

Help

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#include "stdi.h"
#include "error_msg.h"

extern char* path_sep;

int OPT(Get)(int user,Planning *pt_plan,Option *opt, Model
    *mod)
{
    TYPEOPT* pt=(    TYPEOPT*)(opt->TypeOpt);

    (opt->Init)(opt, mod);

    if (user==TOSCREEN)
        if ((opt->Show)(user,pt_plan,opt,mod))
            do
            {
                Fprintf(TOSCREEN,"-----Option:
                %s\n",opt->Name);

                if ((strcmp(opt->Name,"ZeroCouponCallBondEuro")==0)
                    || (strcmp(opt->Name,"ZeroCouponPutBondEuro")==0)
                    || (strcmp(opt->Name,"ZeroCouponCallBondAmer")==0)

                    || (strcmp(opt->Name,"ZeroCouponPutBondAmer")==0))
                {
                    ScanVar(pt_plan,user,&(pt->OMaturity));
                    ScanVar(pt_plan,user,&(pt->BMaturity));
                    GetParVar(pt_plan,user,(pt->PayOff.Val.V_NUMFUNC_1
                )->Par);
                }
                if ((strcmp(opt->Name,"CouponBearingCallEuro")==0))
                {
                    ScanVar(pt_plan,user,&(pt->OMaturity));
                    ScanVar(pt_plan,user,&(pt->BMaturity));
                    ScanVar(pt_plan,user,&(pt->FixedRate));
                    ScanVar(pt_plan,user,&(pt->ResetPeriod));
                    GetParVar(pt_plan,user,(pt->PayOff.Val.V_NUMFUNC_1
                )->Par);
                }
            }
        }
    }

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if ((strcmp(opt->Name, "ZeroCouponBond")==0))
{
    ScanVar(pt_plan, user, &(pt->BMaturity));
}

if ((strcmp(opt->Name, "Floor")==0) || (strcmp(opt->Name,
"Cap")==0))
{
    ScanVar(pt_plan, user, &(pt->BMaturity));
    ScanVar(pt_plan, user, &(pt->Nominal));
    ScanVar(pt_plan, user, &(pt->FixedRate));
    ScanVar(pt_plan, user, &(pt->ResetPeriod));
    ScanVar(pt_plan, user, &(pt->FirstResetDate));
}

if ((strcmp(opt->Name, "Caplet")==0))
{
    ScanVar(pt_plan, user, &(pt->BMaturity));
    ScanVar(pt_plan, user, &(pt->FixedRate));
    ScanVar(pt_plan, user, &(pt->ResetPeriod));
}

if ((strcmp(opt->Name, "PayerSwaption")==0)
    || (strcmp(opt->Name, "ReceiverSwaption")==0))
{
    ScanVar(pt_plan, user, &(pt->OMaturity));
    ScanVar(pt_plan, user, &(pt->BMaturity));
    ScanVar(pt_plan, user, &(pt->Nominal));
    ScanVar(pt_plan, user, &(pt->FixedRate));
    ScanVar(pt_plan, user, &(pt->ResetPeriod));
}

if ((strcmp(opt->Name, "PayerBermudanSwaption")==0)
    || (strcmp(opt->Name, "ReceiverBermudanSwaption")==0
))
{
    ScanVar(pt_plan, user, &(pt->OMaturity));
    ScanVar(pt_plan, user, &(pt->BMaturity));
    ScanVar(pt_plan, user, &(pt->Nominal));
    ScanVar(pt_plan, user, &(pt->FixedRate));
    ScanVar(pt_plan, user, &(pt->ResetPeriod));
    /*ScanVar(pt_plan, user, &(pt->NbResetDate));*/
}
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    }
    while ((opt->Show)(user,pt_plan,opt,mod));

    return (opt->Show)(TOSCREENANDFILE,pt_plan,opt,mod);
}

int OPT(FGet)(char **InputFile,int user,Planning *pt_plan,
    Option *opt, Model *mod)
{
    TYPEOPT* pt=( TYPEOPT*)(opt->TypeOpt);

    (opt->Init)(opt, mod);

    if (user==TOSCREEN)
    {
        Fprintf(TOSCREEN,"-----
Option:%s{n",opt->Name);

        if ((strcmp(opt->Name,"ZeroCouponCallBondEuro")==0)
|| (strcmp(opt->Name,"ZeroCouponPutBondEuro")==0)
|| (strcmp(opt->Name,"ZeroCouponCallBondAmer")==0)
|| (strcmp(opt->Name,"ZeroCouponPutBondAmer")==0))
        {
            FScanVar(InputFile,pt_plan,user,&(pt->OMaturity));
            FScanVar(InputFile,pt_plan,user,&(pt->BMaturity));
            FGetParVar(InputFile,pt_plan,user,(pt->PayOff.Val.V_
NUMFUNC_1)->Par);
        }

        if ((strcmp(opt->Name,"ZeroCouponBond")==0))
        {

            FScanVar(InputFile,pt_plan,user,&(pt->BMaturity));
        }

        if ((strcmp(opt->Name,"CouponBearingCallEuro")==0))
        {
            FScanVar(InputFile,pt_plan,user,&(pt->OMaturity));
            FScanVar(InputFile,pt_plan,user,&(pt->BMaturity));
            FGetParVar(InputFile,pt_plan,user,(pt->PayOff.Val.V_
NUMFUNC_1)->Par);

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    FScanVar(InputFile,pt_plan,user,&(pt->FixedRate));
    FScanVar(InputFile,pt_plan,user,&(pt->ResetPeriod));
}

    if ((strcmp(opt->Name,"Floor")==0)|| (strcmp(opt->Name,"Cap")==0))
{
    FScanVar(InputFile,pt_plan,user,&(pt->BMaturity));
    FScanVar(InputFile,pt_plan,user,&(pt->Nominal));
    FScanVar(InputFile,pt_plan,user,&(pt->FixedRate));
    FScanVar(InputFile,pt_plan,user,&(pt->ResetPeriod));
    FScanVar(InputFile,pt_plan,user,&(pt->FirstResetDate));
    ;
}

    if ((strcmp(opt->Name,"Caplet")==0))
{
    FScanVar(InputFile,pt_plan,user,&(pt->BMaturity));
    FScanVar(InputFile,pt_plan,user,&(pt->FixedRate));
    FScanVar(InputFile,pt_plan,user,&(pt->ResetPeriod));
}

    if ((strcmp(opt->Name,"PayerSwaption")==0)
|| (strcmp(opt->Name,"ReceiverSwaption")==0))
{
    ScanVar(pt_plan,user,&(pt->OMaturity));
    FScanVar(InputFile,pt_plan,user,&(pt->BMaturity));
    FScanVar(InputFile,pt_plan,user,&(pt->Nominal));
    FScanVar(InputFile,pt_plan,user,&(pt->FixedRate));
    FScanVar(InputFile,pt_plan,user,&(pt->ResetPeriod));
}

    if ((strcmp(opt->Name,"PayerBermudanSwaption")==0)
|| (strcmp(opt->Name,"ReceiverBermudanSwaption")==0))
{
    ScanVar(pt_plan,user,&(pt->OMaturity));
    FScanVar(InputFile,pt_plan,user,&(pt->BMaturity));
    FScanVar(InputFile,pt_plan,user,&(pt->Nominal));
    FScanVar(InputFile,pt_plan,user,&(pt->FixedRate));
    FScanVar(InputFile,pt_plan,user,&(pt->ResetPeriod));
    /*FScanVar(InputFile,pt_plan,user,&(pt->NbResetDate));
    */
}

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    }

    return (opt->Show)(TOSCREENANDFILE,pt_plan,opt,mod);
}

int OPT(Show)(int user,Planning *pt_plan,Option *opt,
             Model *mod)
{
    TYPEOPT* pt=(TYPEOPT*)(opt->TypeOpt);

    (void)(opt->Init)(opt, mod);
    Fprintf(user,"##Option:%s{n",opt->Name);
    /* Valid Parameters*/
    if ((strcmp(opt->Name,"ZeroCouponCallBondEuro")==0) || (
        strcmp(opt->Name,"ZeroCouponPutBondEuro")==0) || (strcmp(opt->
        Name,"ZeroCouponCallBondAmer")==0) || (strcmp(opt->Name,"
        ZeroCouponPutBondAmer")==0))
    {
        PrintVar(pt_plan,user,&(pt->OMaturity));
        PrintVar(pt_plan,user,&(pt->BMaturity));
        ShowParVar(pt_plan,user,(pt->PayOff.Val.V_NUMFUNC_1)-
        >Par);
    }

    if ((strcmp(opt->Name,"CouponBearingCallEuro")==0) )
    {
        PrintVar(pt_plan,user,&(pt->OMaturity));
        PrintVar(pt_plan,user,&(pt->BMaturity));
        ShowParVar(pt_plan,user,(pt->PayOff.Val.V_NUMFUNC_1)-
        >Par);
        PrintVar(pt_plan,user,&(pt->FixedRate));
        PrintVar(pt_plan,user,&(pt->ResetPeriod));
    }

    if ((strcmp(opt->Name,"ZeroCouponBond")==0))
    {
        PrintVar(pt_plan,user,&(pt->BMaturity));
    }
}

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if ((strcmp(opt->Name,"Floor")==0)|| (strcmp(opt->Name,"    Cap")==0))
{
    PrintVar(pt_plan,user,&(pt->BMaturity));
    PrintVar(pt_plan,user,&(pt->Nominal));
    PrintVar(pt_plan,user,&(pt->FixedRate));
    PrintVar(pt_plan,user,&(pt->ResetPeriod));
    PrintVar(pt_plan,user,&(pt->FirstResetDate));
}
if ((strcmp(opt->Name,"Caplet")==0))
{
    PrintVar(pt_plan,user,&(pt->BMaturity));
    PrintVar(pt_plan,user,&(pt->FixedRate));
    PrintVar(pt_plan,user,&(pt->ResetPeriod));
}
if ((strcmp(opt->Name,"PayerSwaption")==0)|| (strcmp(opt->
Name,"ReceiverSwaption")==0))
{
    PrintVar(pt_plan,user,&(pt->OMaturity));
    PrintVar(pt_plan,user,&(pt->BMaturity));
    PrintVar(pt_plan,user,&(pt->Nominal));
    PrintVar(pt_plan,user,&(pt->FixedRate));
    PrintVar(pt_plan,user,&(pt->ResetPeriod));
}
if ((strcmp(opt->Name,"PayerBermudanSwaption")==0)|| (strc
mp(opt->Name,"ReceiverBermudanSwaption")==0))
{
    PrintVar(pt_plan,user,&(pt->OMaturity));
    PrintVar(pt_plan,user,&(pt->BMaturity));
    PrintVar(pt_plan,user,&(pt->Nominal));
    PrintVar(pt_plan,user,&(pt->FixedRate));
    PrintVar(pt_plan,user,&(pt->ResetPeriod));
    /*PrintVar(pt_plan,user,&(pt->NbResetDate));*/
}

return (opt->Check)(user,pt_plan,opt);
}

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extern Option OPT(ZeroCouponBond);

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extern Option OPT(ZeroCouponCallBondEuro);
extern Option OPT(ZeroCouponPutBondEuro);
extern Option OPT(ZeroCouponCallBondAmer);
extern Option OPT(ZeroCouponPutBondAmer);
extern Option OPT(CouponBearingCallEuro);
extern Option OPT(Cap);
extern Option OPT(Floor);
extern Option OPT(Caplet);
extern Option OPT(PayerSwaption);
extern Option OPT(ReceiverSwaption);
extern Option OPT(PayerBermudanSwaption);
extern Option OPT(ReceiverBermudanSwaption);
```

```
Option* OPT(family) [] =
{
    &OPT(ZeroCouponBond),
    &OPT(ZeroCouponCallBondEuro),
    &OPT(ZeroCouponPutBondEuro),
    &OPT(ZeroCouponCallBondAmer),
    &OPT(ZeroCouponPutBondAmer),
    &OPT(CouponBearingCallEuro),
    &OPT(Cap),
    &OPT(Floor),
    &OPT(Caplet),
    &OPT(PayerSwaption),
    &OPT(ReceiverSwaption),
    &OPT(PayerBermudanSwaption),
    &OPT(ReceiverBermudanSwaption),
    NULL
};
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References