

P(I)DE APPROACH FOR INDONESIAN OPTIONS PRICING

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Abstract. Jakarta Stock Exchange Indonesia has started to trade Indonesian options at September 9th, 2004. An Indonesian option can be considered as an American style barrier option with immediate (forced) exercise if the price hits or crosses the barrier before maturity. The payoff of the option is based on a moving average of the price of the underlying stock. The barrier is fixed at the strike price plus or minus a 10 percent. The option is automatically exercised when the underlying stock hits or crosses the barrier and the difference between strike and barrier is paid immediately. We will refer to this type of option as an Indonesian option. In this paper we study the pricing of the Indonesian option under Black-Scholes model by PDE approach and under Variance Gamma model by PIDE approach.

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