

A NEW ECONOMETRIC APPROACH TO VALUE CASH ACQUISITION BIDS IN A REAL OPTIONS STOCHASTIC VOLATILITY FRAMEWORK

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ABSTRACT

I develop the existing approach to value cash bid offers for acquisition targets as a put option into a stochastic volatility framework, employing Heston and Nandi's (2000) GARCH model. Likewise I economise on computational time, providing a numerical solution with a closer proximity to reality. Comparing results with the, so far employed, Black-Scholes option valuation model I manage to improve reliability, algorithm's speed of convergence and computational time. Moreover, using a sample of 300 cash offer bids in the U.S. spanning the most recent 15 year period I compare the put-stock portfolio's with actual stock's systematic risk, resolving several uncertainties pertaining to existing literature findings. This study improves the understanding and methodology concerning real options valuations for cash bid offers and proposes a useful econometric tool for future researchers.