FEA Product Profile

@INTEREST®

Pricing, hedging, & risk management for interest-rate markets

DESCRIPTION

@INTEREST is a set of Microsoft® Excel add-in functions that value cash and derivative instruments used in interest-rate markets. Typical users are traders, risk managers, corporations, investment funds, financial institutions, insurance companies, brokers, and auditors.

@INTEREST is written completely in C++ and provides extremely fast calculations. It includes Excel add-in functions (XLL files), customizable Excel templates, and documentation. When installed, @INTEREST adds functions to Excel that are used like the built-in worksheet functions, so you can customize the @INTEREST templates or create new ones.

@INTEREST is also available as the IntrLib™ C++ library for Unix and Windows programmers who want to incorporate @INTEREST functions into custom and third-party C, C++, Visual Basic, and SQL database applications. IntrLib includes a COM interface.

FEATURES

Extensive Instrument Coverage: The supported set of instruments (see Coverage) can be extended by combining and chaining functions to value complex transactions. @INTEREST includes templates for specialized trades. FEA regularly expands instrument coverage and publishes new spreadsheet templates.

Comprehensive Results: Price and risk measures can be calculated with a single function call. The risk measures include delta and gamma for a user-defined parallel yield curve shift, theta for a calendar or business day shift, vega for both the short-rate volatility and the mean-reversion rate, cash flow maps, bucket deltas, duration, convexity, and OAS.

Yield Curve Estimation: @INTEREST includes functions that extract zero-coupon yield curves from the market values of money market rates, Eurocurrency futures prices, and swap rates. The output curves can be expressed as annually-compounded yields, discount factors, or synthetic futures prices (futures prices for different expirations than the input dates). You can customize many aspects of the calculations, including the settlement of money market and swap rates, interpolation on rates or prices, futures prices to forward rates convexity adjustment, swap rate compounding frequency and day-count basis, stub rate interpolation, curve smoothing using cubic splines, and compounding frequency of interpolated rates.

Calendar Management: Calendar features include flexible date-based time inputs, automatic accounting for weekends, support for user-defined holiday schedules, day-rolling conventions, and day-count basis support.

Interpolation and Extrapolation: Linear, loglinear, cubic spline, and log-cubic spline yield curve interpolation and extrapolation are supported.

Schedules: You can specify principal amortization schedules for bond sinking funds and roller-coaster swaps, coupon schedules for step-up and step-down coupon bonds and swaps, option strike schedules for variable-strike bond call schedules, swap option schedules, step-up and step-down caps and floors, and conversion schedules for convertible bonds. Payments in advance or arrears and odd-first and odd-last coupons are also supported.

Multiple Pricing Models: You can value instruments using the Black '76, Ho and Lee, Hull and White, Black and Karasinski, Cox, Ingersoll, and Ross, and Brace, Gatarek, and Musiela option pricing models. American, European, and Bermuda options are supported, including forward-starting and changing strike options.

Calibration: You can calculate the pricing-model mean-reversion rate and short-rate volatility from market prices or from Black '76 volatilities of caps or swap options.

COVERAGE

@INTEREST functions value these instruments:

- Zero-coupon bonds
- Zero-coupon bond forwards
- Zero-coupon bond futures
- Zero-coupon bond options
- Zero-coupon bond futures options
- Zero-coupon bond future fair price
- Convertible bonds
- Coupon bonds
- Coupon bond forwards
- Coupon bond futures
- Coupon bond options
- Coupon bond futures options
- Coupon bond option adjusted spread
- Coupon bond yield
- Coupon bond accrued interest
- Interest-rate swaps
- Interest-rate swap options
- Interest-rate swap fair fixed rate
- Basis swaps
- Basis swap options
- Quanto swaps
- Quanto swap options
- Currency swaps
- Currency swap options
- Bermuda bond options
- Bermuda swap options
- Constant maturity swaps
- Constant maturity swap options
- Caps, floors, and collars
- Options on caps, floors, and collars
- Barrier caps, floors, and collars (knockouts and knockins)
- Eurocurrency futures
- Eurocurrency futures options
- FRAs (forward rate agreements)
- FRA options
- FRA fair rate
- FRNs (floating rate notes)
- CDs, commercial paper, and loans

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Contact FEA for a demonstration version of this product

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