

[Help](#)

```
#include "affine3d.h"
#include "chk.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->x01.Vname = "Current X1";
        pt->x01.Vtype = DOUBLE;
        pt->x01.Val.V_DOUBLE = 0.01;
        pt->x01.Viter = ALLOW;
        model->nvar++;

        pt->x02.Vname = "Current X2";
        pt->x02.Vtype = DOUBLE;
        pt->x02.Val.V_DOUBLE = 0.005;
        pt->x02.Viter = ALLOW;
        model->nvar++;

        pt->x03.Vname = "Current X3";
        pt->x03.Vtype = DOUBLE;
        pt->x03.Val.V_DOUBLE = -0.02;
        pt->x03.Viter = ALLOW;
        model->nvar++;
    }
}
```

```
pt->k1.Vname = "Speed of Mean Reversion 1";  
pt->k1.Vtype = PDOUBLE;  
pt->k1.Val.V_PDOUBLE = 1;  
pt->k1.Viter = ALLOW;  
model->nvar++;
```

```
pt->k2.Vname = "Speed of Mean Reversion 2";  
pt->k2.Vtype = PDOUBLE;  
pt->k2.Val.V_PDOUBLE = 0.2;  
pt->k2.Viter = ALLOW;  
model->nvar++;
```

```
pt->k3.Vname = "Speed of Mean Reversion 3";  
pt->k3.Vtype = PDOUBLE;  
pt->k3.Val.V_PDOUBLE = 0.5;  
pt->k3.Viter = ALLOW;  
model->nvar++;
```

```
pt->Sigma1.Vname = "Volatility 1";  
pt->Sigma1.Vtype = PDOUBLE;  
pt->Sigma1.Val.V_PDOUBLE = 0.01;  
pt->Sigma1.Viter = ALLOW;  
model->nvar++;
```

```
pt->Sigma2.Vname = "Volatility 2";  
pt->Sigma2.Vtype = PDOUBLE;  
pt->Sigma2.Val.V_PDOUBLE = 0.005;  
pt->Sigma2.Viter = ALLOW;  
model->nvar++;
```

```
pt->Sigma3.Vname = "Volatility 3";  
pt->Sigma3.Vtype = PDOUBLE;  
pt->Sigma3.Val.V_PDOUBLE = 0.002;  
pt->Sigma3.Viter = ALLOW;  
model->nvar++;
```

```
pt->shift.Vname = "Initial Shift";  
pt->shift.Vtype = PDOUBLE;  
pt->shift.Val.V_PDOUBLE = 0.06;  
pt->shift.Viter = ALLOW;
```

```
model->nvar++;

pt->Rho12.Vname = "Rho 12";
pt->Rho12.Vtype = RGDOUBLEM11;
pt->Rho12.Val.V_RGDOUBLEM11 = -0.2;
pt->Rho12.Viter = ALLOW;
model->nvar++;

pt->Rho13.Vname = "Rho 13";
pt->Rho13.Vtype = RGDOUBLEM11;
pt->Rho13.Val.V_RGDOUBLEM11 = -0.1;
pt->Rho13.Viter = ALLOW;
model->nvar++;

pt->Rho23.Vname = "Rho 23";
pt->Rho23.Vtype = RGDOUBLEM11;
pt->Rho23.Val.V_RGDOUBLEM11 = 0.3;
pt->Rho23.Viter = ALLOW;
model->nvar++;
}
return OK;
}
TYPEMOD Affine3d;
MAKEMOD(Affine3d);
```