

[Help](#)

```
#include "bscir2d.h"
#include "chk.h"
#include "error_msg.h"
#include "model.h"
#include "premia_obj.h"

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

        pt->S0.Vname = "Spot";
        pt->S0.Vtype = PDOUBLE;
        pt->S0.Val.V_PDOUBLE = 100.;
        pt->S0.Viter = ALLOW;
        model->nvar++;

        pt->Sigma.Vname = "Volatility";
        pt->Sigma.Vtype = DOUBLE;
        pt->Sigma.Val.V_DOUBLE = 0.1358;
        pt->Sigma.Viter = ALLOW;
        model->nvar++;

        pt->r0.Vname = "Current Rate";
        pt->r0.Vtype = PDOUBLE;
        pt->r0.Val.V_PDOUBLE = 0.04;
        pt->r0.Viter = ALLOW;
        model->nvar++;

        pt->k.Vname = "Speed of Mean Reversion";
```

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    pt->k.Vtype = PDOUBLE;
    pt->k.Val.V_PDOUBLE = 1;
    pt->k.Viter = ALLOW;
    model->nvar++;

    pt->theta.Vname = "Long Term Mean";
    pt->theta.Vtype = PDOUBLE;
    pt->theta.Val.V_PDOUBLE = 0.04;
    pt->theta.Viter = ALLOW;
    model->nvar++;

    pt->SigmaR.Vname = "Volatility of Interest Rate";
    pt->SigmaR.Vtype = PDOUBLE;
    pt->SigmaR.Val.V_PDOUBLE = 0.2;
    pt->SigmaR.Viter = ALLOW;
    model->nvar++;

    pt->Rho.Vname = "Correlation";
    pt->Rho.Vtype = DOUBLE;
    pt->Rho.Val.V_DOUBLE = 0;
    pt->Rho.Viter = ALLOW;
    model->nvar++;

    /* pt->Mortality.Vname = "Mortality Table"; */
    /* pt->Mortality.Vtype=FILENAME; */
    /* pt->Mortality.Val.V_FILENAME=NULL; */
    /* pt->Mortality.Viter=FORBID; */
    /* pt->Mortality.Vsetable =SETABLE; */

    /* model->nvar++; */

    /* if ((pt->Mortality.Val.V_FILENAME=malloc(sizeof(char)*MAX_PATH_LEN))==N
    /*     return MEMORY_ALLOCATION_FAILURE; */
    /* sprintf( pt->Mortality.Val.V_FILENAME, "%s%sMortality.dat", premia_data

}

return OK;
}

TYPEMOD bscir2d;

```

```
MAKEMOD(bscir2d);
```