

[Help](#)

```
#include "dup1d.h"
#include "chk.h"
#include "error_msg.h"
#include "model.h"
#include "enums.h"

extern char* path_sep;

static PremiaEnumMember volatility_members[] =
{
    { "15/x", 0 },
    { "0.01+0.1*exp(-x/100)+0.01*t", 1 },
    { NULL, NULLINT }
};

static DEFINE_ENUM(volatility_type, volatility_members);

static int MOD(Init)(Model *model)
{
    TYPEMOD* pt=(TYPEMOD*)(model->TypeModel);
    if (model->init == 0 )
    {
        model->init = 1;
        model->nvar=0;
        pt->T.Vname = "Current Date";
        pt->T.Vtype=DATE;
        pt->T.Val.V_DATE=0.;
        pt->T.Viter=ALLOW;
        model->nvar++;

        pt->S0.Vname = "Spot";
        pt->S0.Vtype=PDOUBLE;
        pt->S0.Val.V_PDOUBLE=100.;
        pt->S0.Viter=ALLOW;
        model->nvar++;

        pt->Mu.Vname = "Trend";
        pt->Mu.Vtype=DOUBLE;
        pt->Mu.Val.V_DOUBLE=0.;
        pt->Mu.Viter=ALLOW;
```

```
model->nvar++;

pt->Sigma.Vname = "Volatility type";
pt->Sigma.Vtype=ENUM;
pt->Sigma.Val.V_ENUM.value=0;
pt->Sigma.Val.V_ENUM.members=&volatility_type;
pt->Sigma.Viter=ALLOW;
model->nvar++;

pt->Divid.Vname = "Annual Dividend Rate";
pt->Divid.Vtype=DOUBLE;
pt->Divid.Val.V_DOUBLE=0.;
pt->Divid.Viter=ALLOW;
model->nvar++;

pt->R.Vname = "Annual Interest Rate";
pt->R.Vtype=DOUBLE;
pt->R.Val.V_DOUBLE=10.;
pt->R.Viter=ALLOW;
model->nvar++;

model->HelpFilenameHint = "DUP1D";

}

return OK;
}

TYPEMOD Dupire1dim;

MAKEMOD(Dupire1dim);
```

References