

Table of Contents

List of Figures.....	IV
List of Tables.....	V
List of Variables	VII
Abbreviations	VIII
1. Introduction	1
2. The Efficiency of Financial Markets With Special Reference to Commodity Futures Markets – A Review	7
2.1 The Efficient Market Hypothesis vs. Behavioural Finance Theories: Insights into the Efficiency of Financial Markets.....	8
2.1.1 The Efficient Market Hypothesis: The Theoretical Foundation	9
2.1.2 Behavioural Finance Theories	12
2.1.2.1 Why Sophisticated Traders Might not Arbitrage Away Price Distortions.....	14
2.1.2.2 Why Sophisticated Traders Might Contribute to Price Distortions .	17
2.1.3 Efficient Market Hypothesis and Behavioural Finance Theories: The Empirical Evidence	17
2.1.3.1 Empirical Observations about Weak Form Efficiency.....	18
2.1.3.2 Empirical Observations about Semi-Strong Form Efficiency	21
2.2 Assessing the Efficiency of Commodity Futures Markets with Cointegration Tests.....	22
2.2.1 Cointegration Tests: The General Approach.....	23
2.2.2 Cointegration Tests Applied: Empirical Results about the Efficiency of (Agricultural) Commodity Futures Markets	25
2.2.3 Some Remarks on the Cointegration Approach.....	26
2.3 Increased Index Funds Activities on Commodity Markets	27
2.3.1 Background of the Financialization of Commodity Markets.....	28

2.3.2	How the Financialization of Commodity Futures Markets Can Affect Their Efficiency: The Transmission Channel	31
2.3.3	Does the Financialization of Commodity Markets Affect Their Efficiency? The Empirical Evidence.....	33
2.4	Summary of the Literature Review.....	36
3.	The Competitive Storage Model – Interlinking Commodity Price Expectations and Current Spot Prices.....	39
3.1.	The Theory of the Competitive Storage Model.....	41
3.2	The Empirical Evidence of the Competitive Storage Model.....	53
4.	The Storage Transmission Mechanism – Modelling the Effects of Overshooting Commodity Futures Prices on Spot Prices.....	61
4.1	Excessive Storage and its Effects on Spot Prices.....	62
4.2	Reflections on the Storage Transmission Mechanism under Consideration of the Literature	67
4.3	Research Hypotheses	68
5.	Methodology and Data	73
5.1	Maize as Object of Investigation and its Cultivation Periods	73
5.2	Test Methods.....	75
5.2.1	Modelling the Effect of Production Shocks on the Current Spot Price (Hypothesis 1).....	76
5.2.2	Modelling the Effect of Production Shocks on the Subsequent Spot Price (Hypothesis 2).....	81
5.2.3	Illustrating the Effect of Production Shocks on Trading Activities (Hypothesis 3).....	83
5.2.4	Measuring the Development of Futures Prices within Production Shock Affected Cultivation Periods (Hypothesis 4)	85
5.2.5	Modelling the Reaction of Storage to an Increase of the Futures Price (Hypothesis 5).....	87
5.3	Data.....	91

6. Statistical Characteristics of Maize Production and Prices	95
6.1 Global Maize Production and Yield – Long Term Trends and Shocks	95
6.2 Properties of Spot Price Time Series	99
 7. The Empirics of Commodity Price Bubbles and Storage	 101
7.1 The Results of the Hypotheses Tests.....	101
7.1.1 The Effect of Production Shocks on the Current Spot Price	101
7.1.2 The Effect of Production Shocks on the Subsequent Spot Price.....	110
7.1.3 Production Shocks and Trading Activities	117
7.1.4 The Development of Futures Prices within Cultivation Periods	123
7.1.5 The Reaction of Storage to Futures Price Increases	129
7.2 Critical Reflections of the Empirical Results – Limitations of the Study.....	130
 8. Conclusion.....	 135
 Bibliography	 137
Databases	145
Internet Sources	145
Annexes.....	147