

hw1d

1 Description

The model is defined by

$$\begin{aligned}dS_t &= (r - q)S_t dt + \sqrt{\sigma_t} S_t dW_t^1, \\d\sigma_t &= \nu \sigma_t dt + \zeta \sigma_t dW_t^2,\end{aligned}$$

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 _HW1D_H
#define _HW1D_H

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

#define TYPEMOD HW1D

/*1D HULL-WHITE World*/
typedef struct TYPEMOD
{
    VAR T;
    VAR S0;
    VAR Divid;
    VAR R;
    VAR Sigma0;
    VAR Mean;
    VAR Sigma;
    VAR Rho;
}
```

```
} TYPEMOD;
```

```
#endif
```