

Systems Research Institute, Polish Academy of Sciences

Preprints

# ***TRANSITION TO ADVANCED MARKET ECONOMIES***



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# SESSION 5

## FINANCIAL AND MONETARY ISSUES

# TECHNICAL FINANCIAL INFRASTRUCTURE FOR AN ADVANCED MARKET ECONOMY

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The creation and operation of an advanced market economy requires an appropriate technical infrastructure in the financial industry. This paper addresses three of the essential components of such an infrastructure: retail payments, institutional payments and securities markets. The emphasis is on the technical aspects of this infrastructure rather than on its financial nature as such, but it is explained that the creation of this infrastructure must be guided by appropriate public policy in order to avoid uneconomic and counter-productive developments.

Similar infrastructures in the West have largely been shaped by historical and evolutionary forces. It is virtually certain that copying any major aspects of the Western technical infrastructure is unsuitable for any Eastern European country. However, there is an opportunity for the East to make a qualitative leap and create infrastructures that are better than those existing in the West.

# THE INSTABILITY OF INTERNATIONAL CAPITAL FLOW EQUATIONS: MODELLING STRUCTURAL CHANGE USING THE KALMAN FILTER

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It is often argued that explicit international capital flow functions are plagued by instable coefficients. Capital flow functions are specified for the United States, Germany and Japan, following Marwah's (1985) prototype model of the Canadian balance of payments. Using rolling Chow-tests and a battery of parameter stability tests due to Brown, Durbin and Evans (1975) the parameter stability of capital flow equations is tested. The results indicate significant instability for some equations parameters. Alternative capital flow equations are estimated using a time-varying parameter estimation technique, based on the Kalman filter. It appears the the time path of the parameters contains relevant information about the changing structural forces that determine international investment. To conclude, the results are assessed in the light of the changing role of international capital flows in the international adjustment process.

# PLAN AND MARKET: AN ADAPTIVE CONTROL MODEL FOR OPTIMAL MONETARY AND FINANCIAL PLANNING

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This paper attempts to incorporate the expectation generating mechanisms in a formal economic planning model. We have tried to introduce a simple bayesian filter method into an econometric model to see how the system parametrs would change subject to a "policy-optimization-process". The method was applied to a monetary policy model for India to see how the authorities would respond to private sector reactions to the policy-optimization-process. Through continuous updating of the response parameters, we can derive a very different type of monetary-fiscal policy structure than that which can be obtained through the usual optimal control process.

# READING THE MONETARY TEA LEAVES, CONT'D: AN INDEX FOR MONETARY TIGHTNESS BASED ON THE PROMETHEE METHOD

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In setting and adjusting monetary policy, central banks have to monitor some measure of monetary tightness. In the 1980s, straightforward money targeting in the industrialised countries became increasingly difficult, as the link between monetary instruments and money supply weakened by the emergence of financial innovations. In this paper, I present a multicriteria indicator of monetary tightness, based on four indicators (criteria): the slope of the yield curve, the change in interest, the trade-weighted exchange rate, and the real growth in broad money. The indicator is calculated using the Promethee multicriteria decision making tool, and is represented by a valued preorder on the G-7 countries. Using the complementary GAIA tool, conflicts, independence, or similarity of the four criteria on the data can be analysed. It is shown how the obtained indicator of tightness of monetary policy can be helpful in the context of international coordination of economic policies.



# THE POTENTIAL ROLE OF VENTURE CAPITAL IN POLAND

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The establishment and development of Venture Capital is vital for the transformation of our economy. The basic business concept entails a minority stake taken for a limited period in a small company that is considered to have potential for development. Venture Capital firm or funds are often set up with the special purpose of providing both equity capital and entrepreneurial skills and some degree of enterprise control.

The main principles which should guide Venture Capital in Poland may be listed as follows:

- identify firms in "turnaround situations" with high profit potential,
- create networks among entrepreneurs, financial institutions, private direct investors in the form of management buy-out or management buy using financial leverage,
- introduce favourable tax status for private persons investing capital in unlisted companies.

The future of Polish industry and trade will be decided by the conditions for development laid down for start-ups. Unfortunately, all is not well in this connection. Venture Capital firms and funds are not enough to change this situation but, in any case, without such institutions, the transformation would be much harder, slower and more costly.

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