Dr. Patrick Häner

Berlin, Germany • contact@haenerconsulting.com • www.haenerconsulting.com

+41 79 656 75 20 • +44 20 3239 0836 • +49 1511 0629783

Quantitative risk specialist with three decades of experience delivering regulatory capital and model-risk programmes — Basel III, FRTB and IMM — for tier-one investment banks in London and Frankfurt. Recent work: building the Virtufin trading platform.

Core Competencies

Main focus is to help financial institutions to

- fulfill regulatory requirements like Basel III and FRTB in a cost-efficient way
- optimize regulatory capital

This is achieved by providing to the client end-to-end services including

- Quantitative Analysis
  - Model validation and model control: implementing best practices, fulfilling regulatory requirements for Market and Credit Risk, hands-on benchmarking
  - Design and implementation of core analytics for credit exposure systems: all stages of development lifecyle from mathematical definition to integration into production
- Implementation of Systems and Processes
  - Project management as well and hands-on contribution through whole lifecycle from defining architecture to roll-out into production of risk systems
  - Definition and implementation of processes, which are compliant with regulatory requirements such as IMM and FRTB.
  - Documentation and presentation to regulators of fulfilled regulatory requirements.

Computer Languages/Systems

- Used in production systems: C#, Scala, Java
- For prototyping: Python (Pandas, Numpy), F#, Julia, Mathematica, Matlab, R
- Infrastructure: Kubernetes, Proxmox, Postgres, NATS
- Development process: Git, Drone, Jira, J/NUnit
- Third party: Murex, Sungard Adaptiv Analytics Extensibility Framework

Work Experience

Jun 2025– *Developer, Virtufin*

- Building an exchange-agnostic trading platform: a digital twin that mirrors live market data into an event-driven simulation, so strategies can be tested against production data without production risk
- Event-driven architecture over a Dapr pub/sub fabric with CloudEvents contracts; strategy workers in .NET, Python or native code via a C ABI
- Venue integrations (Binance, Alpaca, WebSocket feeds) isolated at the edge, so strategies, indicators and executors are unchanged when venues change

Sep 2022–Jun 2025 *Contractor, Quantitative Analyst*

- Implemented and productionized analytics for the risk management system of BNP Paribas in C#: RFET for FRTB

Nov 2021–Sep 2022 *Quantitative Developer, Coremont Digital*

- Front office credit and crypto quantitative developer

Aug 2009– *Owner, Häner Consulting*

- *Selected engagements:*
- Defined and implemented back-testing methodology for IMM at *Standard Bank, Johannesburg and London* using C#, IronPython, R, Sungard libraries and Microsoft SQL
- Consulting on the IMM application programme, in particular gap analysis and resource allocation, at *Nordea, Copenhagen*; proof of concept for an agent-based, event-driven risk management system
- Extended Market Risk VaR and IRC models to cover defaulted and distressed obligors for *BNP Paribas*
- Helped a bulge bracket investment bank to fulfill regulatory requirements for IMM; developed the ICAAP model for Credit Risk and validated the ICAAP model for Operational Risk
- IMM models for a large UK investment bank; prototyping in C#, F# and Matlab; proof of concept for backtesting infrastructure using CouchDB and .Net
- Courses on model validation, credit exposure and Basel 3 delivered in London, Frankfurt, Singapore, São Paulo and Johannesburg

NOMURA

Apr 2006–July 2009 *Director, Global Head Counterparty Credit Exposure Analytics at Nomura London*

- Built up a new credit exposure group consisting of team of quants and developers
- Responsible for defining and implementing credit exposure methodologies
- Built grid based system for IMM compliant exposure estimations
- Contributing to IMM application and discussions with FSA

Goldman Sachs

July 2004–Apr 2006 *Executive Director in the Derivative Analysis group at Goldman Sachs London*

- Benchmarking and model review credit derivatives
- Spearheading new model control framework

UBS

2001–July 2004 *Global Head Quantitative Risk Methods and Statistics (QRMS) Fixed Income/Credit Derivatives at UBS London*

- Model validation for credit derivatives libraries and systems
- Trade approvals for credit derivatives
- Exposure calculation for exotic trades across all Product lines

1999–2000 *Co-head QRMS representation UBS Chicago*

- Built up QRMS representation at UBS O'Connor in Chicago
- Responsible for equity models and QRMS IT

1996–1999 *Member of QRMS at UBS Zurich*
Implemented benchmark models for exotic equity derivatives: extensive experience of PDE, tree and Monte Carlo pricing methods.

Education

1995	Research assistant at the Institute of Theoretical Physics of the Humboldt-University of Berlin

1993–1994	Research assistant at the Institute of Theoretical Physics Basel
November 1993	Doctoral thesis: "Some Investigations on the Sand-Pile Model"
1989–1993	PhD studies in Theoretical Physics at the University of Basel
1983–1988	Studies in Physics and Philosophy at the University of Basel