

Marc Boissaux

Nationality Luxembourgish Date of Birth 19 Feb 1971

Education

- 2001-2006 Open University (UK)
Bachelor of Science (BSc) in Mathematical Sciences (distance education), first class honours.
(2003: **Diploma in Statistics**: awarded on completion of four second- and third-year Statistics modules.)
* Modular 12 unit degree completed using 2 second- and 10 third-year Mathematics and Statistics options.
- 2001-2003 Birkbeck College, University of London (UK)
Master of Science (MSc) in Finance (two years part time), distinction.
* Quantitative finance degree programme covering finance theory, corporate finance, international finance, auction theory, banking theory, econometrics, numerical analysis and pricing theory.
* Summer project covered option pricing under Heston-type stochastic volatility: analysis of original derivation, implementation of analytic (Fourier space) solution, implementation of explicit finite difference pricer, eigenvalue stability analysis, discussion.
- 1998-1999 University of Bristol (UK)
Master of Science (MSc) in Electronic Engineering.
* Research Master's degree fully funded by British Telecommunications plc.
* Research was centered on the design and implementation of a distributed Java software system using mobile agent technology.
* Main additional skills developed were modelling techniques for fractal/self-similar time series and protocol design.
* Research was published and presented at ITC Mobility and Mobile Systems, Lillehammer, Norway, March 2000.
- 1995-1998 University of Bristol (UK)
Bachelor of Engineering (BEng) in Electronic and Communications Engineering, first class honours.
IEE prize for best overall performance, 1998.
Motorola prize for best final-year project, 1998.
IEE Undergraduate scholarship, 1997.
Hewlett-Packard prize for best overall second-year result, 1997.
University of Bristol scholarship, 1997.
Cash prize for best performance in first-year midsessional exam, 1996.
- 1991-1994 University of York (UK)
Bachelor of Arts (BA) in English (main)/ Philosophy (subsidiary), first class honours.
Book prize for best second-year philosophy essay, 1993.

Other certifications

- Passed **Level 1 (of 3)** exam of the **CFA (Chartered Financial Analyst)** programme – 2002
- **Sun Java 2 Certified Developer** – 2001
- **Sun Java 2 Certified Programmer** - 2000

Employment experience

Ikano Fund Management SA, Luxembourg

Developer: March 2008 - February 2009

IT Environment: Windows XP, Bloomberg, Visual C# 2005, Excel 2003.

Main projects:

- Researched and implemented numerically stable modified Simplex and Goldfarb-Idnani quadratic programming solvers, and put them to use in internal Sharpe and Fama-French fund returns style analysis tools.

IKB Deutsche Industriebank, Luxembourg

Quantitative Analyst (Front Office): March 2005 - March 2008

IT Environment: Windows XP, Unix, Reuters Kondor, Reuters 3000, Bloomberg, Numerix, Summit, Murex, CVS/Sourceforge, Excel 2000, Visual C++ 2005.

Main projects:

- Created Excel valuation infrastructure for the pre-deal pricing of IR and FX derivatives from scratch on joining the bank. Initial valuation of products using the commercial Numerix package.
- Replacement of some Numerix valuations by VBA implementations to improve market conformity.
- Creation of a self-contained C++ valuation library and gradual replacement of the remaining Numerix implementations. Full Excel interface. Main implementation blocks:
 - term structure - bootstrapping, interpolation;
 - swaption, cap and FX vol surfaces - caplet vol bootstrapping, obtention of FX vols from ATM/RR/BF market quotes;
 - analytical pricers for vanilla caps, digital caps (bull spread), CMS spread caps (Kirk and two factor integration), FX vanilla options, FX regular and reverse barrier options (Vanna-Volga adjustment);
 - generic tree and MC engines to work with any affine short rate term structure models, calibration infrastructure, implementation of both Hull-White 1F and G2++ (additive formulation of Hull-White 2F) short rate models, pricing of IR exotics such as ratchets, autocallables or TARN;
 - generic library architecture to decouple client specific parameters or market data from the core library so as to facilitate later integration with the Murex trading system.
- Market data research, specification, configuration and configuration as well as validation of the Murex pricing functionality, all undertaken as part of the (ongoing) Murex implementation project.
- Daily quantitative support to traders and structurers.

Deutsche Bank AG, London, UK

Architect/Developer: August 2000-March 2005

IT Environment: Windows NT, Linux, JBoss, Weblogic(6.1/7.0/8.1), CVS/Sourceforge, Source Safe, Ant, Oracle (8i/9i), Visual C++ 6.

Main projects:

- Specified algorithm and implemented MC calculation of Operational Risk VaR for different user-selectable loss scenarios. Calculation part in C++; web front end using Struts JSPs. Interface in JNI. Scenario persistence using Hibernate.
- Quantitative development work on model validation C++ library: various bond, bond option and swaption finite difference credit derivative pricing models.
- Central role in the initial architecture and development of operational risk scorecard production system. Technologies used -- EJB, servlets/JSP and JMS on JBoss then Weblogic cluster. Solely responsible for the scoring engine part of the system which involves parsing of free text arithmetic risk indicator expressions.
- Carried out architecture compliance review and generated compliance plan for Operational Risk IT.
- Participated in Risk IT Architecture Forum meetings as the 'designated architect' for Operational Risk IT.

British Telecommunications plc, Martlesham, Ipswich, UK

Graduate professional: September 1999-August 2000

IT Environment: Windows NT, Linux, Java, Weblogic(6.1), Oracle (8i), Visual C++ 6.

Main projects:

- European Community funded 'active networks' research project: modelling, implementation.
- Set projects for and supervised work experience students.
- Followed distributed systems, marketing and solution design modules of optional part-time MSc jointly organised by BT and the University of London.

Languages

English (degree level), German (very good), French (good), Japanese (very basic; Level 4 Proficiency Certificate).
Also Luxembourgish (native) and Latin.