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/*-----*/
/*  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_std.h"

#ifdef PremiaCurrentVersion && PremiaCurrentVersion < (2007+2) //The "#else"
    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
    {

        capletMat = capletMat - t0;
        return lmm_jump_caplet_GlassMer_pricer(tenor, capletMat, strike, l0, sigma,

    }

    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,
        ptMod->T.Val.V DATE,

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        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},FORBID}*/ , {" ",
    CHK_OPT(AP_GM),
    CHK_ok,
    MET(Init)
} ;
}

```