MASTER'S THESIS

The pricing of warrants and the implications concerning market efficiency

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Abstract

This study investigates the efficiency of the Hong Kong traded warrants market. Because it applies the Black-Scholes warrant pricing model, it is also a test of warrant pricing. In this study, three issues are examined.

First, by use of the B-S warrant pricing model, the study tests the efficiency of the warrants market. Previous studies have not applied any pricing model, therefore, they failed to handle the issue of risk. This study uses the riskless hedging strategy suggested by the model; thus no adjustment for risk is required.

Second, a review of previous studies indicated that no theoretically derived hedge ratio has been used to test efficiency; hence, the hedge might not be riskless. This study derives the formula of the warrant hedge ratio from the pricing model. The warrant hedge ratio is important in that it indicates the amount of the underlying stock needed to form a riskless hedged position. The complete derivation shows that the warrant hedge ratio is the option hedge ratio modified with the dilution effect. The modification of the option hedge with the dilution effect is critical because similar framework can be applied when researchers test other more complicated convertible securities.

The third issue examined in this study is to develop a better assessment of the efficiency of the warrants market. This is accomplished by using the ex ante test since previous studies ignored the biases inherent in the expost test. The results show that the hypothesis that the warrants market is efficient cannot be rejected.

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