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fd_ikonentoivanen_heston

Input parameters:

- SpaceStepNumber $N1$
- TimeStepNumber $N2$

Output parameters:

- Price
- Delta

This model is given by,

$$\begin{aligned} dS_t &= rS_t dt + \sqrt{v_t} S_t dW_t^1, \\ dv_t &= k(\theta - v_t) dt + \sigma \sqrt{v_t} dW_t^2, \end{aligned}$$

where W^1 and W^2 are two correlated brownian motions with $\langle W^1, W^2 \rangle_t = \rho t$, and k , θ and σ are constants. The EDP associated with the option pricing problem is solved with an ADI finite difference scheme. Details abouts this routine are in [there](#).

References