

## **Abstract**

This paper investigates the behavior of information transmission between IBM stock and its option. We adopt the intradaily data constituted of quoted bid and ask prices of the stock and options markets in our empirical tests. By using intradaily quotes, we can avoid data bias problems existing within the trade prices. We analyze the lead/lag relationship between the stock quotes and the option quotes, and provides information explanation ability of each quoted price. We also delineate the impulse response behaviors of each quoted price. The results show that in terms of information explanation capability and the time length of impacts of innovations on other variables, the stock quotes perform well and have great effects on option quotes, however the reverse is not valid. Meanwhile, the stock quotes lead the options quote while the option asks change have very minor effects on the stock quotes.

**Keywords:** Lead-Lag, VAR, Bid-Ask Spread, Information Transmission