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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 PutDownOutAmer=
{
    /*Maturity*/      {"Maturity",DATE,{0},ALLOW,SETABLE},
    /*Limit*/         {"Limit",NUMFUNC_1,{0},FORBID,SETABLE},
    /*PayOff*/        {"Payoff",NUMFUNC_1,{0},FORBID,SETABLE}
    ,
    /*Rebate*/        {"Rebate",NUMFUNC_1,{0},FORBID,SETABLE}
    ,
}
```

```

/*OutOrIn*/      {"Out",BOOL,{OUT},FORBID,UNSETABLE},
/*DownOrUp*/     {"Down",BOOL,{DOWN},FORBID,UNSETABLE},
/*Parisian*/     {"Parisian",BOOL,{1},FORBID,UNSETABLE},
/*RebNo*/        {"Rebate",BOOL,{REBATE},FORBID,UNSETA
BLE},
/*EuOrAm*/       {"Amer",BOOL,{AMER},FORBID,UNSETABLE},
/*PartOrTot*/    {"Total",BOOL,{TOTAL},FORBID,UNSETABLE}
,
/*ContOrDisc*/   {"Cont",BOOL,{CONT},FORBID,UNSETABLE},
/*ConstLim*/     {"ConstLim",BOOL,{CONSTLIM},ALLOW,UNSE
TABLE},
};

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=10
0.0;
    (pt->Rebate.Val.V_NUMFUNC_1)->Par[0].Val.V_PDOUBLE=10
.0;

    (pt->OutOrIn).Val.V_BOOL=OUT;
    (pt->DownOrUp).Val.V_BOOL=DOWN;
    (pt->Parisian).Val.V_BOOL=WRONG;
    (pt->RebOrNo).Val.V_BOOL=REBATE;
    (pt->EuOrAm).Val.V_BOOL=AMER;
    (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=90.0;

(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(PutDownOutAmer);
```

## References