

Summary

Option Pricing and Hedging with Transaction Costs: the Superhedging Approach

Dubovic A.A.

This paper addresses the problem of pricing and hedging options under the presence of transaction costs. One of the known approaches to this problem is superhedging. This paper proposes an idea of hedging sets that allows implement the superhedging approach in a new way that is more efficient in comparison with the methods present. The idea allows use of the superhedging approach to price and hedge both European and American options under the presence of transaction costs.

The superhedging approach states the problem to find the cheapest portfolio for which there exists a trading strategy with consumption such that for every possible outcome the value of the portfolio at the time of the option execution is not less than the value of the option (when the short position in the option is considered).

The notion of a hedging set is introduced in the paper to solve this problem. The discrete time economy is considered with price movements of an underline asset being modeled by a recombining tree. At the current node of the tree a hedging set is defined as a set of the portfolios that can hedge the considered option in the sense of superhedging. It's easy to build a hedging set for every tree node at the time of the option execution. Also it is discovered that under proportional transaction costs it is possible to build hedging sets for the current nodes of the tree given hedging sets for the next nodes of the tree. Then the solution to the stated problem comes from building hedging sets backward the tree and then finding the cheapest portfolio in the first hedging set.

The superhedging approach and the idea of hedging sets are given in detail in the paper. Pricing and hedging European and American options under the presence of symmetric and asymmetric proportional transaction costs is discussed and the appropriate numerical examples are given.

On the authors mind, the idea of hedging sets is convenient in the sense that it allows any type of trees to be used as models for price movements of an underline asset when pricing and hedging derivatives using the superhedging approach. Also, multidimensional hedging sets may be used to price and hedge derivatives that are dependent on several random factors.

Globalization and the Effect of Interest Group Pressure on Firm Entry

Abdelhamid D.M., Mokhtari M.

This paper challenges a substantial body of literature suggesting that regulators are often captured by the industries they control and therefore end up ignoring the interests of consumers. We present an analytical model examining the effect of international rivalry between regulators on firm-entry and consequent industry/market profits and product-pricing. Our analysis overturns previous findings and provides significant insight into whether strategic competition constrains regulators to pursue the public interest more effectively.

On Dynamics of Total Factor Productivity in the Russian Economy in Transition

Bessonov V.A.

The paper is devoted to the analysis of dynamics of total factor productivity (TFP) in the Russian economy in transition and its industries. Several estimations of dynamics of TFP are constructed, including those accounting for capacity utilization, for much higher efficiency of new fixed capital, and for the hours worked.

It is shown that the worst dynamics of TFP is demonstrated by industries with rather successful dynamics of output and not having sufficient stimulus to improve productivity. The best dynamics of TFP, at least, at a stage of domination of the tendencies of growth, is demonstrated by industries with relatively less successful dynamics of output, not monopolized and faced with rigid demand constraints.

The carried out analysis of dynamics of TFP shows that the situation in the Russian economy is not so pessimistic, as it follows from the analysis of dynamics of output and its structure.

Modes of Functioning of Some Research Centers of Russian Academy of Sciences

Busygin V.V., Busygin V.P.

The paper examines the new modes of functioning of the institutes of the Russian Academy of Sciences, using tools of the economy of science, the theories of the firm and the game theory. A three-fold typology for these organizations is proposed. Game models for each type are constructed. A special attention is paid to the comparison of the efficiency of different modes of functioning, using different criteria. We argue that none of these types is optimal in all circumstances; each of these types can be the best choice for a given institute.