

Research Topic: Big Data Analysis: Advanced Analysis of Trading Behavior in the
Futures Market

Research Date: 2016/01/01 – 2016/12/31

Abstract:

The objective of this study was to use big data to analyze trading behavior in the futures market, including the turnover rate, and the trends, including the number of account openings and market withdrawals.

The study showed that over the 10-year period from 2006 to 2015, the turnover ranged between 53% and 81%. It was highest in 2015 when TAIEX Futures recorded highest average daily volatility since 2012. When compared the 2015 turnover rate of TAIEX Futures contracts to that of the world's five largest indexes, the TAIEX Futures' turnover rate was 186%, higher than Japan's 154% and Russia's 133%, lower than mainland China's 823%, and a lot higher than America's 59% and Germany's 36%, indicating that futures markets with relatively high percentages of individual participation have higher market turnover rates.

The study also analyzed trends in new account openings and investors leaving the market in the period since the 1998 when Taiwan futures market initiated. It found that the market volatility would influence entries and withdrawals of natural persons and domestic institutions. When the market's volatility was relatively low, investors had less interest in entering the market, resulting in a net outflow of participants. When crisis occurred, investors will use the futures market actively for hedging, leading to a net inflow, or a decrease of net outflow. For example, the financial tsunami of 2008, the Fukushima Daiichi nuclear crisis of 2011, and the US credit-rating downgrade of 2011 all increased the market's demand for hedging and led to net inflows in the number of individual investors. Concerning foreign institutional investors, the market has generally seen steady net inflows excepting 2005, 2012, 2013 and 2015, in which an outflow was founded, but not significantly obvious.