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Possibilities for Joint Commodity Futures Market in Eastern Europe

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Abstract

The aim of this paper is to analyse possibilities and effects of joint futures market for Eastern European countries Romania, Hungary, Bulgaria and Serbia.

Developed futures market is of importance for agricultural sector because of possibilities to use hedging strategies. Volatility of grain prices in recent years is driving force for development of futures market worldwide. Most developed commodity derivatives are futures and option contracts.

In the USA this market is highly developed, while in the EU, and especially in the Eastern Europe this market is not fully developed.

According to the analyses in this paper the main reason of underdevelopment of grain future contracts in Eastern Europe is low volume of trade. As the main preconditions for functioning of grain future market is liquidity the assumption is that the joint market in Black sea region will provide sufficient liquidity and provide sustainable futures market.

Keywords: *Hedging strategies; futures contract; security derivatives*

JEL Classification: *E61; Q13*

Introduction

Derivative securities are financial innovations that have arisen in the last few days primarily as a result of an increased risk of price changes or other riots in the future.

As the name of the derivative says, these securities have an underlying asset, i.e. they are created on some other type of asset.

There are two types of commodity exchange markets spot (cash) and commodity derivative market.

For a commodity derivative market, it is characteristic that commodity trading occurs at some time in the future, while physical delivery of goods most often does not occur, but derivative contracts are closed by paying the buyer to the seller or vice versa, depending on the price of the goods at the closing of the contract.

Futures contracts are highly standardized contracts for the purchase / sale of some kind of goods.

Considering that trading in futures takes place in the future period, there is a need to provide guarantees to participants in trading that in case of unfavorable movement of prices and losses on the futuresthey will not give up the execution of the contract.

Therefore, for the functioning of futures, it is necessary to have a clearinghouse which receives monetary guarantees at the conclusion of the futures - margins both from the buyer and from the seller.

In order for a cash deposit to be always above the potential loss of a trader at the futures, based on the daily movement of commodity prices, which is a futures underlying asset, a daily settlement price is determined on the basis of which the losing party must add to its account an additional amount of money so that the amount on the margin account remains always above the amount of loss.

The significance of the commodity derivative market for the agricultural sector is the ability to secure the price of agricultural products in the future - hedging strategies (Belozertsov et al., 2011).

Hedging strategies are usually based on the sale of goods on futures contracts.

If the price in the free market of goods on the day of the maturity of the futures is higher than the price previously concluded on the contract, the farmer will lose on the commodity derivative market the amount of the difference of these two prices, but at the same time he will actually sell his goods at a higher price that is in the free market, so it will reverse the loss and realize the planned price (Zakić, Kovačević, 2012.).

Otherwise, if the price in the free market goods is lower than the price reached on the futures, the farmer will earn a profit equal to the difference of these two prices, but at the same time he will actually sell his product at a lower price in the free market, which will annul the profit as well as in the previous case.

The farmer realizes the planned price that was concluded in the previous period on the futures.

There is also a possibility of deviation from the realization of the planned price in hedging with futures in the case of changing basis.The basis is the difference in the price at which the futures contract is balanced and the price at which the farmer actually sells his goods on the local market (Kovačević, 2014).

An example is presented in order to better understand hedging strategies with futures.

EXAMPLE:

A farmer who produces corn is willing to except corn price of 125 €/t for delivery in November. In November futures is settled at 100 €/t. Since farmer has sold futures contract he will be in gain of difference between two prices 25 €/t. As the open market price is equal to futures settlement price farmer will sold his corn in November at 100 €/t. Decreased cash price will be compensate with profit of 25 €/t and final combined price will be 125 €/t.

Table 1. Hedging strategies outcomes

Cash price	Future's price	
Planned: corn price in May – 125 €/t	In May farmer opens short position is opened on November contract (corn is sold) for 125 €/t	
November – corn is sold on spot market for 100 €/t	Closes position in November at 100 €/t	
Results on the spot market: 125-100 €/t = 25 €/t less than planned	Result on futures market: 125-100 €/t = 25 €/t profit	The end result: - planned price of 125 €/t - selling price at the spot market 100 €/t - profit on future contract 25 €/t **Total corn price: 125 €/t**

Source: Authors own calculation

If the scenario is different and corn price in November at open market is 50 €/t, farmer will loss 25 €/t at futures but he will be selling his corn at open market with 150 €/t. In this case loss at futures market will be compensated with higher actual selling price.

Hedging strategies with forward contracts

Forwards are contracts for the purchase or sale of goods, at a precise time in the future, at a defined price. Delivery of products is expected, while complete payment is most often after delivery of goods. If the market price at the time of delivery is higher than agreed, the buyer has made a profit, while if the price is lower than the agreed, the seller has earned a profit.

The possibility of losing the forward contract results in the possibility that the party in the contract that is at the loss does not deliver or pay the goods, if at the maturity date it is more convenient to buy / sell the product. This feature of the Forward is classified as very risky stock exchange instruments, due to which the commodity markets in the world are trying to develop mechanisms for guaranteeing execution of contracts. This can be achieved by allowing traders to deposit different types of guarantees at the clearing house account.

Advantages of forward contacts are in individuality and can be feted by the exact needs of traders. Second important advantages is in delivering the good and as a consequence volume of trade is not crucial limitation for commodity market trading as is for future contracts.

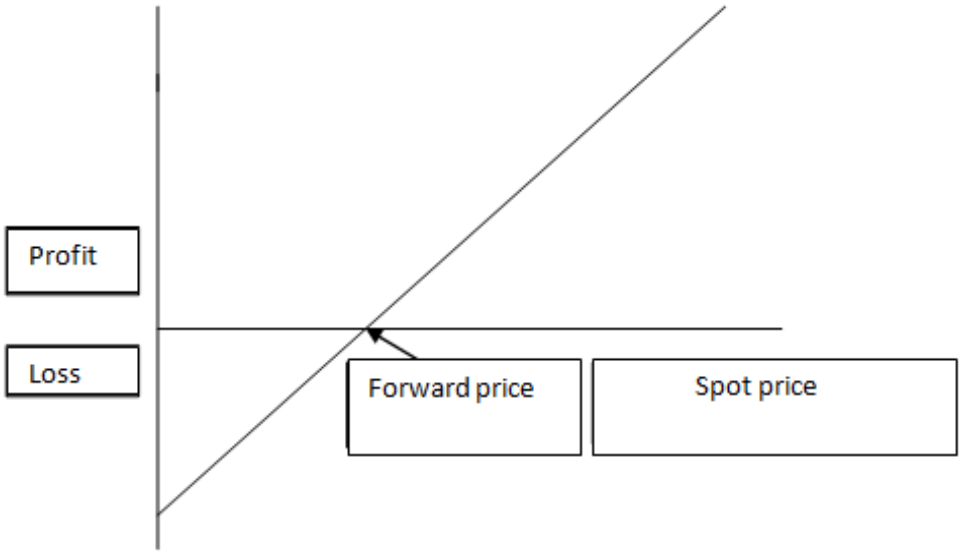

Fig. 1. Profit offorward contract sellers

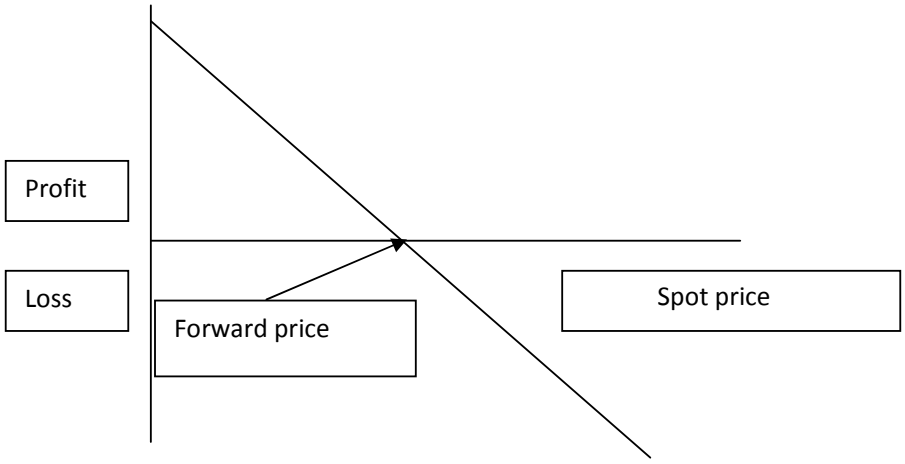

Fig. 2. Profit offorward contract byer

Novi Sad commodity exchange is trading with forward contract but so far with no guarantees to traders on contract execution.

New law on commodity exchanges is drafted in Serbia which will establish margin guarantees on forward contracts similar to margins on futures. It will be useful to fallow Serbian experience on forward contract and use this experience for multilateral regional commodity exchange.

Results and Discussion

In this part, the necessary prerequisites for establishing a common commodity derivative platform are analyzed: the stock exchange infrastructure, the volume of goods, volatility and the correlation of the prices of cereals and margins.

In the analyzed countries of the region, Serbia, Romania and Bulgaria, the operations of the major commodity exchanges, which could be potential participants of the common commodity derivative platform, are presented.

Commodity Exchange Novi Sad, Serbia (CENS). There are two types of market at the CENS: spot and forward. Commodity which is traded is mostly wheat and corn. CENS has no electronic trading platform, neither clearinghouse.

Romanian Commodity Exchange (RCE/BRM) - Romania - numerous types of commodities for which there was a supply/demand were traded. In 1994 the exchange successfully introduced trading with currencies in the spot market. In 1995 forwards on foreign currencies were introduced, and in 1998 futures on foreign currencies (Kovačević, 2014).

Sofia Commodity Exchange (SCE) was established in 1991. At the SCE only agricultural products are traded. SCE, spot and derivative markets. Options and futures on several standardized contracts are traded: food wheat, barley, forage, bear barley, corn, sunflower, black and white beans. Trade takes place in the general auction at which the participants trade. Contract size is 15 t (Kovačević, 2014).

Based on the analysis of market standards for wheat traded on commodity exchanges in Serbia, Bulgaria and Romania, it is concluded that market standards are compatible and do not impede the establishment of a common futures market.

Table 2. Comparison of important elements for establishing a common grain futures market for Serbia, Romania and Bulgaria

Country	Wheat production in 2014 in '000 t	Corn Production in 2014 t	Trading system	Public warehouse	Clearing and settlements
Serbia	2.387*	7.951*	Non electronic	Developed	No
Bulgaria	5.347*	3137	Electronic	Developed	Yes
Romania	7.584*	11.988*	Electronic	Moderate	Yes

Source: Serbian grain fund, *FAOSTAT

Based on the analysis in Table 2, it can be concluded that there are conditions for establishing a common futures market with the need to introduce a single electronic trading platform.

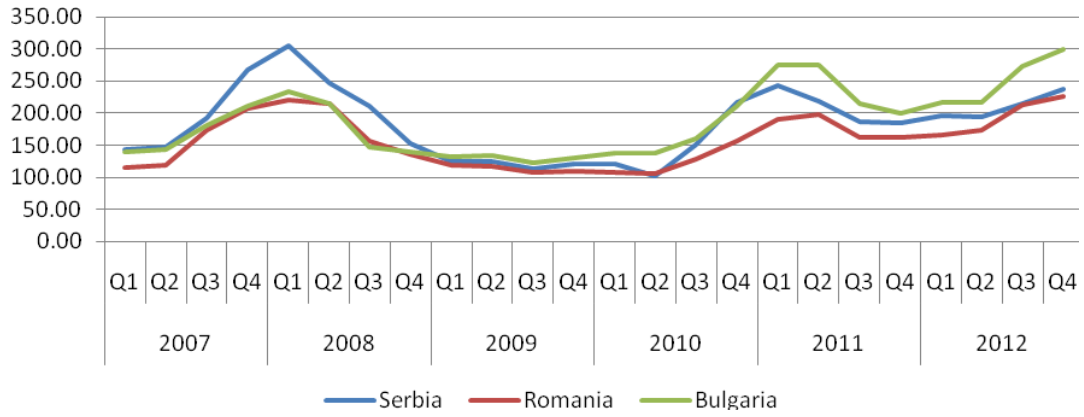

Fig. 3. Wheat price in Serbia, Romania and Bulgaria in 2007-2012, (EUR)

Source: Kovačević, 2013

Based on Figure 3, there is a significant volatility of wheat prices, which is a basic condition for the development of the commodity derivative market.

Table 3. Correlations in wheat prices for Serbia, Romania and Bulgaria in 2007-2012

		Serbia	**Romania**	**Bulgaria**
Serbia	Pearson Correlation	1	.935	.793
	Sig. (2-tailed)		.000	.000
	N	24	24	24
Romania	Pearson Correlation	.935	1	.893
	Sig. (2-tailed)	.000		.000
	N	24	24	24
Bulgaria	Pearson Correlation	.793	.893	1
	Sig. (2-tailed)	.000	.0000	
	N	24	24	24

Source: Kovačević, 2013.*Correlation is significant at the 0,01 level (2-tailed)

A high degree of correlation of wheat prices affects the possibility of developing a common commodity derivative market. Regarding the legal framework, EU member states for the commodity derivative market have a prescribed single EU legal framework mainly throughout EMIR and MIFID2 regulations.

Serbia as an EU candidate country has an incompatible legal framework that is prescribed by the Law on the Capital Market and prevents the establishment of a joint clearing house, so it is necessary to harmonize legislation with the EU to include Serbia in the common futures market.

Based on the conducted analysis, it can be concluded that there are excellent opportunities for establishing a common commodity derivative market in the Black Sea Region. Such a market, thanks to the greater volume of goods and the greater number of participants in trading, could reach the necessary amount of poisoning that individual countries can not realize. It is necessary for the functioning of the common market to establish a common clearing house that would be clearing the entire market, as well as a joint management body that would determine the daily settlement price and manage the entire market.

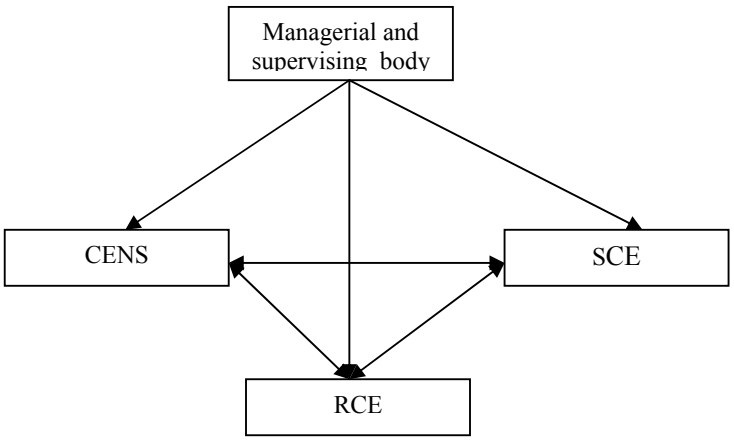

Fig. 4. Possible organizational structure of joint derivative commodity exchange

Source: Authors' opinion

Conclusion

Based on the research in the work, it is concluded that the volatility of the prices of maize and wheat prices is highly pronounced on the world market, which is reflected in prices in the countries of Eastern Europe.

Despite the expressed need for futures on agricultural products, the developed commodity exchange derivatives have not yet been established in any one of the countries of Eastern Europe.

Commodity derivative exchange operates in the EU to a small extent, while for the show of Europe this type of stock exchange business is highly developed in the EU and USA.

The reason for the poor development of the commodity exchange derivative in Eastern Europe is the small volume of turnover that is on the commodity derivative exchange.High volume of traffic is the basis for the successful functioning of this type of commodity market.

The assumption is that by combining multiple exchanges in the region, a sufficient volume of trading was created for the successful development of commodity futures.

Regarding the legal basis for trading a commodity derivative, it is positive that the legal basis for this type of market is defined by a single common EU regulation that significantly facilitates the establishment of a regional market for countries that are members of the EU.

In Serbia, the commodity derivative market is regulated by the Law on Capital Market that is not in line with the EU common regulation, so it is not possible to establish a joint clearing house in Serbia and the EU member states.

On the basis of this, Serbia cannot be included in a single regional commodity derivative market until the harmonization of national legislation in this area with the EU.

Regarding the amount of cereals traded in the region, it is concluded that it would be sufficient for the successful functioning of the commodity derivative market.

Correlation of the prices of cereals is high, which very positively affects the possibility of establishing a common market.

Port of Constanta, Romania, is the site of the most common cereal delivery in the region, making this port the most convenient point of delivery and has a favorable effect on the possibility of establishing a regional futures contract.

An indispensable organizational requirement is the establishment of a management body of a single commodity derivative platform that would function in establishing settlement prices on the daily basis, as well as trading management.

It will be useful to considered first partially standardized forward contract with margin guarantees at mutual regional commodity exchange, since for this kind of contract volume of trade Is not limitation factor for exchange development.

Based on the analyzes carried out, the conclusion is that the establishment of a common commodity derivative trading platform in the region would create conditions for the development of commodity derivative trade and create opportunities for all participants in the trade in cereals in the region.

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