

## FMR3000 Calculation Libraries

### FMR3000

FMR3000 is a set of financial libraries that supports bonds, derivatives (both rate and share) and exchanges. The system is integrated with a proprietary database that includes the instruments to evaluate static features and the calculation methods associated with the different supported markets.

FMR3000 is optimised to support high volumes of calculations required by real time applications.

The system has different interfaces, such as Excel, MatLab, SAS and the most common programming languages (Visual Basic, C\C++ and so on).

FMR3000 is a developing product, which adapts to the news and to the modifications required by the markets.

### Financial functionalities

FMR3000 has more than 100 functions related to different financial problems. They are grouped in several evaluation modules. The available functionality can be grouped in the following categories:

- **pricing** functionality;
- **market analysis** functionality;
- **simulation** functionality and scenario analysis based on rate curves;
- **support** functionality (date utilities and so on).

FMR3000 offers very complex models to build zero coupon curves from market data. Among the others, the available models are:

- **bootstrapping** model;
- McCulloch's **cubic spline** model;
- **Black-Derman-Toy's** stochastic model, automatic set on cap or swaption.

Moreover, FMR3000 supports the following calculation models:

- asset swap analysis;
- discount margin;
- cheapest to deliver;
- CCT analysis.

### Microsoft Excel Support

FMR3000 makes available some further instruments to increase the productivity in Excel environments:

- **financial functions** which can be used directly on the sheets or inside VBA and Excel macros;
- a command **menu**, to use additional applications (for example, the database manager) and Excel's macros;
- preconfigured **analysis worksheets**:
  - term structure and swap curve calculation;
  - asset swap analysis;
  - future contract cheapest to delivery calculation;
  - TED Spread analysis;
  - total return analysis.

### Integrated Database

FMR3000 has network database integrated with calculation functions.

The database includes:

- instrument registration;
- calculation models and calendars

Supported bonds:

- European countries inside and outside EMU;
- Emergent eastern European countries (Hungary, Poland and Czech Republic);
- United States of America, Canada and Japan;
- Italian Corporate;
- Pfandbriefe;
- Eurobonds.

### Connectivity

FMR3000 has a set of utilities for the connection with the real time data providers. Particularly, the providers supported are **Reuters** and **Bloomberg** on several platforms among which are Reuters, **TIBCO**, **Triarch**, **DowJones**, **FIST** and **OpenTrade**.

FMR3000 can be integrated with different electronic market quotation systems such as **MarketView**, **GateMate**, **Xtrade** and **MTSQuote**.

### Available Interfaces

Microsoft Excel  
Visual Basic  
C/C++  
COM/DICOM  
Matlab  
SAS  
MarketView

### Supported Operating Systems

Windows NT  
Windows 2000