

sabr1d

1 Description

This model is given by,

$$\begin{aligned}dS_t &= S_t^\beta dW_t^1, \\ d\sigma_t &= \alpha \sigma_t dW_t^2,\end{aligned}$$

where W^1 and W^2 are two correlated brownian motions with $\langle W^1, W^2 \rangle_t = \rho t$.

2 Code Implementation

```
#ifndef _SABR1D_H
#define _SABR1D_H

#include "optype.h"
#include "var.h"

#define TYPEMOD SABR1D

/*1D SABR World*/
typedef struct TYPEMOD
{
    VAR T;
    VAR S0;
    VAR Sigma0;
    VAR Beta;
    VAR Sigma;
    VAR Rho;
} TYPEMOD;

#endif
```