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Chris Veld, Adri Verboven

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AN EMPIRICAL ANALYSIS OF WARRANT PRICES VERSUS LONG-TERM CALL OPTION PRICES

CHRIS VELD AND ADRI VERBOVEN*

INTRODUCTION

In their well-known warrant pricing paper Galai and Schneller (1978) demonstrated that otherwise identical warrants and call options, should have the same price. No empirical research that confronts this result with actual data appears to be available, which is probably caused by the fact that warrants usually have a much longer time to maturity than call options. However, this is not the case for the Dutch capital market. Since 1986, the European Options Exchange (EOE) in Amsterdam provides for trading in call and put options on individual stocks with maturities up to a maximum of five years. In the last few years, these long term option contracts have become increasingly popular among investors in the Netherlands, resulting in steady growing trading volumes and considerable open interest positions.[1,2] Moreover, at the Amsterdam Stock Exchange (ASE) warrants and covered warrants are being traded. This Dutch institutional feature enables us to carry out a new test, i.e. a comparison of warrant prices versus long term call option prices. In this paper we will analyze a data-set containing prices of warrants and call options that were traded in Amsterdam from April 1, 1987 until September 30, 1989. The composition of the data-set is described in Table 1.

Because the maturities and exercise prices of warrants and call options are hardly ever exactly the same, we suggest the comparison of implied standard deviations from warrants and call options written on the same underlying stock

deviations from warrants and call options written on the same underlying stock. This test reveals that warrants appear to have substantial higher market prices than the concomitant long term call option contracts. This result turns out to be robust to the choice of either the Binomial model, the Merton model or the Square Root CEV model to compute the implied standard deviation.

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Address for correspondence: Chris Veld, Department of Business Administration, Faculty of Economics, Tilburg University, PO Box 90153, 5000 LE Tilburg, The Netherlands.

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