risky assets' positive price movement at frequency of 5 minutes.

Session 4: Aula I (16:30-18:00)

Wojciech Charemza, Carlos Diaz, Svetlana Makarova
Quasi ex-ante inflation forecast uncertainty.

We argue that the *ex-post* forecast uncertainty measures developed from the distributions of forecast errors differ from the corresponding *ex-ante* measures because of the impact of monetary policy decisions. By approximating the distribution of forecast errors with the weighted skew-normal distribution, we derive a proxy measure of inflation uncertainty which is, to an extent, free from the effects of monetary policy decisions. This in turn leads to the development of the concept of *uncertainty ratio*, which shows the relative impact of monetary policy on reducing inflation forecast uncertainty. The uncertainty ratio is tested by comparing it with measures of central bank independence for 38 countries, and then it is applied to the BRICS countries, (Brazil, Russia, India, China and South Africa), the UK and the US. It is concluded that the greatest policy contribution to a reduction in inflation forecast uncertainty is for countries which either conduct a long-established and relatively pure inflation targeting policy (South Africa, and the UK), and clandestine inflation targeting (India and the US). The smallest reduction is for countries that mix inflation targeting with exchange rate stabilisation (China and Russia).

Adam Golinski
Monetary Policy at the Zero Lower Bound: Information in the Federal Reserve's Balance Sheet.

We examine the impact of the purchases of Treasury securities by the Federal Reserve on the Treasury bond yields. In the zero lower bound period the actual purchases of Treasury securities by the Federal Reserve are positively related to changes in the long maturity Treasury yields. This effect is driven primarily by the positive relation of the Treasury purchases with the bond risk premium, but they are also positively related with the expected inflation rate and the real rate of interest. These effects are strong and robust both in the monthly and the weekly data, and specific to the zero lower bound period. Since the Federal Reserve's purchases are also positively correlated with the cash flows to equity mutual funds and stock market returns, the evidence is consistent with the safety (and liquidity) channel hypothesis as put forward by Krishnamurthy and Vissing-Jorgensen (2011).

Marcin Kolasa, **Michał Rubaszek**
Does foreign sector help forecast domestic variables in DSGE models?

This paper evaluates the forecasting performance of several small open economy DSGE models relative to a closed economy benchmark using a long span of data for Australia, Canada and the United Kingdom. We find that opening the economy does not improve, and even deteriorates the quality of point and density forecasts for key domestic variables. We show that this result can be to a large extent attributed to an increase in forecast error due to a more sophisticated structure of the extended setup. This claim is based on a Monte Carlo experiment, in which an open economy model fails to consistently beat its closed economy benchmark even if it is the true data generating process.