



# AN EMPIRICAL TEST OF THE BS AND CSR VALUATION MODELS FOR THAI DERIVATIVE WARRANTS AND THE ISSUE SPECIFIC FACTORS

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## ABSTRACT

The purpose of this paper is to compare the option pricing performance between Black-Scholes (BS) and Cox Square Root (CSR) models for the derivative warrants traded on the Stock Exchange of Thailand (SET) over the period 2009 to 2012. This paper also examines the relationship between mispricing and credit ratings of issuers and turnover ratio. The result of the study indicates that the BS model provides more accuracy for derivative warrants pricing than the CSR model does. For the first trading day, the mean differences between percentage absolute pricing errors of BS and CSR is statistically significant by the percentage of 0.42 while the mean differences between percentage pricing errors of BS and CSR is statistically significant by the percentage of 0.79. BS model that assumes volatility constant during the life of the options can improve the pricing performance compared to CSR model that assumes stochastic volatility.

*Keywords:* Thai Derivative warrants, Black-Scholes model, Cox Square Root model