

[Help](#)

```
#include "bns.h"
#include "chk.h"
#include "error_msg.h"
#include "model.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->Divid.Vname = "Annual Dividend Rate";
        pt->Divid.Vtype = DOUBLE;
        pt->Divid.Val.V_DOUBLE = 0.;
        pt->Divid.Viter = ALLOW;
        model->nvar++;

        pt->R.Vname = "Annual Interest Rate";
        pt->R.Vtype = DOUBLE;
        pt->R.Val.V_DOUBLE = 10.;
        pt->R.Viter = ALLOW;
        model->nvar++;

        pt->Sigma0.Vname = "Current Variance";
        pt->Sigma0.Vtype = DOUBLE;
```

```
pt->Sigma0.Val.V_DOUBLE = 0.0433;
pt->Sigma0.Viter = ALLOW;
model->nvar++;

pt->Lambda.Vname = "Lambda";
pt->Lambda.Vtype = DOUBLE;
pt->Lambda.Val.V_DOUBLE = 0.5474;
pt->Lambda.Viter = ALLOW;
model->nvar++;

pt->Beta.Vname = "Beta";
pt->Beta.Vtype = DOUBLE;
pt->Beta.Val.V_DOUBLE = 18.6075;
pt->Beta.Viter = ALLOW;
model->nvar++;

pt->Alpha.Vname = "Alpha";
pt->Alpha.Vtype = DOUBLE;
pt->Alpha.Val.V_DOUBLE = 0.6069;
pt->Alpha.Viter = ALLOW;
model->nvar++;

pt->Rho.Vname = "Rho";
pt->Rho.Vtype = DOUBLE;
pt->Rho.Val.V_DOUBLE = -4.6750;
pt->Rho.Viter = ALLOW;
model->nvar++;
}

return OK;
}

TYPEMOD bns;
MAKEMOD(bns);
```