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   Help
#include "lmm_stochvol_piterbarg.h"
#include "chk.h"
#include "model.h"

extern char* path_sep;

extern PremiaEnum flat;
double MOD(GetYield)(TYPEMOD *pt)
{
  VAR *Par;
  Par = lookup_premia_enum_par (&(pt->Flag_InitialYieldCurv
    e), 0);
  return Par[0].Val.V_PDOUBLE;
}


static int MOD(Init)(Model *model)
{
  VAR *Par;
  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=0.0;
      pt->T.Viter=ALLOW;
      model->nvar++;

      pt->Flag_InitialYieldCurve.Vname = "Initial Yield
    Curve";
      pt->Flag_InitialYieldCurve.Vtype=ENUM;
      pt->Flag_InitialYieldCurve.Val.V_ENUM.value=0;
      pt->Flag_InitialYieldCurve.Val.V_ENUM.members=&Premia
    EnumFlat;
      pt->Flag_InitialYieldCurve.Viter=ALLOW;
      model->nvar++;
      Par = lookup_premia_enum_par (&(pt->Flag_InitialYield
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Curve), 0);
  Par[0].Vname = "Yield Value";
  Par[0].Vtype=PDOUBLE;
  Par[0].Val.V_PDOUBLE=0.05;
  Par[0].Viter=ALLOW;

  pt->Var_SpeedMeanReversion.hname = "Variance Speed of
 Mean Reversion";
  pt->Var_SpeedMeanReversion.htype=DOUBLE;
  pt->Var_SpeedMeanReversion.hal.V_DOUBLE=2.0;
  pt->Var_SpeedMeanReversion.hiter=ALLOW;
  model->nvar++;

  pt->Var_Volatility.Vname = "Variance Volatility";
  pt->Var_Volatility.Vtype=DOUBLE;
  pt->Var_Volatility.Val.V_DOUBLE=0.1;
  pt->Var_Volatility.Viter=ALLOW;
  model->nvar++;

  pt->SkewsParams_a.Vname = "Skews:(a(Tn-t)+b)exp(-c(Tn
-t))+d : a";
  pt->SkewsParams_a.Vtype=DOUBLE;
  pt->SkewsParams_a.Val.V_DOUBLE=0.1;
  pt->SkewsParams_a.Viter=ALLOW;
  model->nvar++;

  pt->SkewsParams_b.Vname = "b";
  pt->SkewsParams_b.Vtype=DOUBLE;
  pt->SkewsParams_b.Val.V_DOUBLE=0.1;
  pt->SkewsParams_b.Viter=ALLOW;
  model->nvar++;

  pt->SkewsParams_c.Vname = "c";
  pt->SkewsParams_c.Vtype=DOUBLE;
  pt->SkewsParams_c.Val.V_DOUBLE=0.1;
  pt->SkewsParams_c.Viter=ALLOW;
  model->nvar++;

  pt->SkewsParams_d.Vname = "d";
  pt->SkewsParams_d.Vtype=DOUBLE;
  pt->SkewsParams_d.Val.V_DOUBLE=0.1;
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      pt->SkewsParams_d.Viter=ALLOW;
      model->nvar++;

      pt->VolsParams_a.Vname = "Vols:(a(Tn-t)+b)exp(-c(Tn-
    t))+d : a";
      pt->VolsParams_a.Vtype=DOUBLE;
      pt->VolsParams_a.Val.V_DOUBLE=0.1;
      pt->VolsParams_a.Viter=ALLOW;
      model->nvar++;

      pt->VolsParams_b.Vname = "b";
      pt->VolsParams_b.Vtype=DOUBLE;
      pt->VolsParams_b.Val.V_DOUBLE=0.1;
      pt->VolsParams_b.Viter=ALLOW;
      model->nvar++;

      pt->VolsParams_c.Vname = "c";
      pt->VolsParams_c.Vtype=DOUBLE;
      pt->VolsParams_c.Val.V_DOUBLE=0.1;
      pt->VolsParams_c.Viter=ALLOW;
      model->nvar++;

      pt->VolsParams_d.Vname = "d";
      pt->VolsParams_d.Vtype=DOUBLE;
      pt->VolsParams_d.Val.V_DOUBLE=0.1;
      pt->VolsParams_d.Viter=ALLOW;
      model->nvar++;

    }
  return OK;
}
TYPEMOD Lmm_StochVol_Piterbarg;
MAKEMOD(Lmm_StochVol_Piterbarg);
```

References