Help

```
#include  "
href../../../mod/bns/bns_std/bns_std_h_src.pdfbns_std.h"
#include  "
href../../../common/math/equity_pricer/levy_diffusion_h_src.pdfmath/equity_price
#include  "
href../../../common/math/equity_pricer/carr_h_src.pdfmath/equity_pricer/carr.h"

#if defined(PremiaCurrentVersion) && PremiaCurrentVersion < (2010+2) //The "#els
static int CHK_OPT(CF_CarrBNS)(void *Opt, void *Mod)
{
  return NONACTIVE;
}
int CALC(CF_CarrBNS)(void *Opt, void *Mod, PricingMethod *Met)
{
  return AVAILABLE_IN_FULL_PREMIA;
}
#else

int CALC(CF_CarrBNS)(void *Opt, void *Mod, PricingMethod *Met)
{
  TYPEOPT *ptOpt = (TYPEOPT *)Opt;
  TYPEMOD *ptMod = (TYPEMOD *)Mod;
  NumFunc_1 *p;
  int option_type;
  int std = 1;
  double drift;
  Option_Eqd *op;
  BNS_diffusion *Process = BNS_diffusion_create(ptMod->Lambda.Val.V_PDOUBLE,
                           ptMod->Rho.Val.V_PDOUBLE,
                           ptMod->Beta.Val.V_PDOUBLE,
                           ptMod->Alpha.Val.V_PDOUBLE,
                           sqrt(ptMod->Sigma0.Val.V_PDOUBLE),
                           &drift);
  Levy_diffusion *Levy = Levy_diffusion_create(Process, &BNS_diffusion_character
  p = ptOpt->PayOff.Val.V_NUMFUNC_1;
  if ((p->Compute) == &Call)
    option_type = 1;
  else if ((p->Compute) == &Put)
    option_type = 2;
```

```
  else
    option_type = 3;

  op = option_eqd_create(ptOpt->EuOrAm.Val.V_BOOL, option_type, std, ptMod->S0.V
  option_eqd_set_rate(op, log(1. + ptMod->R.Val.V_DOUBLE / 100.), log(1. + ptMod


  CarrMethod_Vanilla_option_LD(op, 0.1, Levy);
  (Met->Res[0].Val.V_DOUBLE) = op->price;
  (Met->Res[1].Val.V_DOUBLE) = op->delta;
  free(op);
  free(Levy);
  free(Process);
  return OK;
}


static int CHK_OPT(CF_CarrBNS)(void *Opt, void *Mod)
{
  if ((strcmp(((Option *)Opt)->Name, "CallEuro") == 0) || (strcmp(((Option *)Opt
    return OK;

  return  WRONG;
}

#endif //PremiaCurrentVersion

static int MET(Init)(PricingMethod *Met, Option *Opt)
{
  if (Met->init == 0)
    {
      Met->init = 1;
    }

  return OK;
}

PricingMethod MET(CF_CarrBNS) =
{
  "CF_Carr_BNS",
  {{" ", PREMIA_NULLTYPE, {0}, FORBID}},
```

```
  CALC(CF_CarrBNS),
  { {"Price", DOUBLE, {100}, FORBID},
    {"Delta", DOUBLE, {100}, FORBID} ,
    {" ", PREMIA_NULLTYPE, {0}, FORBID}
  },
  CHK_OPT(CF_CarrBNS),
  CHK_ok,
  MET(Init)
};
```