

Seminar Title : Examining the Success and Efficiency of Base Metals Futures Market

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Venue : SM302

Date and Time : 05 Feb 2025 (11:00)

Abstract : Base metals futures market has been experiencing a significant downturn in trading volume over the last five years. This decline poses a critical challenge to market participants and regulators, as trading volume is a key indicator of market success. Given a prolonged downturn in volume since 2019, it is imperative to revisit the determinants of trading volume in base metals futures markets. The determinants of trading volume are well-studied, yet financialization's impact remains underexplored. In addition, innovations in contract design flexibility—such as the introduction of mini contracts, quality-based contracts, and varying settlement mechanisms, have transformed the structure of futures markets. Prior studies have largely focused on the impact of mini futures contracts on the trading volume of pre-existing futures, limited attention has been given to other flexible contract types. Furthermore, the decline raises concerns about the efficiency of these markets—specifically, whether they are still capable of fulfilling their core function of price discovery effectively. Prior research examining the interaction between futures and spot markets often relied on parametric models that assume a linear relationship between the markets. However, financial market information flows are inherently nonlinear. In light of these observations, it is imperative to study these broad objectives: 1) Assessing the impact of financialization on the success of the base metals futures market. 2) Assessing the impact of contract design flexibility on the success of base metals futures market, 3) Examining the efficiency of base metals futures market.

To probe these objectives, 19 base metals futures traded on four major exchanges from April 2004 to April 2024 have been studied using Dynamic Conditional Correlation Generalized Autoregressive Conditional Heteroskedasticity(DCC GARCH), fixed effects regression, Difference-in-Differences and Transfer Entropy. The findings reveal a negative influence of financialization on trading volumes, aligning with the Portfolio Rebalancing Theory. The introduction of flexible futures contracts, while substituting pre-existing contracts and reducing their volumes, broadens participation and overall market growth. Additionally, the study reveals the futures market's leadership in price discovery supporting transaction cost hypothesis and varying efficiencies in normal market condition and extreme market condition align with the Adaptive Market Hypothesis.

**Keywords:** *Base Metals Futures, Financialization, Trading Volume, Contract Design Flexibility, Mini Futures, Settlement, Price Discovery, Market Efficiency, Transfer Entropy*