

[Help](#)

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#include "
href../../mod/cirpp2d/cirpp2d_h_src.pdfcirpp2d.h"
#include "
href../../common/chk_h_src.pdfchk.h"
#include "
href../../mod/hes1d/hes1d_pad/model_h_src.pdfmodel.h"
#include "
href../../common/enums_h_src.pdfenums.h"

extern char *path_sep;

static PremiaEnumMember flatint_members[] =
{
    { "to Initial Yields and Intensity in data/ directory", 0 },
    { "to Initial Yields and Spread in data/ directory", 1 },
    { NULL, NULLINT }
};

DEFINE_ENUM(flatint, flatint_members);

static int MOD(Init)(Model *model)
{
    TYPEMOD *pt = (TYPEMOD *) (model->TypeModel);

    if (model->init == 0)
    {
        model->init = 1;
        model->nvar = 0;
        pt->T.Vname = "Current Date";
        pt->T.Vtype = DATE;
        pt->T.Val.V_DATE = 0.0;
        pt->T.Viter = ALLOW;
        model->nvar++;

        pt->flat_flag.Vname = "Calibration";
        pt->flat_flag.Vtype = ENUM;
        pt->flat_flag.Val.V_ENUM.value = 0;
        pt->flat_flag.Val.V_ENUM.members = &flatint;
        pt->flat_flag.Viter = ALLOW;
    }
}
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model->nvar++;

pt->InitialYieldsR.Vname = "Initial R0";
pt->InitialYieldsR.Vtype = PDOUBLE;
pt->InitialYieldsR.Val.V_PDOUBLE = 0.05;
pt->InitialYieldsR.Viter = ALLOW;
model->nvar++;

pt->aR.Vname = "Speed of Mean Reversion Interest Rate";
pt->aR.Vtype = PDOUBLE;
pt->aR.Val.V_PDOUBLE = 0.15;
pt->aR.Viter = ALLOW;
model->nvar++;

pt->bR.Vname = "Long Term Mean Interest Rate";
pt->bR.Vtype = PDOUBLE;
pt->bR.Val.V_PDOUBLE = 0.05;
pt->bR.Viter = ALLOW;
model->nvar++;

pt->SigmaR.Vname = "Volatility Interest Rate";
pt->SigmaR.Vtype = PDOUBLE;
pt->SigmaR.Val.V_PDOUBLE = 0.1;
pt->SigmaR.Viter = ALLOW;
model->nvar++;

pt->InitialYieldsI.Vname = "Initial IO";
pt->InitialYieldsI.Vtype = PDOUBLE;
pt->InitialYieldsI.Val.V_PDOUBLE = 0.05;
pt->InitialYieldsI.Viter = ALLOW;
model->nvar++;

pt->aI.Vname = "Speed of Mean Reversion Intensity";
pt->aI.Vtype = PDOUBLE;
pt->aI.Val.V_PDOUBLE = 0.15;
pt->aI.Viter = ALLOW;
model->nvar++;

pt->bI.Vname = "Long Term Mean Interest Intensity";
pt->bI.Vtype = PDOUBLE;
pt->bI.Val.V_PDOUBLE = 0.05;

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    pt->bI.Viter = ALLOW;
    model->nvar++;

    pt->SigmaI.Vname = "Volatility Intensity";
    pt->SigmaI.Vtype = PDOUBLE;
    pt->SigmaI.Val.V_PDOUBLE = 0.1;
    pt->SigmaI.Viter = ALLOW;
    model->nvar++;

    pt->Rho.Vname = "Rho";
    pt->Rho.Vtype = DOUBLE;
    pt->Rho.Val.V_DOUBLE = 0.5;
    pt->Rho.Viter = ALLOW;
    model->nvar++;

}
return OK;
}
TYPEMOD CirPlus2d;
MAKEMOD(CirPlus2d);

```