

Summary

A Simple Model of Crises Prediction

Smirnov A.D.

Financial crises were studied as disturbances of a debt monetization process. A simple model was proposed for the critical values prediction of several financial indicators. The forecast of these values was made on the basis of the IMF global financial stability statistics. The model was used to investigate the three types of financial interrelations. The first embraced processes of a debt monetization, economic growth and leverage, all these processes being modeled as the «Malthusian» equations. Then the group of distributions of a random number of crisis occurrences in the last 105 years was studied. The expected value of a sample number of crises was used to parameterize Pareto distributions of financial indicators. Their critical values being defined for the equal probabilities of system's collapse and survival, would have been reached approximately by the year 2015. Hence, contrary to the positive trends being quite noticeable in the post-crisis period, the global financial system seems to have a great chance to be drowned under the «second wave» of a crisis.

Key words: financial bubble; credit meltdown; complex system; financial crisis; critical point; debt monetization.

Earnings Inequality and Informal Economy in Russia (2000–2010)

Lukiyanova A.L.

In this paper I study and compare the earnings distributions for formal and informal workers using the data from the RLMS HSE survey for 2000–2010. I find that during the whole period earnings inequality was significantly higher in the informal sector than in the formal sector. Informality has statistically significant impact on the distribution of earnings, but its contribution is much smaller than the effects of other variable such as gender, education, region, and settlement type. Earnings inequality dramatically decreased in both sectors over the

2000–2010 period. In the formal sector the changes in the earning distribution were mainly generated by the changes in the distribution of hourly earnings. In the informal sector the reduction of inequality went through two channels: differences in both hourly rates and hours of work were declining. This reflects several underlying forces: a declining share of workers without permanent job and low barriers between the sectors (as inequality decreased by similar amount in both sectors). In fact, one third of the overall decline in the variance of logs over the 2000–2010 period is due to workers without permanent employment.

Key words: earnings inequality; informal sector; decomposition.

Multivariate Financial Time Series Analysis: A Comparison of Approaches to Modeling Heavy Tails

Balaev A.I.

In this paper we compare several well-known probabilistic models for returns on key global stock market indices along with a new probabilistic model based on t -distribution with vector of degrees of freedom. The models are compared in terms of in-sample fit and out-of-sample predictive ability for the whole conditional density function. The focus is on the effects produced by the shape of density function, especially multivariate heavy tails. We consider t -distribution with scalar and vector of degrees of freedom as well as modifications of multivariate normal distribution, which allow heavy tails: generalized error distribution and Gram – Charlier distribution. We conduct pairwise comparisons of estimated models using a test based on Kullback – Leibler information criterion. We then rank the models according to their quality of fit and predictive ability and discuss the possible reasons of superiority of this or that density specification over others.

Key words: multivariate distribution of returns; heavy tails; Kullback – Leibler information criterion.

International Euro Market: Problems and Prospects

Kondratov D.I.

The paper reviews the studies on European monetary policy which examines developments in the use of the euro by non-euro area residents since 1999 to 2011. In article finds that the international role of the euro remained broadly stable during 1999–2011 when compared with other major international currencies. The share of euro-denominated instruments fluctuated only marginally between 2009 and 2011 in the market segments examined. Also this publi-

cation presents the main findings of the continued monitoring and analysis by the ECB and the Eurosystem of the developments, determinants and implications of the use of the euro by non-euro area residents. In the report you can also find data regarding the use of the euro by third countries as well as in global markets, in particular with respect to the use as anchor, reserve, trade, invoicing and parallel currency.

Key words: Euro area; financial crisis; international reserves; euro; European central bank.

The Program of Innovative Development of the State-owned Electric Power Industry: Initiation, Formulation and Implementation

Aleksandrov V.N.

The article considers the issues related to the initiation, creation and implementation of innovative programs of state-owned companies of electric power industry. Briefly examine the main problems faced by the domestic industry. There are three main problems lie in the bed of the studies: the problem of choice of strategy of innovative development from the point of view of an opportunity of their practical implementation; the problem of the choice of the basic technological directions of innovation development; the issue of the full implementation of intellectual energy system in the framework of the energy and related industries. Are the documents initiating the creation and the formation of these programs, the General requirements in terms of efficiency of production processes, a significant improvement of which is achieved through the implementation of innovative programs. Analyzed the goals and objectives of the innovative programs of the four large state-owned companies, playing a key role in the industry: JSC «FSK UPS», JSC «SO UPS», JSC «RusHydro» and JSC «RAO ES of the East». Determined by innovative strategies covered companies based on innovative products, planned to introduce in them. Identify sources and amounts of funding in the near future. Conducted a SWOT analysis of the investigated programs and the author's recommendations on minimization and elimination of the revealed the «threats» and «weaknesses». Asked to identify the main production the main concept of the intelligent energy Smart Grid, as the technology of wide application. For the full implementation of this concept proposed the creation of a single electric power industry competence center and standardization, combined with the innovative park for electric power industry.

Key words: innovative strategies; intelligent energy system; innovation development programme; RAO ES of the East; RusHydro; SO UPS; synergetic effect; Smart Grid; technology platform (TP); technology of wide application; intelligent energy; FSK UPS; the electricity industry.

Development of a Dynamic Stochastic General Equilibrium Model for an Economy with High Dependence on Oil Export

Polbin A.V.

This paper describes a dynamic stochastic general equilibrium (DSGE) model for a small open economy with high dependence on oil export. Model consists of three production sectors: tradable and non-tradable sectors and oil extraction sector. Oil is exported and is used as an intermediate input in tradable and non-tradable sectors. The model also assumes the existence of nominal and real rigidities commonly used in the literature: sticky nominal prices and wages, habits in consumption, costs of adjusting the capital stock and costs of adjusting the utilization rate of the capital. As a practical application of the calibrated model we analyze the effect of oil price shocks.

Key words: dynamic stochastic general equilibrium models; small open economy; business cycles; oil prices.