```
   Help
#include "wishart2d.h"
#include "chk.h"
#include "error_msg.h"
#include "model.h"
#include "pnl/pnl_vector.h"

extern char* path_sep;

static int MOD(Init)(Model *model)
{
  TYPEMOD* pt=(TYPEMOD*)(model->TypeModel);

  static double S0[]={100.,100.};
  static double Divid[]={0.,0.};
  static double b[]={0.,0.};
  static double Sigma0[]={0.02,0.02,0.02,0.03};
  static double Q[]={0.02,0.02,0.02,0.03};

  if (model->init == 0 )
    {
      model->init = 1;
      model->nvar=0;

      pt->T.Vname = "Current Date";
      pt->T.Vtype=DATE;
      pt->T.Val.V_DATE=0.0;
      pt->T.Viter=ALLOW;
      model->nvar++;

      pt->S0.Vname = "Initial Spot";
      pt->S0.Vtype=PNLVECT;
      pt->S0.Val.V_PNLVECT=pnl_vect_create_from_ptr(2,S0);
      pt->S0.Viter=FORBID;
      model->nvar++;

      pt->R.Vname = "Annual Interest Rate";
      pt->R.Vtype=DOUBLE;
      pt->R.Val.V_DOUBLE=10.;
      pt->R.Viter=ALLOW;
      model->nvar++;
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    pt->Divid.Vname = "Annual Dividend Rate";
    pt->Divid.Vtype=PNLVECT;
    pt->Divid.Val.V_PNLVECT=pnl_vect_create_from_ptr(2,
 Divid);
    pt->Divid.Viter=FORBID;
    model->nvar++;

    pt->alpha.Vname = "alpha";
    pt->alpha.Vtype=DOUBLE;
    pt->alpha.Val.V_DOUBLE=3.;
    pt->alpha.Viter=ALLOW;
    model->nvar++;

    pt->b.Vname = "b-11 b-12 b-21 b-22";
    pt->b.Vtype=PNLVECT;
    pt->b.Val.V_PNLVECT=pnl_vect_create_from_ptr(4,b);
    pt->b.Viter=FORBID;
    model->nvar++;

    pt->Sigma0.Vname = "X0-11 X0-12 X0-21 X0-22";
    pt->Sigma0.Vtype=PNLVECT;
    pt->Sigma0.Val.V_PNLVECT=pnl_vect_create_from_ptr(4,
 Sigma0);
    pt->Sigma0.Viter=FORBID;
    model->nvar++;

    pt->Q.Vname = "Q-11 Q-12 Q-21 Q-22";
    pt->Q.Vtype=PNLVECT;
    pt->Q.Val.V_PNLVECT=pnl_vect_create_from_ptr(4,Q);
    pt->Q.Viter=FORBID;
    model->nvar++;

  }
 if(pt->S0.Val.V_PNLVECT==NULL){
   if((pt->S0.Val.V_PNLVECT=pnl_vect_create_from_double(2
  , 100.))==NULL)
      goto err;
 }

     if(pt->Divid.Val.V_PNLVECT==NULL){
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    if((pt->Divid.Val.V_PNLVECT=pnl_vect_create_from_
    double(2, 0.))==NULL)
      goto err;
       }

      if(pt->Sigma0.Val.V_PNLVECT==NULL){
     if((pt->Sigma0.Val.V_PNLVECT=pnl_vect_create_from_
    double(4, 0.02))==NULL)
 goto err;
      }

       if(pt->b.Val.V_PNLVECT==NULL){
    if((pt->b.Val.V_PNLVECT=pnl_vect_create_from_double(2,
    0.))==NULL)
      goto err;
       }

        if(pt->Q.Val.V_PNLVECT==NULL){
    if((pt->Q.Val.V_PNLVECT=pnl_vect_create_from_double(2,
    0.))==NULL)
      goto err;
       }

  return OK;

  err:
    Fprintf(TOSCREEN,"%s{n",error_msg[MEMORY_ALLOCATION_FAI
    LURE]);
    exit(WRONG);
}
TYPEMOD WISHART2d;
MAKEMOD(WISHART2d);
```

References