



# Firmament®

Your complete credit and equity valuation solution

Financial Institutions are more involved in credit derivatives than ever before making the management of credit risk ever more challenging. Escalating credit volumes and the breadth of new instruments traded have driven operational costs and risks significantly. Lombard Risk offers a complete global solution capable of handling a broad range of products to reduce costs, manage risk, and control a wide range of arbitrage opportunities.

Lombard Risk provides Firmament®, a component-based, single platform, enterprise-wide solution that covers the entire life cycle of products from pricing, deal capture, risk management, processing, reporting and ISDA compliant documentation, front to back, across a wide range of credit types. Firmament® operates as a stand-alone application, or as a straight-through processing, enterprise-wide business solution. Firmament seamlessly integrates with Oberon®, a global trade valuation and processing solution and Colline®, a global collateral management solution to provide a complete solution to improve the approach to risk management.

Firmament® allows you to manage credit risk enterprise-wide and cut the costs of market data maintenance by a significant margin. The benefits derived from using Firmament® include:

- ❖ Handle increasing trade volumes and user numbers
- ❖ Cope with an increasing diversity of tradable credit types
- ❖ Help control operational risks
- ❖ Manage risk efficiently
- ❖ Enable internal auditing, aiding compliance with regulatory accords
- ❖ Handle increasing trade volumes and user

## Consistent Processes

Firmament Credit Trading identifies potential arbitrage between bond and Credit Default Swap (CDS) prices, through consistent valuation models. It also provides a consolidated and consistent view of all trading positions.

## Market Data Module

The Market Data Module allows users to set up, distribute and maintain a range of current and historical price and rate data, including Live Feeds from the major providers:

- ❖ Bloomberg
- ❖ Reuters

The module's intuitive design removes the hassle of market data input, reducing operational risk and increasing user productivity.

## FIRMAMENT® CREDIT TRADING

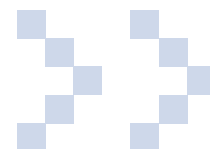
Firmament covers an extensive range of tradable credit instruments including:

- ❖ Credit Default Swaps (CDSs)
- ❖ CDS Indices
- ❖ Credit Linked Notes (CLNs)
- ❖ 1st and nth to default baskets
- ❖ Constant Maturity CDSs
- ❖ Collateralised Debt Obligations (CDOs)
- ❖ Bonds
- ❖ Loans

## FIRMAMENT® EQUITY TRADING

Firmament covers an extensive range of tradable equity instruments including:

- ❖ Equity Options on Single Stocks, Baskets and Indices
- ❖ Asian Average Price and Strike Option
- ❖ Barriers
- ❖ Binary Options
- ❖ Equity Variance Swaps
- ❖ Total Return Swaps
- ❖ Contracts for Difference



# Firmament Key Features

## Transparency and Control

- ❖❖ Users can use their own market data, curves, default correlations and other calculated data to price both simple and structured credit instruments. This data, and the resulting curves, can then be distributed across the enterprise.
- ❖❖ Enables users to input discount curves, bond prices and a wide range of Credit Default Swap prices.
- ❖❖ Bespoke credit curves can be created with ease.
- ❖❖ Algorithms can be applied based on specific needs allowing, for example, calibration from bonds or vanilla credit default swap instruments.
- ❖❖ Firmament applications integrate seamlessly with Colline to form a powerful trading, risk management and collateral management tool. Firmament is available as an entire suite, or in component form.

## Extensive Reporting

The reports are highly flexible - both the input and output criteria can be changed, and further reports can be added to meet individual customer's build requirements. The automated collation of market data guarantees numeric accuracy, and since manual calculation is not required, valuable time can be saved.

Features:

- ❖❖ Provides a set of common reports, including
  - ❖❖ Daily Mark-to-Market
  - ❖❖ Daily Mark-to-Model
  - ❖❖ Risk exposure by reference entity
  - ❖❖ Hedging Reports
  - ❖❖ Position Reports
- ❖❖ Consolidated reporting of credit risk at trade, reference entity and portfolio levels
- ❖❖ Comprehensive intra-daily P&L Reports
- ❖❖ Tracks actual cashflows, and forecasts default adjusted cashflows
- ❖❖ Full audit trail
- ❖❖ Ad-hoc customisation of standard report set

---

## Find Out More!

To find out more information about Lombard Risk and how Firmament® helps improve your approach to trade processing valuation, go to: [www.lombardrisk.com](http://www.lombardrisk.com)



## About Lombard Risk

Lombard Risk is the 2nd largest global provider of specialised software solutions that improve the management of collateralised trading and regulatory compliance to over 300 financial businesses and large corporations.

Our solutions mitigate trading risk and improve regulatory financial compliance so our clients can stay a step ahead of complex trading demands, increasing regulatory reporting challenges, complex market conditions and many other changing financial compliance mandates. Lombard Risk operates from offices based in London, New York, Shanghai, Hong Kong, Singapore and Johannesburg.

Our clients include 20 of the world's top 50 banks, and numerous financial institutions including nearly half of the 340+ banks operating in the UK, as well as several industry leading investment firms, asset managers, hedge funds, fund administrators, and large corporations.

## Continuous Development Pipeline

We operate a continuous development pipeline approach to our software. We are continually developing new product functionality within Firmament Credit Trading, often in partnership with our customers. This means we stay ahead of market trends, and as new instruments are traded, our software can handle them.

## Intuitive Design

- ❖❖ Designed using advanced component-based N-tier distributed architecture
- ❖❖ J2EE compliant and uses standards such as XML
- ❖❖ Familiar Oracle and Microsoft SQL database technology (the application is database neutral)
- ❖❖ Comprehensive user access controls. Facilitates 'plug and play' for new pricing algorithms, proprietary or 3rd party
- ❖❖ Quick to implement - the application is installed, configured and ready to use within 5 days on average
- ❖❖ Specifically designed to be low maintenance
- ❖❖ Does not need a dedicated administrator to manage day-to-day tasks