

Abstract

Using high frequency data in 5 minutes intraday format, this dissertation investigates the information transmission in term of price across gold markets. With unique data construction, the synchronous trading hour among various markets is used to obviate the problems of stale price. The first chapter of this research covers the basic information regarding global major gold markets and one newly established market particularly in the Thailand Futures Exchange.

The second chapter focuses on price transmission between Thai gold futures and international gold futures markets since its high growth rate on trading volume (more than 400% increase from 2010 to 2011).The evidences show that Thai gold futures is efficient and it takes no more than 5 minutes to converge its price toward the price that is spilled over from international market. This study also investigates the contribution of each gold futures contract, standard and mini, in price discovery process. The standard contract contributes up to 96.9% and dominates the price discovery in Thai gold setting. The mini contract (one-fifth contract size compared with standard contract) plays a role to be an assistant in price discovery and be an alternative financial product for minor market participants.

The third chapter investigates lead-lag relationship in three major gold futures exchanges particularly in New York Mercantile Exchange in division of Commodity Exchange (COMEX), Multi Commodity Exchange (MCX) based on India, and Tokyo Commodity Exchange (TOCOM). These three markets are selected because their trading volumes capture the massive proportion of global gold futures market. Once again, 5- minute interval observation is applied. The data is constructed only from jointly operating hours of these three markets. Consistent with previous research, the empirical results from VECM support a leading role of the US market in terms of pricing information transmission across international boundaries. In addition, the evidences from Hasbrouck information share approach show that COMEX gold futures contract yields highest price discovery contribution at the rate of 37.09% and is therefore the leading market.

The final chapter investigates whether arbitrage opportunities do exist in gold markets. We taking into account all transaction costs associated with making arbitrage

activities. Two main types of arbitrage are investigated. The first is arbitrage between futures and spot market. The other arbitrage is futures-futures arbitrage or arbitrage across futures market. To calculate theoretical price of futures contract, the classical cost-of-carry model is employed. Any price deviations from theoretical price that must be exceed all relevant costs signal an arbitrage opportunity. The evidences show that arbitrage opportunities do exist in both futures-spot and futures-futures arbitrages. The three mature gold futures markets have relatively much lower average arbitrage profit than new-comer Thai gold futures market. Moreover, the average profits of Futures-futures arbitrage between any two major gold futures markets are higher than those of futures-spot arbitrage. Finally, the evidences highlight the remarkably leading role of the US gold futures market in price formation process.