ABSTRACT

A recent development in Singapore is the rapid influx of asset-backed securitisation transactions following the first of such deals in the sale of NOL building in December 1998. One unique feature of the securitisation deals is the explicit call option structured into the agreement, which enables the originator to have a contingent claim on the upside potential of the property price. Traditional valuation techniques are inadequate to estimate the embedded option premium. Well established financial techniques which assume that the underlying asset price follows a stochastic Brownian motion process, present conceptually superior pricing models for the valuation of the embedded option premium. The call option structured in the securitisation agreement is characteristically "exotic" and the technical difficulties in the pricing of the embedded options stem from the dependence of the option value on the stochastic movements of both the asset price and the strike price. Based on the pricing algorithm developed by S.M Turnbull and L.M. Wakeman (1991), for pricing arithmetic Asian options, this paper seeks to partially deal with the inherent path dependency problem in the pricing of the option premium and also to illustrate its application in four recently completed asset securitisation transactions. The estimated option premium is found to be significantly valuable at 11%-12% of the bond value. This valuable option premium, which is not captured in the transacted price, presents pertinent implications in terms of the transparency of the securitisation deals, the gross investment yield for the bond investors and the assessment of stamp duty tax imposed by the tax authorities.

Key Words:

asset-backed securitisation, option pricing, path-dependency