Indexation and Causation of Financial Markets

Yoko Tanokura1 and Genshiro Kitagawa1,2

1 MIMS, Meiji University, Tokyo 164-8525, Japan

2 MI Center, The University of Tokyo, Tokyo 113-8656, Japan

Abstract

Financial markets can be found in nearly all countries in the world. By the integration of a country's local financial system with international financial markets, people's daily livings in the country and the country itself have become more exposed to the cross-border risks such as financial and economic risks. In fact, the financial crisis triggered by the US subprime loan problem in 2007, eventually led to the global economic crisis which simultaneously affected not only emerging countries but also developed countries all over the world. In order to find out the mechanism, it is indispensable to overview a market especially when it receives a lot of attention due to the influential product characteristics on the business and the economy.

One of the means to express the whole perspective of a market is to construct the index as a proxy measure. Unlike an established market where the index is officially defined and announced, for a newly developed financial instrument forming its market with rapid growth, it is not easy to construct an appropriate index due to the lack of information such as missing observations at certain times. Moreover, in order to fully reflect the movements of prices or returns on a financial asset, the index should reflect their distributions. However, they are often heavy-tailed and possibly skewed and identifying them directly is not easy.