# New evidence on the volatility spillover between Chinese and major international stock markets: A causality-in-variance approach

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This paper employs the CCF and multivariate GARCH (in the form of BEKK) approaches to investigate the causality-in-variance linkage between Chinese stock markets and major international stock markets by using the daily data of recent two years. We find surprisingly that there is significant empirical evidence to show that the A-shares market of China caused the international major markets in variance, indicating the volatility spillover from the former to the latter, while there appears no feedback in variance in the reverse direction. This result implies that China has been entering a new phase, not only in the filed of international trade, but also in global financial markets. We can also observe that the patterns of the information transmission from China's stock market to major international markets are quite the same way. In particular, our results provide evidence to show immediate causal effects in variance from the A-shares market of China to major international markets within the same trading day, as well as with some lags, three trading day's lag for the U.S market, and four trading day's lag for remaining international markets. These results seem to suggest that investors in international markets may need some time to evaluate the new information occurred in the A-shares market of China to be reflected in stock prices of the global markets. Our results also verify the leading role of the U.S. in the global markets. In contrast, B-shares and H-shares indices of Chinese enterprises, in which more international investors participate, are not only affected by the A-shares, but also significantly sensitive to the U.S. market. The inconsistent results compared with the A-shares index seem to imply that there may be remarkable distortion in the information enclosure and underestimated risks in the A-shares market of mainland China, allowing potential room for sudden adjustments. Unfortunately, this market still seems to be climbing independently, which may put the swarming participants into the potential accumulating risk. Therefore, the regulatory institution and investors in China should be more alert to the potential danger.