```
   Help
/*-----------------------------------------------------------
    -----*/
/*   CF approx. for caplet prices in one-factor LMM with
    jumps  */
/*   Algorithm of Glasserman/Merener
         */
/*
         */
/*-----------------------------------------------------------
    -----*/
/*  Sonke Blunck, Premia 2005
         */
/*-----------------------------------------------------------
    -----*/

#include  "glassermanmerener.h"

extern "C"{
#include  "lmm_jump1d_stdi.h"

#if defined(PremiaCurrentVersion) && PremiaCurrentVersion <
     (2007+2) //The "#else" part of the code will be freely av
    ailable after the (year of creation of this file + 2)
static int CHK_OPT(AP_GM)(void *Opt, void *Mod)
{
  return NONACTIVE;
}
int CALC(AP_GM)(void *Opt,void *Mod,PricingMethod *Met)
{
  return AVAILABLE_IN_FULL_PREMIA;
}
#else

static int ap_glassermanmerenenr_caplet(NumFunc_1 *p,
    double l0,double t0, double sigma,double capletMat ,double stri
    ke,double tenor,double *price)
{

  capletMat=capletMat-t0;
  return lmm_jump_caplet_GlassMer_pricer(tenor,capletMat,
```

```
    strike,l0,sigma, price);

}

int CALC(AP_GM)(void *Opt,void *Mod,PricingMethod *Met)
{
  TYPEOPT* ptOpt=(TYPEOPT*)Opt;
  TYPEMOD* ptMod=(TYPEMOD*)Mod;

  return ap_glassermanmerenenr_caplet(ptOpt->PayOff.Val.V_
    NUMFUNC_1,ptMod->l0.Val.V_PDOUBLE,
                                        ptMod->T.Val.V_DATE,
                                        ptMod->Sigma.Val.V_
    PDOUBLE,
                                        ptOpt->BMaturity.Val.
    V_DATE,
                                        ptOpt->FixedRate.Val.
    V_PDOUBLE,
                                        ptOpt->ResetPeriod.
    Val.V_DATE,
                                        &(Met->Res[0].Val.V_
    DOUBLE));
}

static int CHK_OPT(AP_GM)(void *Opt, void *Mod)
{

  if ((strcmp(((Option*)Opt)->Name,"Caplet")==0))
    return OK;
  else
    return WRONG;
}

#endif //PremiaCurrentVersion
static int MET(Init)(PricingMethod *Met,Option *Opt)
{
  if ( Met->init == 0)
    {
      Met->init=1;
    }
```

```
  return OK;
}

PricingMethod MET(AP_GM)=
{
  "AP_GlassermanMerener",
  {{" ",PREMIA_NULLTYPE,{0},FORBID}},
  CALC(AP_GM),
  {{"Price",DOUBLE,{100},FORBID}/*,{"Delta",DOUBLE,{100},FO
    RBID}*/ ,{" ",PREMIA_NULLTYPE,{0},FORBID}},
  CHK_OPT(AP_GM),
  CHK_ok,
  MET(Init)
} ;
}
```

References