Help

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#include "varswap3d.h"
#include "chk.h"
#include "error_msg.h"
#include "model.h"
#include "pnl/pnl_matrix.h"

extern char* path_sep;

static int MOD(Init)(Model *model)
{
  TYPEMOD* pt=(TYPEMOD*)(model->TypeModel);
  double Beta[]={0.8,0.5,0.3};
  double MeanReversion[]={2.0,1.5,0.8};

  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=0.0;
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    pt->R.Viter=ALLOW;
    model->nvar++;

    pt->V0.Vname = "Current Variance";
    pt->V0.Vtype=DOUBLE;
    pt->V0.Val.V_DOUBLE=0.2;
    pt->V0.Viter=ALLOW;
    model->nvar++;

    pt->Beta.Vname = "Volatility of Volatility";
    pt->Beta.Vtype=PNLVECT;
    pt->Beta.Val.V_PNLVECT=pnl_vect_create_from_ptr(3,Bet
  a);
    pt->Beta.Viter=FORBID;
    model->nvar++;

    pt->MeanReversion.hname = "Mean Reversion Factor";
    pt->MeanReversion.htype=PNLVECT;
    pt->MeanReversion.hal.V_PNLVECT=pnl_vect_create_from_
  ptr(3,MeanReversion);
    pt->MeanReversion.hiter=FORBID;
    model->nvar++;

    pt->Rho.Vname = "Correlation";
    pt->Rho.Vtype=RGDOUBLEM11;
    pt->Rho.Val.V_RGDOUBLEM11=0.;
    pt->Rho.Viter=ALLOW;
    model->nvar++;
  }
if(pt->Beta.Val.V_PNLVECT==NULL){
  if((pt->Beta.Val.V_PNLVECT=pnl_vect_create_from_double(
  3, 0.2))==NULL)
    goto err;
  }
if(pt->MeanReversion.hal.V_PNLVECT==NULL)
  {
    if((pt->MeanReversion.hal.V_PNLVECT=pnl_vect_create_
  from_double(3, 0.2))==NULL)
goto err;
  }
```

```
  return OK;

    err:
    Fprintf(TOSCREEN,"%s{n",error_msg[MEMORY_ALLOCATION_FAI
    LURE]);
    exit(WRONG);

}
TYPEMOD VarSwap3dim;
MAKEMOD(VarSwap3dim);
```

References