



**NOVEMBER 30<sup>TH</sup> AND DECEMBER 1<sup>ST</sup>**

**Venue: IKB Deutsche Industriebank AG Düsseldorf**

# **QUANTLIB USER MEETING (QLUM) 2015**

Sponsored by



# QuantLib

## QUANTLIB RATIONALE

The QuantLib project is aimed at providing a comprehensive software framework for quantitative finance. QuantLib is a free/open-source library for modeling, trading, and risk management in real-life.

QuantLib is written in C++ with a clean object model, and is then exported to different languages such as C#, Objective Caml, Java, Perl, Python, GNU R, Ruby, and Scheme. The QuantLibAddin/QuantLibXL project uses ObjectHandler to export an object-oriented QuantLib interface to a variety of end-user platforms including Microsoft Excel and OpenOffice.org Calc.

Appreciated by quantitative analysts and developers, it is intended for academics and practitioners alike, eventually promoting a stronger interaction between them. QuantLib offers tools that are useful both for practical implementation and for advanced modeling, with features such as market conventions, yield curve models, solvers, PDEs, Monte Carlo (low-discrepancy included), exotic options, VAR, and so on.

Finance is an area where well-written open-source projects could make a tremendous difference:

- any financial institution needs a solid, time-effective, operative implementation of cutting edge pricing models and hedging tools. However, to get there, one is currently forced to re-invent the wheel every time. Even standard decade-old models, such as Black-Scholes, still lack a public robust implementation.

As a consequence many good quants are wasting their time writing C++ classes which have been already written thousands of times.

- By designing and building these tools in the open, QuantLib will both encourage peer review of the tools themselves, and demonstrate how this ought to be done for scientific and commercial software. Open standards are the only fair way for science and technology to evolve.

The library could be exploited across different research and regulatory institutions, banks, software companies, and so on. Being a free/open-source project, quants contributing to the library would not need to start from scratch every time.

- Students could master a library that is actually used in the real world and contribute to it in a meaningful way. This would potentially place them in a privileged position on the job market.

- Researchers would have a framework at hand, which vastly reduces the amount of low-level work necessary to build models, so to be able to focus on more complex and interesting problems.

- Financial firms could exploit QuantLib as base code and/or benchmark, while being able to engage in creating more innovative solutions that would make them more competitive on the market.

- Regulatory institutions may have a tool for standard pricing and risk management practices.



The QuantLib Workshop in 2011 held at HSH Nordbank was the initial inspiration for IKB to have a regular meeting where people could exchange their ideas and experience about QuantLib.

IKB (cosponsored by d-fine and Quarternion) therefore decided to have the first QuantLib User Meeting in 2013 held at IKB in Düsseldorf. There has been positive feedback to the first meeting which is why we decided to have another go in 2014.

The talks always represented a good mixture of subjects ranging from very quantitative ones like the implementation of a stochastic local volatility calibration in QuantLib to more general aspects like how to effectively use scripting languages like R in QuantLib.

We (cosponsored by CompatibL) want to carry on this “tradition” for 2015.

**Check out the talks section to see what is planned for this upcoming event.**

- ✓ **Create a network of people that know, trust and potentially help each other**
- ✓ **Inspire other people to use QuantLib**
- ✓ **Learn from others what could be done better, easier or faster**
- ✓ **There is no registration fee**
- ✓ **The number of seats is limited to 70**

# TALKS

## Monday 30<sup>th</sup> November

- 9:30 – 10:00 **User registration**
- 10:00 – 10:15 **Michael von den Driesch / Nicholas Hainings**  
*IKB Deutsche Industriebank / CompatiBL*  
Greeting
- 10:20 – 11:20 **Jörg Kienitz**, *Deloitte & Touche GmbH, University of Cape Town*  
“A Short History of SABR – From approximation formulas to PDEs and back”
- 11:20 – 12:20 **Alexander Sokol**, *CompatiBL*  
“Implementing AAD in QuantLib”
- 12:20 – 14:00 **Lunch Break**
- 14:00 – 15:00 **Ferdinando M. Ametrano / Paolo Mazzocchi**  
*Banca IMI / Deloitte & Touche*  
“Parametric basis rate curves” / “Excel Rate Curve Framework”
- 15:00 – 16:00 **Eric Ehlers**, *Reposit & Sayula*  
“Cloud computing in QuantLib”
- 16:00 – 16:30 **Coffee Break**
- 16:30 – 17:30 **Klaus Spanderen / Johannes Goettker-Schnetmann**,  
*E.ON / DZ Bank*  
“Calibration of Stochastic Local Volatility Models”
- 19:00 – OPEN **Dinner**

# TALKS

## Tuesday 1<sup>st</sup> December

- 9:00 – 10:00 **Peter Caspers**, *Quaternion*  
“Negative rates in QuantLib / AD beyond typedef and operator overloading”
- 10:00 – 10:30 **Coffee Break**
- 10:30 – 11:30 **Andreas Pfadler**, *d-fine*  
“Proof of concept for a modern, distributed pricing architecture based on open source components”
- 11:30 – 12:30 **Roland Lichters**, *Quaternion*  
“CSA Pricing using QuantLib”
- 12:30 – 14:00 **Lunch Break**
- 14:00 – 15:00 **Sebastian Schlenkrich**, *d-fine*  
“Multi-curve Pricing of Non-Standard Tenor Vanilla Options in QuantLib”
- 15:00 – 15:30 **Coffee Break**
- 15:30 – 16:30 **Luigi Ballabio**, *StatPro Italia*  
“Ship it! QuantLib, Docker and Ipython Notebook + Wrap Up & Good Bye”



# VENUE AND REGISTRATION

The number of seats is limited to 70.

There is no registration fee. Seats can't be guaranteed. Please be fair. Only apply for a seat if you really plan to attend.

[Click here to create registration Email](#)

Please email your registration until 31<sup>th</sup> of October.



[Google Maps Link to IKB](#)

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