Help

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#include "doublehes1d.h"
#include "chk.h"
#include "error_msg.h"
#include "model.h"
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->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++;

      pt->Sigma0.Vname = "Current Variance";
      pt->Sigma0.Vtype=DOUBLE;
      pt->Sigma0.Val.V_DOUBLE=0.01;
      pt->Sigma0.Viter=ALLOW;
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  model->nvar++;

  pt->MeanReversion.hname = "Mean Reversion of
Variance";
  pt->MeanReversion.htype=DOUBLE;
  pt->MeanReversion.hal.V_DOUBLE=2.;
  pt->MeanReversion.hiter=ALLOW;
  model->nvar++;

  pt->Sigma.Vname = "Volatility of Variance";
  pt->Sigma.Vtype=DOUBLE;
  pt->Sigma.Val.V_DOUBLE=0.2;
  pt->Sigma.Viter=ALLOW;
  model->nvar++;

  pt->Rho.Vname = "Rho Spot-Variance";
  pt->Rho.Vtype=DOUBLE;
  pt->Rho.Val.V_DOUBLE=0.5;
  pt->Rho.Viter=ALLOW;
  model->nvar++;

  pt->SigmaOV.Vname = "Current Variance of Variance";
  pt->SigmaOV.Vtype=DOUBLE;
  pt->SigmaOV.Val.V_DOUBLE=0.01;
  pt->SigmaOV.Viter=ALLOW;
  model->nvar++;

  pt->MeanReversionV.Vname = "Mean Reversion  of
Variance of Variance";
  pt->MeanReversionV.Vtype=DOUBLE;
  pt->MeanReversionV.Val.V_DOUBLE=2.;
  pt->MeanReversionV.Viter=ALLOW;
  model->nvar++;

  pt->LongRunVarianceV.Vname = "Long-Run of Variance of
 Variance";
  pt->LongRunVarianceV.Vtype=DOUBLE;
  pt->LongRunVarianceV.Val.V_DOUBLE=0.01;
  pt->LongRunVarianceV.Viter=ALLOW;
  model->nvar++;
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      pt->SigmaV.Vname = "Volatility of Variance of
    Variance";
      pt->SigmaV.Vtype=DOUBLE;
      pt->SigmaV.Val.V_DOUBLE=0.2;
      pt->SigmaV.Viter=ALLOW;
      model->nvar++;

      pt->RhoSV2.Vname = "Rho Spot-Variance of Variance";
      pt->RhoSV2.Vtype=DOUBLE;
      pt->RhoSV2.Val.V_DOUBLE=0.5;
      pt->RhoSV2.Viter=ALLOW;
      model->nvar++;

      pt->RhoVV.Vname = "Rho Variance-Variance of Variance"
    ;
      pt->RhoVV.Vtype=DOUBLE;
      pt->RhoVV.Val.V_DOUBLE=0.5;
      pt->RhoVV.Viter=ALLOW;
      model->nvar++;
          }

  return OK;
}

TYPEMOD DoubleHeston1d;
MAKEMOD(DoubleHeston1d);
```

# References