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fd_explicit_bs

Input parameters:

- TimeStepNumber N

Output parameters:

- Price
- Delta

/*Memory Allocation*/

/*Space localisation/*
Define the integration domain $D = [-l, l]$ using inequality there.

/*Space Step/*
Define the space step $h = \frac{2l}{M}$.

/*Peclet Condition*/
If $|r - \delta| / \sigma^2$ is not small, then a more stable finite difference approximation is used. there.

/*Stability Condition Time Step*/
This stability condition is given there The Time Step number is given by M.

/*"Probabilities" associated to point/*
cf. there

/*Terminal Values/*
Put the value of the payoff saved in *Obst* into a vector P which will be used to save the option value.

/*Finite difference Cycle/*
At any time step, described by the loop in the variable *TimeIndex*, we have to solve explicitely the equation cf. there

/*Splitting for American case*/
For American options, we compare at each time step the solution in S with the payoff function saved in *Obst*. We save the result in P there.

/*Price*/

/*Delta*/

/*Memory Desallocation*/