

# An Empirical Study on China's Gold Futures Market Hedging Performance

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## ABSTRACT

*In the current financial crisis, promoting rapid developments of gold industry, ensuring healthy operations of national economy, and actively developing the gold futures market are very important. Functioning of the gold futures market will determine the gold market maturity and integrity. Risk transfer is one of the two basic functions of futures market. The risk transfer function is realized through hedging. China's gold futures market has been in market for more than four years, is the risk transfer function fully realized? How the performance of hedging? Based on the data of futures prices and spot prices from January 9th of 2008 to December 31st of 2010, we use the following four statistical models such as traditional regression model (OLS), two-variable vector auto regression model (B-VAR), error correction hedging model (ECM), and error correction GARCH model (EC-GARCH) to perform stationarity and cointegration test. On the basis of minimum risk hedge ratio estimated, the following conclusions are made based on the study: (1) As China's gold futures market has run for more than three years, hedge is effective through the gold futures market, which can significantly reduce the participants' risk of price fluctuation; (2) In practice, hedging ratio should be rationally determined by different models according to different hedging length and different expectations. Based on these conclusions, this paper also made corresponding policy recommendations.*

*Keywords: Economic Policy, Empirical Study, Gold Futures Markets, Hedge, Ratio*

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## 1. RESEARCH BACKGROUND AND SIGNIFICANCE

Gold price has been surging all the way and gold market has become the focus of global attention since the 2008 global financial crisis triggered by the U.S. subprime mortgage crisis.

Meanwhile, in the context of the increased mobility and continuous depreciation of dollar major reserve currency, how to properly use the gold market to achieve the preservation and appreciation of foreign exchange reserves, and to promote the rapid development of gold industry, so as to ensure the healthy operation

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of the national economy, is a major issue China needs to seriously consider.

The gold futures market is an indispensable and significant part of the gold market. The fulfillment of its functions plays a crucial role in promoting the rapid development of gold industry and in ensuring the healthy operation of the national economy. From a global point of view, the gold futures market occupies an important position in the world gold market system. It's mainly shown in the following aspects: First, the maturity of the world's gold futures market played a guiding and significant role in the formation of the world's gold futures prices; Second, as main participants of world's gold futures market vary; risk and return flows reasonably; different participants' different subjects goal demands can be met in world gold futures market; Third, world gold futures market enhanced the level of the gold market, improved the gold market, and ensured the market order.

Combined with the development of China's gold market, gold futures market has played an important leading role in the construction and development of China's gold market system. First, the guidance features of market price of gold futures help lead the development of the gold spot market; the risk gold industry economic entities transfer function of gold futures market help major gold production, processing and distribution companies to improve risk management, and enhance competitiveness; Second, the establishment and development of gold futures market improve China's gold market system: it forms the good pattern of mutual promotion and common development of the spot market and futures market; Third, gold futures market enriches gold market investment channels; Fourth, gold futures market will help the establishment and improvement of China's market economy system; Fifth, the establishment and development of the gold futures market is a powerful blow to the illegal underground transaction; It helps protect the investors interests and stabilize the financial market order.

From the industry's point of view, the establishment and development of gold futures market will help the development of real economy in gold industry. It is mainly shown as follows: First, the formation of authoritative future price in gold futures market help the rational allocation of resources in gold industry; Second, gold futures market provide a risk transfer approach for gold industry; Third, the development of gold futures market can provide an important frame of reference for policy formulation and adjustment of gold industry.

The gold futures market functions mentioned above, in the final analysis, must give full play to two basic economic functions: price-driven and risk transfer. Among them, whether the gold futures market risk transfer function is given full play, has a direct impact on the value of the gold futures market.

On January 9<sup>th</sup> of 2008, the Shanghai Futures Exchange successfully launched gold futures trading, which marked that China's gold market system took another step forward on building spot market. China's gold futures contracts have been listed for more than three years. A gold future trading volume continues to increase and trading has been expanding. In the year of 2010, gold futures contract trading volume reached 6,794,100 hands, on a turnover of 1.83 trillion. The gold futures market has become an important part of China's gold market system.

In the development of China's gold futures market, how the risk transfer function of gold futures market play is a major concern in both theoretical field and practical field. On the bases of the exist results and estimating the minimum risk hedge ratio, comparing and examining the issue of China's futures market hedging strategy, this paper explores the current China's gold futures market hedging play situation, through a comprehensive analysis of the gold futures price and spot price, an examination of stationarity and cointegration tests on sample data by using the following four statistical models: traditional regression models (OLS), bivariate autoregressive models (B-VAR), error correction hedging

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