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fd_natalinibriani_heston

Input parameters:

- SpaceStepNumber $N1$
- TimeStepNumber $N2$

Output parameters:

- Price
- Delta

This model is given by,

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

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 a finite difference scheme. Details abouts this routine are in there.

References