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#include "doublim.h"

static NumFunc_1 call=
{
    Call,
    {"Strike",PDOUBLE,{100},ALLOW,SETABLE},{ " ",PREMIA_NULLTYPE,{0},FORBID,SETABLE}},
    CHK_call
};

static NumFunc_1 const_Re=
{
    Const,
    {"Const Rebate",DOUBLE,{100},ALLOW,SETABLE}, {" " ,PREMIA_NULLTYPE,{0},FORBID,SETABLE}},
    CHK_ok
};

static NumFunc_1 const_Low=
{
    Const,
    {"Lower Limit",PDOUBLE,{100},ALLOW,SETABLE}, {" " ,PREMIA_NULLTYPE,{0},FORBID,SETABLE}},
    CHK_call
};

static NumFunc_1 const_Up=
{
    Const,
    {"Upper Limit",PDOUBLE,{100},ALLOW,SETABLE}, {" " ,PREMIA_NULLTYPE,{0},FORBID,SETABLE}},
    CHK_call
};

static TYPEOPT DoubleCallOutEuro=
{
    /*PayOff*/          {"PayOff",NUMFUNC_1,{0},FORBID,SETABLE},
    /*Rebate*/          {"Const Rebate",NUMFUNC_1,{0},FORBID,SETABLE},
}
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/*LowerLimit*/      {"Lower Limit", NUMFUNC_1, {0}, FORBID
,SETABLE},
/*UpperLimit*/      {"Upper Limit", NUMFUNC_1, {0}, FORBID
,SETABLE},
/*Maturity*/        {"Maturity", DATE, {0}, ALLOW, SETABLE}
,

/*OutOrIn*/         {"Out", BOOL, {OUT}, FORBID, UNSETABLE},
/*Parisian*/        {"Parisian", BOOL, {1}, FORBID, UNSETABLE},
/*RebNo*/           {"Rebate", BOOL, {REBATE}, FORBID, UNSETA
BLE},
/*EuOrAm*/          {"Euro", BOOL, {EURO}, FORBID, UNSETABLE}

};

static int OPT(Init)(Option *opt, Model *mod)
{
  TYPEOPT* pt=( TYPEOPT*)(opt->TypeOpt);

  if (opt->init == 0 )
  {
    opt->init = 1;
    opt->nvar = 9;
    opt->nvar_setable = 5;

    pt->PayOff.Val.V_NUMFUNC_1=&call;
    pt->Rebate.Val.V_NUMFUNC_1=&const_Re;
    pt->LowerLimit.Val.V_NUMFUNC_1=&const_Low;
    pt->UpperLimit.Val.V_NUMFUNC_1=&const_Up;

    (pt->EuOrAm).Val.V_BOOL=EURO;
    (pt->OutOrIn).Val.V_BOOL=OUT;
    (pt->RebOrNo).Val.V_BOOL=NOREBATE;
    (pt->Maturity).Val.V_DATE=1.0;

    (pt->PayOff.Val.V_NUMFUNC_1)->Par[0].Val.V_PDOUBLE=10
0.0;
    (pt->Rebate.Val.V_NUMFUNC_1)->Par[0].Val.V_PDOUBLE=0.
0;
    (pt->LowerLimit.Val.V_NUMFUNC_1)->Par[0].Val.V_PDOUB
LE=90.0;

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        (pt->UpperLimit.Val.V_NUMFUNC_1)->Par[0].Val.V_PDOUNB
        LE=110.0;

    }

    if((pt->Rebate.Val.V_NUMFUNC_1)->Par[0].Val.V_PDOUBLE>0.0
    )
        (pt->RebOrNo).Val.V_BOOL=REBATE;

    return OK;
}

MAKEOPT(DoubleCallOutEuro);
```

References