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```
#if defined(PremiaCurrentVersion) && PremiaCurrentVersion < (2007+2) //The "#els
#else

#ifndef LMM_HEADER_H
#define LMM_HEADER_H

#include<math.h>
#include"stdio.h"
#include"stdlib.h"
#include "pnl/pnl_vector.h"

typedef double (*funcVol)(double t, double T, double sigma) ; /*// volatility fu

typedef struct
{
    int numberOfFactors;
    double flat_sigma;
    funcVol *vol; /*// vol is an array of volatility functions */
} Volatility;

typedef struct
{
    int numberOfMaturities ;
    double tenor;
    PnlVect *maturity ;
    PnlVect *libor ;
} Libor;

typedef struct
{
    int numberOfMaturities ;
    int numberOfTrajectories;
    double tenor;
    double *maturity ;
    double ** *libor ;
} HistLibor;
```

```
typedef struct
{
    int numberOfFactors ;
    double *val ;

} RandomGenerator;
```

```
typedef struct
{
    double swaptionMaturity;
    double swapMaturity;
    double price;
    double strike;
    double tenor;
    int numberOfDates;

} Swaption;
```

```
typedef struct
{
    double maturity;
    double price;
    double strike;

} Caplet;
```

```
typedef struct
{
    int numberOfMaturities ;
    double tenor;
    double *value ;

} ZeroBond;
```

```
#endif
```

```
#endif //PremiaCurrentVersion
```