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# European call option with inflation-linked strike

Ola Hammarlid *

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**Abstract**

A European call option with an inflation-linked strike is defined. The pricing formula is derived under the assumption that the quotient between the stock return and the price process of the inflation-linked bond is log-normally distributed. This is fufilled if the real short rate is assumed to be one of the tree models, Vasicek, Ho-Lee or Hull-White, the inflation and the return processes are geometric Brownian motions. Also calculated are the first order derivatives that are used for hedging, also referred to as the "Greeks".

*Key words:* Inflation, real bond, inflation-linked bond, hybrid derivative, option.

*Postal address: Swedbank AB, Swedbank Markets, SE-105 34 Stockholm, Sweden. E-mail: ola.hammarlid@swedbank.se.