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```
#include "libor_affine_gould.h"
#include "chk.h"
#include "model.h"
#include "enums.h"
#include "premia_obj.h"

double MOD(GetYield)(TYPEMOD *pt)
{
    VAR *Par;
    Par = lookup_premia_enum_par(&(pt->flat_flag), 0);
    return Par[0].Val.V_PDOUBLE;
}

char *MOD(GetCurve)(TYPEMOD *pt)
{
    VAR *Par;
    Par = lookup_premia_enum_par(&(pt->flat_flag), 1);
    return Par[0].Val.V_FILENAME;
}

static int MOD(Init)(Model *model)
{
    VAR *Par;
    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 = "Initial Yield Curve";
        pt->flat_flag.Vtype = ENUM;
    }
}
```

```

pt->flat_flag.Val.V_ENUM.value = 0;
pt->flat_flag.Val.V_ENUM.members = &PremiaEnumFlat;
pt->flat_flag.Viter = ALLOW;
model->nvar++;
Par = lookup_premia_enum_par(&(pt->flat_flag), 0);
Par[0].Vname = "Yield Value";
Par[0].Vtype = PDOUBLE;
Par[0].Val.V_PDOUBLE = 0.03;
Par[0].Viter = ALLOW;
Par = lookup_premia_enum_par(&(pt->flat_flag), 1);
Par[0].Vname = "Yield Curve";
Par[0].Vtype = FILENAME;
Par[0].Val.V_FILENAME = NULL;
Par[0].Viter = FORBID;

```

```

pt->x0.Vname = "x0";
pt->x0.Vtype = PDOUBLE;
pt->x0.Val.V_PDOUBLE = 1.25;
pt->x0.Viter = ALLOW;
model->nvar++;

```

```

pt->lambda.Vname = "lambda";
pt->lambda.Vtype = PDOUBLE;
pt->lambda.Val.V_PDOUBLE = 0.01;
pt->lambda.Viter = ALLOW;
model->nvar++;

```

```

pt->alpha.Vname = "alpha";
pt->alpha.Vtype = PDOUBLE;
pt->alpha.Val.V_PDOUBLE = 2.0;
pt->alpha.Viter = ALLOW;
model->nvar++;

```

```

pt->beta.Vname = "beta";
pt->beta.Vtype = PDOUBLE;
pt->beta.Val.V_PDOUBLE = 1.0;
pt->beta.Viter = ALLOW;
model->nvar++;

```

```

}

```

```

Par = lookup_premia_enum_par(&(pt->flat_flag), 1);

```

```
if (Par[0].Val.V_FILENAME == NULL)
{
    if ((Par[0].Val.V_FILENAME = malloc(sizeof(char) * MAX_PATH_LEN)) == NULL)
        return MEMORY_ALLOCATION_FAILURE;
    sprintf(Par[0].Val.V_FILENAME, "%s%sinitialyield.dat", premia_data_dir, pa
}
return OK;
}
```

```
TYPEMOD Libor_Affine_Gould;
MAKEMOD(Libor_Affine_Gould);
```