```
   Help
#include "black_cox_extended.h"
#include "chk.h"
#include "error_msg.h"
#include "model.h"

static int MOD(Init)(Model *model)
{
  TYPEMOD* pt=(TYPEMOD*)(model->TypeModel);
  int n = 2;

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

      pt->S0.Vname = "Spot";
      pt->S0.Vtype=PDOUBLE;
      pt->S0.Val.V_PDOUBLE=100.;
      pt->S0.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->Sigma.Vname = "Volatility";
      pt->Sigma.Vtype=DOUBLE;
      pt->Sigma.Val.V_DOUBLE=0.2;
      pt->Sigma.Viter=ALLOW;
      model->nvar++;

      pt->L.Vname = "Barrier";
      pt->L.Vtype=PNLVECT;
      pt->L.Val.V_PNLVECT=NULL;
      pt->L.Viter=FORBID;
      model->nvar++;

      pt->alpha.Vname = "Barrier decrease";
```

```
      pt->alpha.Vtype=DOUBLE;
      pt->alpha.Val.V_DOUBLE=0.1;
      pt->alpha.Viter=FORBID;
      model->nvar++;

      pt->mu.Vname = "Default intensities";
      pt->mu.Vtype=PNLVECT;
      pt->mu.Val.V_PNLVECT=NULL;
      pt->mu.Viter=FORBID;
      model->nvar++;
          }

  if (pt->L.Val.V_PNLVECT == NULL) {
    if ((pt->L.Val.V_PNLVECT = pnl_vect_create_from_list (
    n, 95., 85.)) == NULL)
      goto err;
  }
  if (pt->mu.Val.V_PNLVECT == NULL) {
    if ((pt->mu.Val.V_PNLVECT =
         pnl_vect_create_from_list (n+1, 0.05, 0.2, 0.3)) =
    = NULL)
      goto err;
  }
  return OK;

 err:
  Fprintf(TOSCREEN,"%s{n",error_msg[MEMORY_ALLOCATION_FAILU
    RE]);
  exit(WRONG);
}

TYPEMOD black_cox_extended;
MAKEMOD(black_cox_extended);
```

References