QuantLib prepares to enter its half decade with its dreams intact

Four years of open source financial models

Approaching its fourth anniversary, QuantLib has established itself as the reference free-software/open-source C++ library for quantitative finance. Intended for academics and practitioners alike and eventually promoting a stronger interaction between them, it offers tools that are useful both for practical implementation and for advanced modeling. It includes features such as market conventions, yield-curve bootstrapping, interest rate models, solvers, PDEs, Monte Carlo, exotic options, VaR, and so on.

The QuantLib project was born in 2000 as a few professionals left the interest-rate derivative desk of Caboto Banca Intesa to create a company called RiskMap, now StatPro Italia. As they were once again faced with the task of implementing the Black-Scholes formula, Ferdinando Ametrano had the idea of sharing development in a structured project, allowing for a cooperation in which everyone could improve, correct, and develop a free common-base framework. The idea was supported by RiskMap.

Ametrano, who is now working for Monte Paschi Asset Management, still administers the project; so does StatPro Italia through Luigi Ballabio, which has supervised the library design since the beginning.

Why "open-sourcing" a financial library in the profit-driven financial world? Ferdinando Ametrano says: "The case for such an approach is based on the difference between releasing model implementations and possessing an actual trading system that incorporates them and whose real value lies in the efficient integration of the portfolio risk management. QuantLib offers itself as an 'open' component that can be merged and tailored to whatever environment."

Designing and building its tools in the open, QuantLib encourages peer review and lowers barriers to adoption. It is the belief of the QuantLib founders that open standards are the best way for science and technology to evolve: this is especially important in academia because good working practices (and tools) will only succeed in the long run if they become accepted as part of the education.

Linux and other well-run projects have shown how to benefit from the open-source community and its established channels, harnessing the experience and insight of thousands of people. The QuantLib project has leveraged existing knowledge and enthusiasm, fostering a community. Its web site has had over 850,000 page views and 70,000 downloads; there are about 1,000 mailing-list subscribers and 14 registered developers worldwide. All numbers are steadily increasing. Its wide collaborative user base, multi-platform availability, and fast developing pace are positive signs for the future of open-source quantitative finance.

■ *For further information visit www.quantlib.org*

Inference Challenge Prize Awarded

Back in November last year, Alireza Javaheri, sometime book reviewer and incurable Markov Chain Monte Carlo addict threw down the gauntlet to users of wilmott.com.

The Inference Challenge consisted of a simulated time series of 5,000 points with certain details revealed leaving other parameters unknown.

Contestants had to recover these parameters, explaining their method. The closest estimate would receive, rather fittingly, an at the time undetermined prize.

As Javaheri explains in his article on The Inference Challenge in the May 2004 edition of *Wilmott* Magazine, the winner was Vladimir Piterbarg, who actually came in very early with his response.

Piterbarg has been awarded a book voucher worth £200 from John Wiley & Sons for his winning answer.

■ *To see the original thread, including Piterbarg's answer, visit the Forums at www.wilmott.com*

Calypso on its mark with RED standard

Mark-it Partners Ltd the world's first integrated daily pricing service for global credit derivatives, cash credit instruments and syndicated loan pricing, recently announced that Calypso has integrated Mark-it RED data into its core technology. The aim of the partnership is to provide financial institutions with greater automation in the trading of credit derivatives and reduce risk by lowering the number of failed trades from inconsistent data.

Calypso is a leading provider of credit derivatives trading and risk management technology to the world's largest financial institutions. The integration allows data from RED, which has been adopted as the market standard for reference data in the credit markets, to be incorporated directly into Calypso's system, giving users the ability to place trades using the standardized reference entities and reference obligations.

Mas Nakachi, Senior Business Analyst at Calypso, said, "Having access to accurate reference entity data is a major challenge in the credit derivatives markets today. Mark-it RED is invaluable in providing the transparency and consistency that firms require to conduct their business accurately and efficiently. This integration is an important enhancement for Calypso and our mutual clients will gain tremendously from this joint initiative."

Penny Davenport

Penny Davenport, Director of Mark-it RED, said, "We are able to leverage Calypso's strong technology framework to incorporate RED so that trading desks can benefit greatly from the direct access to Mark-it's standardized reference entity and reference obligation data. Firms are looking for seamless, integrated solutions for their credit trading businesses and the partnership between Calypso and RED provides exactly that."

■ *For further information visit www.mark-it.com*