

LexiFi

“INTEGRATED SOFTWARE
SOLUTION FOR OTC
DERIVATIVES AND
STRUCTURED PRODUCTS”



USE ONE SYSTEM TO GAIN AGILITY AND SCALABILITY

PRODUCT DEFINITION

- Accurately record the terms and conditions of tailored products in trading-quality entry screens laid out like term sheets.
- A single definition to manage, analyse and price financial products from inception to maturity.
- Product definitions evolve and adapt automatically in response to life cycle events hence reflecting the current state of the contract.
- Countless out-of-the box financial structures, based on any type and combination of underlying assets.
- Automatically import and export product definitions using predefined or customised formats.

TRADES

- Record or automatically import client and counterparty trade operations.
- Calculate client positions and assess the value, performance and risks of client portfolios.
- Custom post-trade workflows to control product data and term sheets, process trades, synchronise relevant data with in-house systems and interact with other stakeholders upon consummating a trade.
- Use interactive displays to quickly find orders and trades and to calculate pertinent information such as past and future security positions.

LIFE CYCLE MANAGEMENT

- Products with embedded conditions, such as continuous barriers, require special monitoring capabilities.
- LexiFi Apropos measures the proximity of the event, generates alerts, diagnoses when a condition is met, records detailed information on the circumstances surrounding the event and details its consequences.
- Detect and process life cycle events such as payments, fixings, options, early redemptions, barrier crossings and equity corporate actions.
- Product definitions adapt automatically in response to such events.
- Receive alerts and send notification messages to clients, counterparties or colleagues upon the occurrence of lifecycle events or when certain product or portfolio metrics are exceeded.

WORKFLOW

- The workflow system can securely control user rights, data status, and validation process.
- The workflow configuration is implemented and customised for each customer.
- LexiFi framework allows for precise and detailed workflow definition.
- Workflows seamlessly integrate with external systems and provide accurate and up-to-date information when needed.



Graphical Simulation

PRICING

USE LEXIFI'S HIGHLY SOPHISTICATED PRICING MODELS OR IN-HOUSE MODELS TO VALUE TAILORED FINANCIAL PRODUCTS.

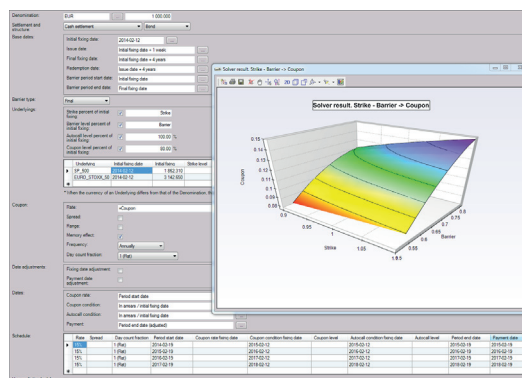
KEY FEATURES INCLUDE:

- Wide list of cutting-edge and industry-standard pricing models with the choice of Monte Carlo, PDE and closed-form implementations. Available models cover all major asset classes: equity, foreign exchange, commodity, interest rate, inflation, credit and hybrid.
- LexiFi automates the pricing of financial products from inception to maturity and provides the ability to price products at a past date without any ad hoc manipulation.
- Calibration: Transform observable market data into relevant model inputs with flexible and robust calibration algorithms.
- Multiple curves: Price with multiple yield curves to reflect the different credit and liquidity risk of Libor rates with different tenors and overnight discounting of cash flows.
- Issuer credit spreads: Discount cash flows with risky curves that reflect the credit risk of issuers.
- Trigger pricing and quantitative analysis in batch mode using interactive displays or command lines.
- Store valuation results calculated by the system and/or imported from an external source and associated market data inputs.

A SELECTION OF POWERFUL QUANTITATIVE TOOLS

QUANTIFY PRECISELY THE RISKS AND REWARDS OF BOTH NEW AND EXISTING PRODUCTS WITH A COLLECTION OF ANALYTICS:

- Structuring tools:
 - Contract variations – Calculate the impact on price of changes in product parameters.
 - Solver – Calculate product parameters to match a user-entered price.
 - Underlying Optimiser – Identify and optimise underlyings for product shapes.
- In depth pricing:
 - Monte Carlo Inspector – Explore the details of a Monte Carlo pricing result.
 - PDE Inspector – Explore the details of a PDE pricing result.
 - Compute Greeks and other sensitivities.
 - Value Change Analysis – Explain the change in value of a contract between two dates.
- Scenario analysis: use a powerful framework for designing, managing and running scenarios:
 - Historical simulation – Quantify the performance of a product as if acquired in the past.
 - Forward-looking simulation – Analyse the behaviour and value of a product along future market scenarios.
 - Risk scenario – Price a selection of financial contracts under certain market data scenarios (e.g. stress testing, regulatory ratio computation).
 - Value at Risk, Tail Conditional Expectation.



Solver

DOCUMENT GENERATION

LEXIFI APROPOS SIMPLIFIES THE DESIGN AND AUTOMATES THE PRODUCTION OF HIGH-QUALITY, DYNAMIC DOCUMENTS. SALIENT FEATURES OF LEXIFI'S DOCUMENT GENERATION TECHNOLOGY INCLUDE:

- Fully automatic – Documents may be generated either through a batch processing job or interactively.
- Dynamic and up-to-date documents that reflect the evolution of contracts through time.
- Highly customisable – Users have full control over the information that appears in a document as well as the document's layout and visual aspects.
- Rich content – In addition to static and dynamic texts, numbers, and other basic data, documents may contain images, charts (such as historical prices for the contract and its underlyings), and complex data grids.
- Printing and/or web quality.
- Template reuse – Static and dynamic document fragments may be shared amongst templates.

Contract ID	Status	Value	...
123456789	Active	1000000	...
987654321	Expired	500000	...
...

Contract Reporting View

REPORTING: MANAGE PORTFOLIOS AND RISKS

CALCULATE CASH FLOWS AND POSITIONS, ESTIMATE PORTFOLIO VALUES AND RISKS, AND PRESENT THE INFORMATION WITH A COLLECTION OF SPECIFIC DISPLAYS AND REPORTS:

- Cash and security positions – Calculate past and future cash flows, cash balances and security positions.
- Valuation – Attach one or more pricing environment(s) to each contract in order to automate the ongoing valuation of portfolios.
- Profit and loss – **Profit and loss reports** retrieve product values on a start date and an end date, record intermediate cash flows, and optionally apply overnight funding rates to daily cash balances.
- Scenario analysis – Use a powerful framework for designing, managing and running **historical, forward-looking and stress scenarios** on a portfolio.
- Filtering and grouping – Each trade is assigned to a portfolio and may be associated with an arbitrary number of attributes. **Portfolio analytics** include configurable queries and drill-down capabilities to monitor relevant metrics at all levels.
- **Batch processing** – Tasks that need to be processed to produce portfolio analytics may be launched and run to completion without any user interaction.

INTEGRATE AND CUSTOMISE

TAILOR YOUR SOLUTION AND ENHANCE THE COVERAGE OF IN-HOUSE SYSTEMS.

- LexiFi Apropos may be deployed as:
 - an **integrated application** that implements end-to-end business processes;
 - a server acting as a shared utility in support of business processes managed by one or more other applications;
 - an embedded component that enhances the functional coverage of an in-house or third-party application.
- LexiFi provides tools and services to meet distinct client requirements, including:
 - **integration APIs** – Control the data entering and exiting the system through application programming interfaces (APIs) used, for example, to synchronise the system's reference data with external systems, to import market data, to export product and trade data, and to enforce trade validation rules that fit in with existing workflows;
 - an Extension Kit for adding financial instruments, pricing models, product and portfolio analytics, and processing capabilities independently from LexiFi;
 - a professional services offering that covers all phases of a software acquisition project, from evaluation to ongoing system operation;
 - a complete technology and knowledge transfer program.
- **Customisable scripting commands** – The command-line interface is used to support batch processing and to automate operations hence reducing user interactions and operational risk.

“These workers did not serve, they worked. Their honour was absolute, as is characteristic of honour. It was imperative that the rung of a chair be well made. That was understood. It was a principle. It did not have to be well made in order to receive one’s salary, or in exchange for a salary. It did not have to be well made for the sake of the boss, or for the sake of connoisseurs, or for the sake of the boss’ clients. It had to be well made in and for itself, in its very being. A tradition, [...] a history, an absolute, an honour wanted that that chair rung be well made. Every part in the chair, that was not visible, was exactly as perfectly made as the parts that were visible. It is the very principle of the cathedrals.”

Charles Péguy, *L'Argent*, 1913.

Translation derived from M.G. Guiney and J. Hellman.

