Problems and Countermeasures in Agricultural Futures Market

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Abstract. Abstract. Recently, agricultural futures have grown rapidly, and is playing an integral role in the global economy, making an important contribution to global food security. However, agricultural futures also face several challenges and risks in many aspects. Firstly, agricultural futures prices are unstable and are largely influenced by climatic conditions, supply and demand, respectively; Secondly, the structure of agricultural futures varieties is unreasonable, the current futures varieties are mostly focused on grain and cash crops, and livestock and aquatic products are obviously neglected; Further, its market trading body is missing, and farmers find it difficult to access the futures market due to a lack of knowledge about the market; Finally, current agricultural products are still subject to regulatory risks. In response to these problems, the author suggests a series of measures to stabilize futures prices, optimize the structure of varieties, cultivate trading entities and strengthen market regulation. The paper may shed lights for both authorities and investors.

Keywords: Agricultural futures, problems, countermeasures.

1. Introduction

Agricultural futures markets play an integral role in the global economy and food security. Broll et al. noted that farmers and agro-processors are often exposed to higher risks in the current economy due to factors such as high price volatility of inputs and outputs, climate change, international trade constraints, and new food safety standards [1]. And the agricultural futures market provides them with powerful tools to help them hedge and manage the risk of price volatility. By hedging with futures contracts, commodity owners can minimize the marketing risk associated with price volatility [2]. This risk management mechanism not only protects the economic interests of farmers and agro-processors, but also plays a crucial role in stabilizing the prices of agricultural products and guaranteeing the supply of agricultural products [3].

In addition, agricultural futures markets have contributed significantly to the development of global trade. International buyers and sellers rely on this market to plan and execute cross-border trade, which is critical to the efficiency and stability of the global food supply chain. By providing price transparency and predictability, futures markets enable international traders to make trading decisions in a more certain environment. They can utilize the futures market to better cope with exchange rate fluctuations and various uncertainties in the international market, which can reduce the risks and costs in cross-border transactions.

In conclusion, agricultural futures markets are not only an important part of the global economy, but also a key mechanism for ensuring a stable and sustainable global food supply. The purpose of this paper is to provide insights into the current state of agricultural futures markets and the challenges they face, and to provide strategies for their development.

2. Current Status

In 1848, the world's first futures exchange - the U.S. Chicago Board of Trade (CBOT) was established, and in the same year launched a corn-based futures contract for agricultural products, which is also the earliest agricultural futures. From the late 19th century to the early 20th century, in addition to corn, wheat and other grain futures, with the emergence of new exchanges around the world, coffee, cotton and other cash crops, butter and other livestock products, rubber and other forest products futures have also been listed. Since its development, the agricultural futures market has

undergone development and changes in many aspects, including technology, system, and law (See Table 1).

Table 1. Agricultural Futures Varieties in CBOT

Category	Subcategory
Grain futures	wheat futures, corn futures, soybean futures , soybean meal futures , red bean futures, rice futures, peanut futures,etc
Cash crop futures	raw sugar futures, coffee futures, cocoa futures, rapeseed futures, etc
Livestock product futures	meat product futures, fur product futures
Forest product futures	timber futures, natural rubber futures, and apple futures

At the same time, as the global population grows and the economy develops, the demand for agricultural products is increasing, which is driving the development of agricultural futures markets. The chart shows that the turnover of agricultural futures and options has shown a volatile growth trend, and in 2023, the volume reached a staggering 3.2 billion lots, with a year-on-year growth rate of 31%, which shows that the agricultural futures market has been developing rapidly in recent years, and the scale of the market has been expanding (See Fig. 1).

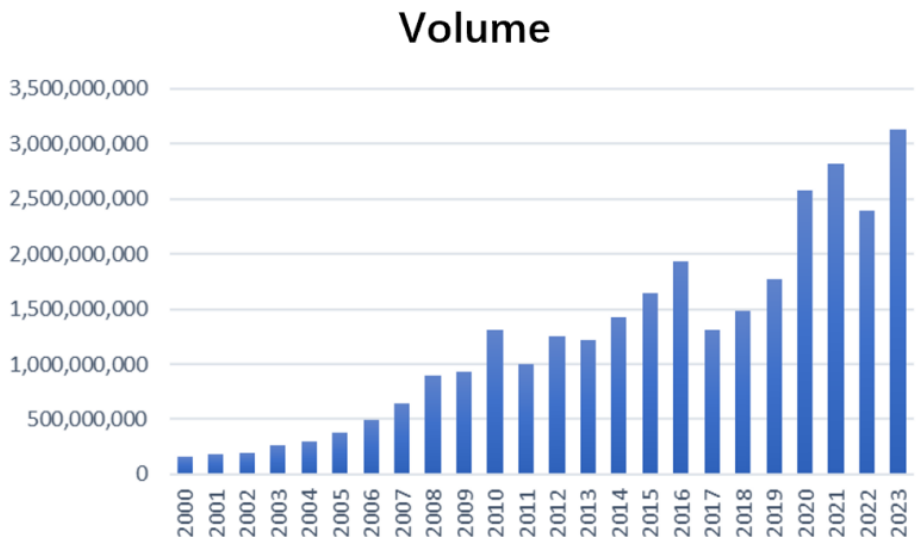


Fig. 1 Volume

With the development of the agricultural futures market, more and more individual investors and institutional investors participate in the agricultural futures market, making the market more active and liquid. From the initial local market to the modernized global trading platform, the agricultural futures market has become more and more extensive in coverage, with continuous technological innovation and promising prospects.

3. Problems

3.1. Price Instability

Futures prices of agricultural commodities are affected by climate, seasonal factors, changes in supply and demand, and other aspects. Global warming and extreme weather events in recent years have made agricultural futures prices more volatile [4]. Extreme weather events, such as droughts, floods, or storms, may have a severe impact on the quantity and quality of agricultural products, which not only exacerbates the price volatility of agricultural products, but also increases the uncertainty in the agricultural futures market [5].

In addition, seasonal factors also have an impact on agricultural futures prices. The supply of and demand for agricultural products may vary significantly from season to season, leading to seasonal fluctuations in prices. For example, the onset of the harvesting season may cause prices of certain agricultural commodities to fall. Such seasonal factors exacerbate price instability and make agricultural futures markets more complex and unpredictable. Fig. 2 shows that agricultural futures prices have seen sharp price increases and significant volatility in recent years.

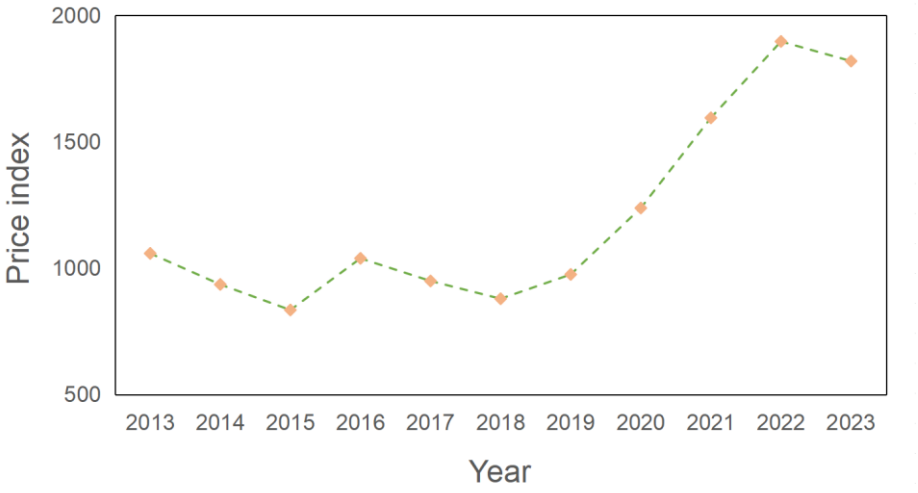


Fig. 2 Dalian Commodity Exchange (DCE) Agricultural Futures Price Index

3.2. Structure Unreasonable

Although the listed agricultural futures are more diversified and can satisfy most investors' needs for hedging risks, the agricultural futures market structure is unbalanced in terms of trading volume, which may be biased towards certain varieties, such as wheat and corn, at the expense of other varieties. There is a significant gap in their trading volume. This bias may lead to a homogeneous market and increase the risk for investors.

At the same time, the lack of diversity in the variety structure of the agricultural futures market may limit the choice of investors and risk diversification ability. Listed agricultural futures varieties are mainly grain futures, cash crop futures, the number of livestock product futures is much lower than the former two, more typical of hog futures, aquatic products so far there is no listed futures varieties [6].

3.3. Trading Entities

The main subjects of futures trading mainly include speculators, hedgers and arbitrageurs. Farmers and agricultural processors are an important part of hedgers in agricultural futures trading [7]. Whereas futures trading involves complex financial instruments and market mechanisms, farmers and agricultural producers may lack the understanding of futures markets and relevant training to enter futures markets [8]. At the same time, participation in the futures market may require a certain level of financial capability and technical support, which some agricultural producers may not be able to fulfill. High margins, fees, and complex trading platforms may limit farmers' participation.

3.4. Regulatory Loophole

At present, there are still many problems in the regulatory system of agricultural futures. First, with the development of financial technology, new trading forms such as high-frequency trading and algorithmic trading are emerging, and the inherent regulatory technology and means are difficult to effectively supervise and identify these new trading behaviors, and there is a regulatory blind spot. Secondly, there are still some loopholes in the recent laws and regulations on agricultural futures trading, and some specific trading behaviors have not yet been subject to clear legal boundaries and

regulations, which poses a problem for regulation. Third, the regulation of the futures market has long faced the problem of insufficient human and material resources. Fourthly, with the development of economic globalization, trading in the agricultural futures market has become increasingly internationalized and cross-border trading activities have increased. Currently, the cross-border regulatory cooperation mechanism is inadequate and lacks effective international coordination and cooperation.

4. Countermeasures

4.1. Stabilize Agricultural Futures Prices

First, increase market transparency. Governments and relevant organizations can improve the transparency of agricultural markets by improving information disclosure systems and providing information such as yield forecasts. These measures can allow participants to make trading decisions based on more comprehensive and accurate information, thereby reducing information asymmetry price volatility. Second, the government carries out reasonable price intervention. The government can directly intervene in the market by implementing a minimum price guarantee policy, providing subsidies and other means to stabilize the price of agricultural products. Third, innovative development models. For example, the "insurance + futures" model can reduce farmers' losses due to natural disasters or price fluctuations through agricultural insurance, while utilizing the futures market to provide a certain locking mechanism for the price of agricultural products, thus providing more stable market expectations. This helps to alleviate market participants' concerns about future uncertainty, thereby reducing market overreaction and price volatility.

4.2. Optimize Variety Structure

Optimizing the variety structure can be achieved by improving the listing and delisting system and enriching the variety of agricultural futures.

With regard to the listing and delisting system, the following should be done: first, more flexible and market-oriented listing criteria should be formulated for the characteristics of different agricultural varieties. Second, for varieties that already meet the listing requirements, the listing process should be accelerated by simplifying procedures and improving approval efficiency. Third, for varieties with low trading volume and low market participation over a long period of time, they should be gradually guided to be delisted after regular market consultation and assessment, to release market resources.

For enriching the varieties of agricultural futures, on the one hand, new varieties of livestock products and aquatic products should be actively explored and developed to meet the needs of more market participants. On the other hand, based on the existing major categories of agricultural products, the development of sub-species should be further refined so as to expand market development and trading scale.

4.3. Cultivate Agricultural Futures Trading Entities

First, it is necessary to strengthen the publicity and training for farmers [9]. Relevant institutions can use multimedia channels, agricultural technology extension services and other means to popularize the basic knowledge and operation skills of the futures market. By organizing regular training courses and lectures, they can help farmers build up their confidence in the futures market and stimulate their interest in participation.

Meanwhile, the guiding role of the government is indispensable. The government can encourage more farmers and agribusinesses to participate in the futures market by formulating a favorable policy environment, such as providing tax incentives, risk compensation funds, and start-up capital support. In addition, the government can also play the role of market regulator to ensure the fairness and transparency of the market, crack down on illegal trading behavior, and protect the interests of market participants, especially small farmers.

4.4. Strengthen Market Regulation

To strengthen the market supervision of agricultural futures, firstly, it is necessary to strengthen the technological innovation of supervision, use big data analysis and other means to automatically identify abnormal trading behaviors and improve the efficiency and accuracy of supervision. Second, existing laws and regulations should be reviewed, and the corresponding laws and regulations should be formulated or revised in response to the loopholes and deficiencies found, so as to clearly define the legal status and regulatory requirements of various new types of trading behaviors [10]. Third, the government and regulators should increase financial and human resource investment in futures market regulation to improve regulatory efficiency and effectiveness. Meanwhile, professional training for regulators should be strengthened to enhance their understanding of and regulatory capacity for fintech and emerging trading models. Fourth, international regulators should strengthen cooperation and information exchange to escort the globalization of agricultural futures markets.

5. Conclusion

This paper systematically analyzes the important role of agricultural futures markets in the field of global economy and food security and discusses in depth the status of their development and the four major problems that exist. First, the agricultural futures market, with its expanding scale and advancing technology, has become an indispensable part of the global economic system and is of great significance to the maintenance of food security. However, there are still problems such as unstable futures prices, irrational structure of futures varieties, lack of trading entities and regulatory loopholes. In order to solve these problems, this paper puts forward a series of targeted measures: firstly, to stabilize futures prices by means of increasing market transparency, government price intervention and innovative development models; secondly, measures such as improving the listing system and enriching the varieties of agricultural products futures can optimize the varieties structure; furthermore, to cultivate the main body of agricultural products futures market by strengthening farmers' training and government guidance; and lastly, to innovate the supervisory technology, Finally, innovative regulatory techniques, improved laws and regulations, increased regulatory inputs and enhanced cooperation can effectively strengthen market supervision. The implementation of these measures will help enhance the stability and efficiency of the agricultural futures market and promote its sustainable development and role in the global economy and food security.

The analysis in this paper is in-depth and puts forward a series of measures to solve the problem, but there are still some shortcomings. First, the problems and solutions are described in the paper, but lack of concrete cases or data support. Secondly, the solutions proposed in the paper are relatively macroscopic and may encounter some difficulties and challenges in actual operation.

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