

[Help](#)

```
#include "bharchiarella1d.h"
#include "chk.h"
#include "error_msg.h"
#include "model.h"

extern char *path_sep;

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->alpha0.Vname = "Volatility Parameter Alpha0";
        pt->alpha0.Vtype = PDOUBLE;
        pt->alpha0.Val.V_PDOUBLE = 0.001;
        pt->alpha0.Viter = ALLOW;
        model->nvar++;

        pt->alphar.Vname = "Volatility Parameter Alphar";
        pt->alphar.Vtype = PDOUBLE;
        pt->alphar.Val.V_PDOUBLE = 0.04;
        pt->alphar.Viter = ALLOW;
        model->nvar++;

        pt->alphaf.Vname = "Volatility Parameter Alphaf";
        pt->alphaf.Vtype = PDOUBLE;
        pt->alphaf.Val.V_PDOUBLE = 0.0;
        pt->alphaf.Viter = ALLOW;
        model->nvar++;
```

```
pt->gamm.Vname = "Volatility Parameter Gamma";
pt->gamm.Vtype = PDOUBLE;
pt->gamm.Val.V_PDOUBLE = 0.5;
pt->gamm.Viter = ALLOW;
model->nvar++;

pt->lambda.Vname = "Volatility Parameter Lambda";
pt->lambda.Vtype = PDOUBLE;
pt->lambda.Val.V_PDOUBLE = 0.2;
pt->lambda.Viter = ALLOW;
model->nvar++;

pt->tau.Vname = "Volatility Parameter Tau";
pt->tau.Vtype = PDOUBLE;
pt->tau.Val.V_PDOUBLE = 1.;
pt->tau.Viter = ALLOW;
model->nvar++;

pt->beta0.Vname = "Forward Rate Parameter Beta0";
pt->beta0.Vtype = PDOUBLE;
pt->beta0.Val.V_PDOUBLE = 0.04;
pt->beta0.Viter = ALLOW;
model->nvar++;

pt->beta1.Vname = "Forward RateParameter Beta1";
pt->beta1.Vtype = PDOUBLE;
pt->beta1.Val.V_PDOUBLE = 0.04;
pt->beta1.Viter = ALLOW;
model->nvar++;

pt->eta.Vname = "Forward Rate Parameter Eta";
pt->eta.Vtype = PDOUBLE;
pt->eta.Val.V_PDOUBLE = 0.05;
pt->eta.Viter = ALLOW;
model->nvar++;

}
return OK;
}
```

```
TYPEMOD BharChiarella1d;  
MAKEMOD(BharChiarella1d);
```