Help

```
#include "lim.h"

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

static NumFunc_1 rebate =
{
  Const,
  {{"Rebate", PDOUBLE, {100}, ALLOW, SETABLE}, {" ", PREMIA_NULLTYPE, {0}, FORBI
  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 CallDownOutAmer =
{
  /*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, {FALSE}, FORBID, UNSETABLE},
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  /*RebNo*/       {"Rebate", BOOL, {REBATE}, FORBID, UNSETABLE},
  /*EuOrAm*/      {"Amer", BOOL, {AMER}, FORBID, UNSETABLE},
  /*PartOrTot*/   {"Total", BOOL, {TOTAL}, FORBID, UNSETABLE},
  /*ContOrDisc*/  {"Cont", BOOL, {CONT}, FORBID, UNSETABLE},
  /*ConstLim*/    {"ConstLim", BOOL, {CONSTLIM}, ALLOW, UNSETABLE},
};

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 = &call;
      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 = DOWN;
      (pt->Parisian).Val.V_BOOL = FALSE;
      (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
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        pt->Rebate.Vsetable = UNSETABLE;


    }

  return OK;
}

MAKEOPT(CallDownOutAmer);
```