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#include "lim.h"

static NumFunc_1 put =
{
    Put,
    {"Strike", PDOUBLE, {100}, ALLOW, SETABLE}, {" ", PREMIA
        _NULLTYPE, {0}, FORBID, SETABLE}},
    CHK_call
};

static NumFunc_1 rebate =
{
    Const,
    {"Rebate", PDOUBLE, {100}, ALLOW, SETABLE}, {" ", PREMIA
        _NULLTYPE, {0}, FORBID, SETABLE}},
    CHK_digit
};

static NumFunc_1 limit =
{
    ConstLim,
    {
        {"StartingDate", DATE, {0}, IRRELEVANT, UNSETABLE},
        {"FinalDate", DATE, {0}, IRRELEVANT, UNSETABLE},
        {"Frequency", PDOUBLE, {0}, IRRELEVANT, UNSETABLE},
        {"Limit", PDOUBLE, {90}, ALLOW, SETABLE},
        {" ", PREMIA_NULLTYPE, {0}, FORBID, SETABLE}
    },
    CHK_digit
};

static TYPEOPT PutUpOutEuro =
{
    /*Maturity*/    {"Maturity", DATE, {0}, ALLOW, SETABLE},
    /*Limit*/       {"Limit", NUMFUNC_1, {0}, FORBID, SETABLE
    },
    /*PayOff*/      {"Payoff", NUMFUNC_1, {0}, FORBID, SETA
        BLE},
    /*Rebate*/      {"Rebate", NUMFUNC_1, {0}, FORBID, SETA
        BLE},
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/*OutOrIn*/      {"Out", BOOL, {OUT}, FORBID, UNSETABLE},
/*DownOrUp*/     {"Up", BOOL, {UP}, FORBID, UNSETABLE},
/*Parisian*/     {"Parisian", BOOL, {FALSE}, FORBID, UNSE
TABLE},
/*RebNo*/        {"Rebate", BOOL, {REBATE}, FORBID, UNSETA
BLE},
/*EuOrAm*/       {"Euro", BOOL, {EURO}, FORBID, UNSETABLE}
,
/*PartOrTot*/    {"Total", BOOL, {TOTAL}, FORBID, UNSETA
BLE},
/*ContOrDisc*/   {"Cont", BOOL, {CONT}, FORBID, UNSETABLE}
,
/*ConstLim*/     {"ConstLim", BOOL, {CONSTLIM}, ALLOW, UN
SETABLE},

};

static int OPT(Init)(Option *opt, Model *mod)
{
  TYPEOPT *pt = (TYPEOPT *) (opt->TypeOpt);
  if (opt->init == 0)
  {
    opt->init = 1;
    opt->nvar = 12;
    opt->nvar_setable = 4;

    pt->PayOff.Val.V_NUMFUNC_1 = &put;
    pt->Rebate.Val.V_NUMFUNC_1 = &rebate;
    pt->Limit.Val.V_NUMFUNC_1 = &limit;

    (pt->PayOff.Val.V_NUMFUNC_1)->Par[0].Val.V_PDOUBLE =
100.0;
    (pt->Rebate.Val.V_NUMFUNC_1)->Par[0].Val.V_PDOUBLE =
10.0;

    (pt->OutOrIn).Val.V_BOOL = OUT;
    (pt->DownOrUp).Val.V_BOOL = UP;
    (pt->Parisian).Val.V_BOOL = FALSE;

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(pt->RebOrNo).Val.V_BOOL = REBATE;
(pt->EuOrAm).Val.V_BOOL = EURO;
(pt->PartOrTot).Val.V_BOOL = TOTAL;
(pt->ContOrDisc).Val.V_BOOL = CONT;
(pt->ConstLim).Val.V_BOOL = CONSTLIM;

(pt->Limit.Val.V_NUMFUNC_1)->Par[3].Val.V_PDOUBLE = 1
10.0;

(pt->Maturity).Val.V_DATE = 1.0;

/* test for setability */
if ((pt->RebOrNo).Val.V_BOOL == REBATE)
    pt->Rebate.Vsetable = SETABLE;
else
    pt->Rebate.Vsetable = UNSETABLE;

}

return OK;
}

MAKEOPT(PutUpOutEuro);
```

## References