

**EMPIRICAL RISK ANALYSIS IN A MODEL THAT COMBINES FUTURE
CONTRACTS AND WAREHOUSING RECEIPTS AS AN INCOME
STABILISATION MEASURE. A CASE STUDY FOR HUNGARIAN WHEAT
FARMERS UNDER THE CURRENT COMMON AGRICULTURAL POLICY
USING MONTE CARLO SIMULATION APPROACH**

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ABSTRACT

The last reforms of the CAP in compliance with the agreements on agriculture in the Uruguay round and also to prepare the EU for the current Doha-Round, have called for adopting market instruments to manage the risk caused by the volatility of agricultural commodity prices, what the blue box's measures may not compensate. In the light of this fact, Hungary has gained a great deal of experience in the usage of these instruments for its agricultural commodity markets, specifically for wheat and corn. Both future contracts and warehouse receipts (also called warehouse warrants) have been combined to develop a new mechanism to reduce the potential damages caused by price fluctuation and market volatility in general. This study is based on research conducted by László Kozár and Zoltán Bács, but also includes an extension. This extension is a method to calculate risk using *Monte Carlo simulation* as well as some adjustment of the inputs of the original model according to the new legislation of the agricultural markets in Hungary under the regime of the Common Agricultural Policy (CAP). The empirical analysis is applied for the Hungarian wheat market. Several scenarios demonstrate the improved performance of the extended model relative to the previous model by providing more information for business decisions.

Key words

Future markets, Warehouse receipt, Future contracts, Common Agricultural Policy, Hungary, Monte Carlo Simulation, Value-at-Risk.