Editorial for the Special Issue on 'Computational Methods for Russian Economic and Financial Modelling'

Fantazzini, Dean

Moscow School of Economics, Moscow State University

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Editorial

Dean Fantazzini

Moscow School of Economics,
119992, Leninskie Gory, 1, Building 61,
M.V. Lomonosov MSU, Moscow, Russia
Fax: +7 495 5105256
E-mail: fantazzini@mse-msu.ru
E-mail: dean.fantazzini@gmail.com

Biographical notes: Dean Fantazzini is an Associate Professor in Energy Economics, Applied Econometrics and Risk Management at the Moscow School of Economics – Moscow State University. The author has to his credit more than 40 publications, including three monographs. On the 28/04/2009 he was awarded for fruitful scientific research and teaching activities by the former USSR President and Nobel Peace Prize winner Mikhail S. Gorbachev and by the MSU rector Professor Viktor A. Sadovnichy.

This double-issue contains 11 papers invited for the first special issue on "Computational methods for Russian economic and financial modelling". It was an attempt to explore and bring together practical, state-of-the-art applications of computational techniques with a particular focus on Russia and the Commonwealth of Independent States. The response was beyond expectations and managed to cover a wide range of issues, so that a double-issue was considered: the first dealing with Finance and the second with Economics.

Fantazzini and Fomichev propose a set of multivariate models, including both Google data and macroeconomic aggregates, which greatly improve the forecasting of the real price of oil. They show that models, including both Google data and macroeconomic aggregates statistically outperform the simple no-change forecast in the short term, while multivariate models including only Google data outperform the simple no-change forecast also for medium and long-term forecasts up to 24 steps ahead. In this perspective, using Google search data can be a simple and powerful way to summarise a large amount of information worldwide.

Peresetsky tests the dependence of the Russian stock market on the world stock market, world oil prices and Russian political and economic news during the period 2001–2010. He finds that oil prices are not significant after 2006, while the Japan stock index is significant over the whole period. Moreover, he shows that political news has a short-term impact. These factors confirm the structural instability of the Russian financial market.

Ivin, Kurbatskiy and Slovesnov introduce several mathematical methods to estimate the time necessary to make a conclusion about a fund manager's performance, using the leading Russian managed funds. They show that short-term periods are not optimal a priori and the evaluation period must be not less than two years. Furthermore, they show

that in some special cases the Russian MICEX index cannot be considered a benchmark to compare different funds and they suggest a universal index, providing a VBA programme for its implementation.

Penikas and Petrova model the growth and consolidation tendencies of the Russian banking system by using Markov chains methods. They argue that, between 2010 and 2020, the number of banks is expected to decrease almost two times, whereas total assets should grow more than 2.5 times, while the return on assets is unlikely to increase more than 10%.

Balaev considers a set of multivariate models for modelling returns on Russian equities and then compares these approaches by computing optimal portfolios of three types: absolute minimum variance portfolio, portfolio with minimum variance subject to a lower boundary for expected return and portfolio with maximum expected return subject to an upper boundary for variance.

Malugin, Hryn and Novopoltsev assess the creditworthiness of Belarussian non-financial companies. On the basis of the company's financial reports data, they propose a system of credit measures called 'relative statistical credit ratings', which includes the company ratings, the branch of the economy ratings and the integral indicator of creditworthiness of the national economy. The software developed for the proposed statistical methodology passed a preliminary analysis on an expanded database in the National Bank of the Republic of Belarus, and its results confirm the acceptable effectiveness of this approach in solving some problems which the Belorussian Central Bank faces.

Malakhovskaya and Minabutdinov build a DSGE model for an economy with commodity exports, and estimate this model with Russian data, focusing on the quantitative effects of commodity price dynamics. They found that despite a strong impact on GDP from commodity export shocks, business cycles in Russia are mostly domestically based. Although they do not explicitly consider an optimal monetary policy issue in their paper, their conclusion implies that it is reasonable for policymakers to switch to inflation targeting, as the Central Bank of Russia is supposed to do by 2015.

Demidova compares possible determinants of attitudes towards immigrants in the European Union, Russia and Ukraine. She founds that in Russia, Ukraine and Europe, the public perception of immigrants improves as the educational level of respondents increases. At the same time, more religious citizens in Russia, Ukraine and new European countries perceive the cultural impact of immigrants to be greater, whereas those in old European countries exhibit the opposite tendency. Moreover, immigration policy that is successful for European countries may be not suitable for Russia and Ukraine, because both the composition of immigration flows and the determinants of public attitude toward immigrants differ sufficiently.

Pilnik, Pospelov, Radionov and Zhukova propose a general economic equilibrium model of the Republic of Kazakhstan. Their model includes eight macroagents: four of the macroagents, Household, Producer, Bank, Owner, are described by optimisation problems, while the other four macroagents follow prescribed scenarios. All agents contact through market interactions. Their model is calibrated on quarterly data of 2005–2010 and it is able to represent the main effects and trends in the economy of Kazakhstan.

Khokhlov, Pospelov and Pospelova present a support system for economic modelling named ECOMOD. This system uses the computer algebra system Maple and supports both numerical computations and analytical study of models. ECOMOD can be used to

calibrate intertemporal equilibrium models of the Russian and the Kazakhstan economies. The system is particularly efficient for structures similar to general economic equilibrium with non-standard descriptions of agents.

Sokolova studies the process that guides the evolution of inflation expectations in Russia, and she estimates a hybrid Phillips curve that includes proxies for both backward- and forward-looking components of inflation expectations. Her analysis suggests that to a large extent inflation expectations in Russia remain backward-looking. Hence, it is recommended to take action to enhance agents' confidence in the Central Bank's policy before switching to aggressive inflation targeting.

I want to thank the authors for contributing to this special issue. I also address special thanks to all referees for their hard work and dedication. Many thanks to the Editor-in-Chief Giovanni Cerulli for his continuous support and help and to all the Inderscience staff for great editorial assistance.