A Study on the Pricing Efficiency of Hong Kong’s Index Derivative Warrant Market

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ABSTRACT

Using intraday firm bid and ask quote data for the period January 2003 to September 2005, this paper investigates the pricing efficiency of Hang Seng Index (HSI) derivative warrants relative to HSI options in Hong Kong. Consistent with the results from previous studies, the paper finds that warrants are often more expensive than options. However, warrants are generally more liquid than the corresponding options in terms of lower bid-ask spreads. Although warrants can be more expensive than the corresponding options, they are not necessarily overpriced in the conventional sense – i.e., relative to the realized volatility. This paper examines the pricing efficiency of index warrants by comparing implied volatilities (IV) of warrants and options with realized volatility. The results show that although IVs of derivative warrants are generally above the corresponding realized volatility, the IVs of at-the-money (ATM) and out-of-the-money (OTM) warrants (both call and put) are not significantly different from the realized volatility. Consistent with the result from direct price comparisons, the IVs derived from warrants are generally above those from options; while the option IVs are largely in line with the realized volatility. The results based on delta-hedged warrant and option positions reaffirm the relationship between warrant/option mispricing and the deviation of IV from the realized volatility.
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