

A free boundary problem arising from the pricing of strike reset options

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A strike reset option allows its holder to reset the strike price to the prevailing underlying price at a moment voluntarily chosen by the holder. In this talk, we formulate the pricing problem of the option as a free boundary problem where the free boundary corresponds to the optimal strike reset policy. Some interesting properties of the free boundary are exploited and strictly proved with the help of PDE arguments. Existence and uniqueness of the free boundary problem is addressed. We also provide an efficient numerical approach to computing the free boundary. This is a joint work with Y.K. Kwok, L.X. Wu, F.H. Yi and Y. Zhou.