## On the characterization of arbitrage in terms of preferences

*Tamás Badics*

Although it is well known that a no-arbitrage condition assumes only the monotonicity of the investor's preferences, it is less clear what are the implicit restrictions to investors' preferences emanating from conditions of no free lunch and no free lunch with vanishing risk. Using the so-called no-market free lunch concept, introduced recently by Frittelli, one can carry out a formal analysis of the relationship between preferences and the concepts of arbitrage, and also offer a brand new, economic interpretation of some of the classical and profound mathematical theses of mathematical finance. This, moreover, provides interesting insights into the recent debate on the economic role of risk versus uncertainty, or more precisely, that of objective versus subjective probability.

## Disposition effect in the Hungarian capital market

*István Joó and Mihály Ormos*

The paper examines a disposition effect known from behavioural finance, whereby investors hang on to their losing positions for too long and close their winning positions too early. Analysis was made of individual transactions of a stock market "game" conducted in 2009 and 2010, with the use of real money and students in higher education as the participants, based on realized and non-realized gains and losses, by comparing the holding times. From analysing the whole length of open positions and following up with a comparison of the performances of the transactions, the authors concluded that the participant investors were inclined to disposition, which was worsening their investment performance in general. According to the measurements made, investors were timing their sale and purchase orders badly. The findings of the paper are not based on a fully representative sample of general domestic investors, but the sample represents well the population interested in capital markets and participating in higher education.

## Challenges of European economic governance. The impossible trinity of denial

*István Benczes*

The process of economic integration in the EU has been shaped by the well-known theorem of the impossible trinity. Accordingly, the European Monetary System was built upon a mix of a fixed exchange-rate regime and an autonomous monetary policy, thereby constraining capital mobility. In launching the EMU project, the EU countries decided to fix their national currencies irrevocably and maintain full capital mobility, in exchange for delegating their monetary policy upwards to a supranational level. The introduction of the

Euro zone, however, has simultaneously meant denial of the following three elements: (1) exit, (2) bail-out, and (3) default. Nevertheless, the 2008–9 financial and economic crisis has demonstrated mercilessly that these three pillars are incompatible with each other. So the current debates on reshaping economic governance in the EU can be modelled by introducing the "impossible trinity of denial", concentrating on the benefits and the costs of each option.

**The post-accession change in agricultural trading between Hungary and the EU**

*Attila Jámbor*

Numerous changes in agricultural trading from the EU accession of Hungary and nine other Central-East European countries in 2004. The article sets out to present, in the light of the latest figures and written contributions, how Hungary's EU trade in agricultural raw and semi-processed products developed thereafter. It uses the method of manifest comparative advantages to reach its conclusions. First, it became clear that accession increased the intensity of agricultural trading, although it had a detrimental effect on the trade balance. It also appeared that post-accession Hungary was concentrating on exports of basic materials of low added value and imports of processed articles with high added value, although these comparative advantages were much altered by an effective process of adaptation. The fact of the changes is supported by various short and long-term stability examinations, which point to increased competition for agricultural products on EU15 markets. From the policy point of view, the analyses support the need for structural reforms.

**The optimal pension system according to a portfolio theory model**

*Borbála Szüle*

The optimal pension system has for some years been a subject of some interest, related also to the evolution of economic conditions and demographic processes. As a consequence of the great variety of relations, many approaches can be made to analysing it. This study uses a portfolio theory model to produce an optimal composition for the pension system. This allows the financial investments in the funded systems and the "investment" in the pay-as-you-go system to be examined through a common theoretical model of the relation of risk and return. This theoretical approach allows the optimal composition of the pension system with a funded part and a pay-as-you-go financed part to be determined based on the optimal portfolio choice for individuals participating in the pension system.