

The Way China's Futures Market Serves the Real Economy

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Abstract: The futures market was initially established to address the limitations of the spot market and to serve the real industry in the supply side of raw material stability. With the development of the financial system, futures as major financial derivatives and global markets are highly connected. Previously, scholars have conducted many in-depth studies on the role played by the futures market, while this paper mainly focuses on China, focusing on the impact of the futures market on the real industry. The futures market has matured over the past three decades of development in China to become a major derivative trading market. The role of the financial market is ultimately implemented to serve the real industry. This paper focuses on the system of the futures market in China, and the core function of the futures market, and argues how the futures market can serve China's real economy. By reviewing the previous studies, this essay summarises the main roles of the futures market and provides suggestions for the development of the futures market in China based on the current situation of the Chinese market.

Keywords: futures, Price discovery function, risk management, risk communication, Resource allocation

1. Introduction

The contradiction between supply and demand in the spot market in terms of time and the risk brought about by the uncertainty of rise and fall in the process of its value realisation have contributed to the formation of futures. In recent times, the futures market has been an important part of the modern economic system. After more than thirty years of futures market development in China, the futures market has become the futures trading market with the largest turnover in the world and plays an important role in serving the real economy in industrial adjustment and upgrading. Unlike countries such as Europe and the United States, the establishment of China's futures market is mainly driven by government-led promotion, so China's futures market policy reform can be an important means to promote macroeconomic development in China. The main problems existing in the futures market are low trading activity in some commodities, weak functioning, and weak ability to influence pricing power and influence. Different commodity markets on the real economy market caused by the impact of the mechanism have not been fully studied. The complex international situation brought about by the sharp fluctuations in commodity fluctuations and mismatch between supply and demand, etc. will cause enormous pressure on the real industry-based enterprises, which requires a more mature futures market to help the real enterprises to digest, to improve the impact of these. There are more than 100 commodities in the Chinese futures market, but there is a big difference from the thousands on the

head exchanges. Some commodities have been internationalised but the pricing influence of commodities is insufficient [1]. Therefore, the viewpoint of this paper is to analyse what the futures market can offer to the development of Chinese real enterprises from the perspective of theory and specific policy issues.

2. Pricing Function of Futures

2.1. Price Discovery Function of Futures

Xu Jing said that the main factors that lead to market failure are: incomplete information, future uncertainty, irrational human behaviour, monopoly and public goods [2]. All these factors lead to the price fluctuation deviation of commodities in the market. Price occupies a central position in the futures market. The existing futures trading system has stipulated that a standard futures contract needs to include individualised factors such as the quality of the product, origin, payment method, etc., so its main variable is price. The difficulty of collecting relevant information and the limited transparency of trading in the spot market can be solved by the dynamic price reflection and future price trend prediction function of the futures market. Moreover, the anti-monopoly measures in the existing market to a certain extent increase the independence and equality of participants in the futures market, long-term participation in futures trading to a certain extent improves the information-gathering ability of the participants, and the trading trend of futures prices also promotes the management of price expectations of traders, which will reduce the irrational behaviours of the participants in the trading market.

But different types of products affect the market to different degrees. The activity of the traded product is one of these factors. The activity of futures has an enhancing effect on the effect of the real industry said by Song Lingfeng [3]. At the same time this also represents that there are different values of the effect of futures on real enterprises at different stages of activity. The current status quo is that the trading volume of futures market increases worldwide but less than half of the futures products maintain high activity. However, the activity level of futures is a prerequisite for maintaining the futures market to help the production industry. First of all, futures markets have a price discovery function, and the right level of futures activity helps to discover the real price. One of the mechanisms is that when the futures activity level is high, enterprises and investors can fully participate in the hedging business to enhance the price discovery function of futures. The price trend of futures can be based on the reference of producers, but at the same time enterprises will also participate in futures trading, such as hedging business. Therefore, the price formation of futures can be considered as a two-way feedback mechanism. The futures price knows the production of enterprises, while the participation of enterprises provides more real and transparent information for the pricing of futures. With such a feedback mechanism, frequent trading can continuously drive the futures price closer to a fair and reasonable real price.

Futures prices can be affected by external events, and a high level of futures trading activity ensures that the price discovery function of futures is carried out properly, minimising the price deviation caused by events. For example, non-ferrous metals, grains and energy commodities are highly affected by karmic politics and experience large price fluctuations, which leads to price deviations [4]. Due to the highly correlated nature of the market, the impact of the commodity futures market is bound to be contagious to the financial market as a whole. Therefore, maintaining a high level of active trading in commodities can largely influence the pricing power of commodities in the international market and can help China reduce the price volatility of futures in the event of geopolitical events. At the same time, as far as China's domestic market is concerned, future activity can effectively resist the effects of market policy uncertainty. Taking Shanghai crude oil futures in the epidemic as an example, because Shanghai crude oil futures have just been listed, the trading

activity is low and the information absorption capacity is poor, Shanghai crude oil futures are subject to the impact of the policy information uncertainty index which is shown as a strong response and lasts for a long time. Therefore, we can think that improving the activity of futures is the basis for the full play of price discovery in the futures market, which can better respond to the real price in order to realise the fairness and reasonableness of the price.

2.2. Pricing Under the Financialization of Futures

Gaining pricing power over commodities is not the ultimate purpose of the price discovery function of futures; gaining pricing power only represents that futures have reached a relatively mature stage of development. The main idea of the price discovery function of futures is to get a fair and reasonable price that lasts for a long time. However, with the continuous development of the futures market, many futures have become mature financial commodities, and the traditional view is that the pricing of futures is affected by their attributes and the relationship between supply and demand. Macroeconomics weakly affects supply and demand but has little effect. As speculators enter the futures market to use futures as an investable commodity, it will increase the correlation of futures with other markets [5]. Therefore, the pricing of futures in today's market cannot be based on their cost and supply and demand alone. Zheng Zunxin in his study argues that the price of a commodity after being influenced by the financial market should be divided into the price of the commodity and the degree of financialisation influence. Therefore, the movement of capital in and out of the market will bring about price rises and falls. In the case of crude oil futures in the futures market, crude oil has both commodity and financial attributes. Unlike the cost-based pricing method used in developed countries, crude oil prices in China are highly regulated by the state, but the issuance of crude oil futures in China has created a correlation between crude oil prices and the stock market. Crude oil prices in China have some correlation with the SSE index and various industry indices [6]. However, unlike developed countries that use oil imports and exports as the basis for classifying the positive and negative effects of impacts, the crude oil price in China reacts differently to various industries in the production structure. Therefore, its FSI contains many factors that are difficult to observe.

One view is that, unlike the traditional supply and demand mechanism that determines futures price movements with a certain lag and gentle fluctuations, futures prices are more volatile under the influence of financial factors after being linked to the financial market. For example, in 2008, due to the global financial crisis, the South China Commodity Index experienced extremely large fluctuations, which could not be explained by the relationship between supply and demand. Another view is that the financialisation of commodities inhibits the upward pressure on commodities. The introduction of the financial impact index in the study found that for the vast majority of commodities, the financial impact index was mostly negative. The theory suggests that the existence of capital financing activities using commodities as collateral in the Chinese market pushes up the retention of commodity stocks and dampens commodity price movements. Summarising the two views, this paper argues that traditional commodity pricing analysis can no longer meet the pricing of commodities in the futures market. Factors related to financial markets need to be introduced for analysis, and since financial influences are difficult to observe, research on the subject deserves more attention. Due to the integration of economic markets, real enterprises also need to consider their financing and investment behaviours in the process of production, so the real price should not only include the commodity itself but also meet its financial attributes.

3. Risk Management Function of Futures

3.1. Risk Management

One of the major functions of the future is risk management. In terms of risk management, the futures mechanism has more advantages than the insurance mechanism. Taking agricultural products as an example, protection cost insurance mainly focuses on a few major products, with limited coverage, and high premiums make farmers less willing to pay premiums. Futures, on the other hand, reduce risk by hedging and locking in prices at a lower cost to farmers. China's current model is the "insurance + futures" model in agriculture through insurance to limit the risk of natural disasters, and futures to limit the risk of price fluctuations so that the two types of financial products can limit the risk of their respective appropriate mechanisms [7]. Mainly studying the management of risk by futures, this paper argues that the risk managed by futures belongs to price risk and speculative risk. The main instrument used is hedging, which is not a means of earning excessive returns, but rather a means of exchanging for a more stable and certain income. This paper argues that hedging maintains the income while sharing the risk with the counterparties of each industry chain related to the underlying. This is conducive to a chain of related industries to reduce the game, and expect a win-win situation in the industry upstream, midstream and downstream. At the same time the risk transfer object of the counterparty may be able to assume a certain risk in exchange for their desire to gain, the stability of the supply of raw materials.

Hedging in the realisation of risk management at the same time also needs to pay attention to some of the new risks arising from hedging. Firstly, it is difficult to avoid that the products of the real industry have the attributes of financial products after becoming the underlying of hedging. Its price factor is difficult to determine by the relationship between supply and demand, and more price control is transferred to the hands of speculators. Enterprises need to consider whether they can withstand the impact of financialised products in the future. Taking the Lenin nickel short-selling incident in 2022 as a reference, as a result of the sharp rise in nickel price, Aoyama, the giant of the industry, also experienced a crisis of short-selling pressure. Zhou Yuming argues that when enterprises hedge without the same commodity contract but with a high degree of correlation of the product contract should take into account the degree of correlation of the product, the basis difference risk, the settlement time of the closed position and the time difference between the purchase and sale of the spot [8]. From this we can get hedging as a means of risk management, the operation of its own risk should also get the attention of enterprises.

In addition, because the futures market will be given to the financial attributes of the commodity, the commodity risk transfer to the futures market also brings a series of risks to the industry. Take the "insurance + futures" model mentioned in the previous article as an example. This model transfers risk from the physical market to the futures market, whereas the price volatility risk and leverage risk brought about by the operation of the futures market may cause damage to the stability of agricultural production. This type of risk is relatively easy to manage for highly sophisticated enterprises, but for individual farmers, who do not have professional financial knowledge, it is easy to become a victim of the futures market. Research related to the process of transferring closed-loop risks to external markets needs to be explored more [9]. The research of scholars is needed to give a reasonable pricing model under its model to achieve the standardisation of the model, "insurance + futures".

3.2. Reducing Risk Transmission

The previous discussion about risk reveals that linking production companies to the futures market actually increases the correlation between production and the financial market, and therefore the degree and likelihood of risk transmission is amplified. In his study, Song Gashan calculated the

dynamic VAR of each industry index under the risky conditions of the Shanghai crude oil futures market and concluded that regardless of whether the VAR is upward or downward, the risk of the Shanghai crude oil futures market will further amplify the risk of each industry [10]. It is therefore difficult to control risk transmission by relying on the free operation of the futures market, but due to the existence of the regulatory system in the futures market, risk transmission is considered likely to be reduced in the futures market.

The risk of price fluctuations in the market may be accompanied by a range of risks such as liquidity risk and credit risk. Therefore, the regulatory regime in the market needs to properly manage risks to avoid triggering systemic risks. The futures market already exists with clear regulations on trading entry conditions, delivery systems, contract specifications, etc., as well as anti-excessive speculation, anti-market manipulation, etc., which strictly limit the possibility of systemic risk arising from speculative behaviour. When the futures market was still in the pilot period, it was difficult to replicate the operation of Vanguard Securities on 327 treasury bonds today. Clear limits on the amount of positions, and a margin system for trading can prevent a few people from owning large positions to the effect of market manipulation. In 2022, China passed a draft to establish a financial stability fund, futures have its stabilisation fund, which effectively makes up for the shortcomings of the original system, achieves efficient co-ordination of existing resources, and achieves the effect of avoiding systemic risk [11]. Therefore, it can be argued that the existing system in China has greatly reduced the possibility of systemic risk in the futures market. By transferring industry risks to the futures market to be shared by investors, this risk transfer path avoids the possibility of different industries transferring risks to each other and causing systemic risks. Therefore, the existence of China's futures market can effectively reduce risk transmission.

4. Realising Efficient Resource Allocation

Yang Weina believes that for real enterprises, the influence of industrial layout will often form a resource allocation mechanism centred on the allocation of factors of production: the transfer of raw materials to finished products [12]. But the function of the futures market can change this single layout mode. Firstly, the price discovery function of the futures market can quickly transmit contract information to the relevant enterprises and customers to complete efficient resource optimisation, and secondly, based on the optimisation of the layout of the delivery warehouse, the futures market makes the inter-period allocation of products to enhance the ability. The advantage of strong liquidity of the spot market is also replaced by the futures market. Meanwhile, Xu Jing believes that enterprises that participate in futures and related derivatives for a long period will integrate medium- and long-term resource allocation and global industrial layout into their corporate strategies, and futures signals and liquidity will also help them to make medium- and long-term resource allocation.

The professionalism in today's futures market will also place higher demands on the ability of enterprises to collect data, which will help digitalisation and information-based industrial transformation and upgrading. Enterprises can achieve the upgrading of inventory and procurement information digitally to reduce the existence of inventory in physical form and save a certain amount of inventory costs.

The existence of the futures market for the efficient transmission of market information to assist while promoting the transformation and upgrading of real enterprises to achieve the digital, information-based enterprise management mode. At the same time, this series of changes will also increase the transparency of the market related to various industries to enhance the effectiveness of the market.

5. Conclusion

The futures market has been developed in China for more than thirty years and has become relatively mature, and the help of the futures market to real enterprises has been reflected in the actual production process. However, the maturity of the futures market still needs to be continuously improved to accomplish a better service level of the futures market to real enterprises. The price of a futures market is the core of its role. To realise the role of the futures market, the price discovery function of futures should be further explored. The risk management function of the futures market can help enterprises achieve stable income, but the relevant system and regulatory means need to be explored more. The resource allocation function of the futures market also encourages enterprises to upgrade their management mode. The means and systems to realise the above three functions in China are significantly different from those in developed countries, and more scholars need to do more research on the Chinese futures market and Chinese real enterprises as examples to realise the development of the futures market in China.

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