MANUEL MARTIN BARRERA

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Right to work: EU and UK passports. **Notice period:** 1 month

Education

- **M.Sc. in Mathematical Finance 2009 - 2010**
  University of York, United Kingdom. Dissertation on arbitrage opportunities in Levy processes with jumps. Degree awarded with distinction.

- **Diploma in Quantitative Finance 2004 - 2005**
  Escuela de Finanzas Aplicadas. Madrid, Spain. Final project on pairs trading applied to principal components in interest rates.

- **B.Sc. in Mathematics 1998 - 2003**
  University of Seville, Spain.

Professional Experience

- **TD SECURITIES. Quantitative Modelling and Analytics. London, United Kingdom.** *Nov. 2021 – present.*
  Manager, Advanced Analytics. The team is responsible for the production library used in pricing and risk across the bank. The portfolio comprises flow rates, callable bonds and vanilla FX/metals products. Main projects so far include:
    - Review and improvement of bond analytics.
    - Development in the C++library of a variety of topics (e.g. interpolation, serialization of objects…)
    - General library maintenance and tidying up (e.g. running code linters, code analysis…), review of pull requests.
    - Data analysis project in python to assess the bank’s competitiveness in eTrading of Gilts.

- **CREDIT AGRICOLE CIB. Market Risk Analytics. London, United Kingdom.** *Aug. 2014 – Oct. 2021*
  Quantitative Director in the Model Validation team. The team defines the methodological framework necessary to assess and quantify risks, validates pricing models and develops risk models. Main responsibilities included:
    - Validation of pricing models developed by the FX desk, implementation and study of models (submitted for validation, and alternatives). E.g. Andreasen-Huge method for volatility interpolation, stochastic local volatility.
    - Model risk analysis, setting of provisions and reserve methodologies.

- TOTEM submissions, Prudent Valuation, PRIIPS.
- Provisions for Initial Margin (IMVA) and Independent Amounts (IAVA), involvement in SIMM project.
- Involvement in the implementation of new products and activities.
- Quantitative support for Risk Management: P&L explain, sensitivities, VaR.

- **HSBC. Rates Analytics. London, United Kingdom.** *Oct. 2010 - Jul. 2014*
  Quantitative Analyst in the Quantitative Risk and Valuations Group. The team performs calculation of CVA for both support to trading and risk management, validation of Front-Office models, independent product pricing, and development and support of several systems and platforms used across the bank. Main responsibilities were:
    - Development of scenario generator as part of the CVA process.
    - Development of pricing models and curve bootstrapping in the C++ library.
    - Maintenance of library, management of tests, deployment and migrations.
    - Implementation of OIS discounting.
    - Development and support of a tool to compute fair value adjustments.
    - Attendance to valuation committees.

- **KPMG. Financial Instruments Group. Madrid, Spain.** *Jan. 2006 - Sep. 2010*
  Team Leader. The team performed independent pricing of financial products for its audit and advisory clients. The products cover all asset classes and complexity levels. Clients included several of the largest corporates in Spain as well as the financial regulatory authority and public entities. Main responsibilities included:
    - Development and calibration of pricing models, including SABR, Libor Market Model, Hull-White, CEV, Cox-Ross-Rubinstein.
    - Pricing of derivatives, including swaps, caps, swaptions, CMS, CMS spreads, TARNs, Average options…
    - Implementation of numerical methods: Montecarlo, trees, finite differences, Longstaff-Schwartz…

- **Santander Asset Management. Alternative Management. Madrid, Spain.** *Aug. - Dec. 2005*
  Internship. Support to the fund of hedge funds business, performing analysis of the portfolios; calculation of the performance attribution of each underlying fund.

- **Caja Espana Funds. Rates Desk. Madrid, Spain.** *Jan. - Apr. 2005*
  Internship. Support to a fixed-income trader.

Other Skills

- **Languages:** Spanish (*Native*), English (*Fully competent*)
- **IT Experience:** C++, Python, Visual Basic, C#, SQL; Visual Studio, Powershell, GIT, Matlab, R, Bloomberg, MS Office, LaTeX, Bitbucket.