

Conversation with HANNAN MOHAMMAD

Deputy Head of the Funding and Markets Division, AFD



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MESSAGE FROM THE CEO



This last year has been a milestone for both the OTC Markets and for Quantifi. The markets are starting to look towards the future as uncertainty is resolved by long-awaited new regulations coming into effect. Within this environment, Quantifi has had one of its strongest years to date with a 44% growth in new business balanced across all regions and sectors. Matching strong client growth, Quantifi has increased global staff by 48% and opened new offices in Paris and Frankfurt to better serve our clients.

While there has been a shift towards simpler products, the required analysis and technology have become significantly more complex. OTC market participants need new valuation methods incorporating OIS discounting, CVA that takes into account CSAs and collateral, new regulatory calculations, limit management based on PFEs, margining replication, and funding costs such as FVA and COVA. These are complex, front-office centric calculations that play to Quantifi's strengths.

One recent exciting development for Quantifi is our ranking as a 'Category Leader' ahead of many established, much larger firms in the Chartis RiskTech Quadrant for Buy-Side Analytics. Chartis is a highly respected analysis company that focuses on financial risk technology. This is a strong endorsement of the value of our solutions.

As a final note, Quantifi has long been a believer in corporate citizenship. The company and its employees have a history of giving back to local communities. I am very happy to announce Quantifi is formalising and extending this with a commitment to donate 3% of all profits to charitable causes. I think this is a great way for Quantifi to share its current success.

Quantifi thanks all our existing clients and warmly welcomes our new ones. We look forward to an exciting 2014 where we continue to provide long-term benefits to our clients, partners, employees and communities.

ROHAN DOUGLAS, Founder and CEO

NEWS

Quantifi Achieves Record Growth in 2013 Opening New Offices in Paris and Frankfurt

"This last year has been a milestone for both the OTC markets and for Quantifi. The markets are starting to look towards the future as uncertainty is resolved by new regulations coming into effect. Within this environment, Quantifi has had one of its strongest years to date with a 44% growth in new business across all regions." Rohan Douglas, CEO at Quantifi.

Quantifi Recognised as Category Leader for Buy Side Risk Analytics in Chartis RiskTech Quadrant

"We have been impressed by the depth and breadth of functionality provided by Quantifi. A key differentiator for Quantifi is its open, service-based technology architecture which makes the solution easier to integrate, more flexible, and easier to support." Peyman Mestchian, Managing Partner at Chartis.

Quantifi Wins 'Best Risk Management' Award

"Regulators are focussed on mitigating counterparty risk as a method of reducing systemic risk. Our judges agreed that Quantifi has developed a comprehensive platform that supports risk management underpinning several areas including Central Clearing commitments, Basel III calculations and Hedging." William Mitting, editor and publisher of FOW.

EVENTS

Quantifi & EY Seminar

'Risk Implications of Cleared vs Non-Cleared Derivatives'

New York, 12th March 2014

WBS 3rd Interest Rate Conference

Quantifi Gold Sponsor

London, 12-14th March 2014

WBS 3rd CVA Conference

Quantifi Gold Sponsor

London, 19-21st March 2014

Quantifi & EY Roadshow

'CVA, DVA, FVA, Trading, Risk Management, Regulation and Accounting'

Frankfurt (25th March) Copenhagen (27th March 2014)

Quantifi & Equinox Breakfast Seminar

'From Fair Value to Risk Adjusted Pricing & Position Keeping: New Pricing Paradigms'

Paris, 29th April 2014

Q&A WITH MARK TRAUDT

CTO of Quantifi talks about adopting the latest technology innovations

What separates Quantifi's technology from other solution providers?

QUANTIFI recognises that in today's fast-paced environment firms require tools that work faster, perform better, and can scale with their business. Gone are the days when firms could acquire front office or risk management systems and allow 2 to 3 years for implementation. Our modular, open architecture allows customers to rapidly integrate only the components they need into their existing enterprise.

Our solutions are designed from the ground up using the latest, most advanced technology and design patterns to ensure optimal performance. We adopted .NET as our technology platform because it offers a comprehensive set of frameworks, including scripting, workflow, distributed services, and high-performance computing. Customers benefit from leveraging their knowledge of these frameworks rather than being locked in to a proprietary vendor API.

Another key differentiator is our significant investment in R&D, which combined with close collaboration with our clients, enables us to consistently deliver first-to-market support for the latest market innovations.

Can you explain more about your service-oriented architecture (SOA)?

Our services are designed to take advantage of the power and flexibility of modern virtualized data centers (both on premises and cloud hosted). The service layer is interoperable, meaning that customers can consume risk, reporting, workflow, and other services from any client that support the SOAP protocol. By providing interoperable services, customers can leverage risk, reporting, and other functionality in the way that works best for them.

What are workflow services?

As part of our service layer, we recently introduced powerful workflow support using Microsoft Workflow Foundation. Workflow Services can be used to model many business processes, including trade booking, four-eyes verification, risk and pnl signoff, limit management, and straight-through-processing (STP). Customers can use our built-in workflows or create their own using a powerful visual workflow designer and comprehensive activity library.

“ Our solutions are designed from the ground up using the latest, most advanced technology and design patterns to ensure optimal performance. **”**

What techniques do you use to handle Big Data?

The ever-increasing volume and complexity of data involved in a typical customer risk run mandates architecture specifically designed to support scalability to “big data” sets.

Quantifi incorporates several design techniques to efficiently handle these large, heterogeneous data sets. The data itself is transmitted and stored using an open-source technology from Google called Protocol Buffers. This provides an efficient messaging and persistence format for big data and, as it is open-source, customers are not required to use our risk SDK to access the data. Our repository is also designed in a way to allow result data to be partitioned across multiple servers, further improving scalability.

BUY SIDE RISK ANALYTICS



BUY-SIDE FIRMS face a rapidly changing operating environment. They need not only to comply with the regulations, but also to adapt to a new marketplace. The new goal is a performance-oriented trade and risk management execution strategy for asset allocation with a strong focus on stress-testing and scenario analysis.

For buy-side risk management solutions, this means the focus has to be redefined as either:

- *More data management and analytics-driven to build a foundation of efficient risk and financial management or;*
- *Best-of-breed solution for specific, performance-oriented and value-based risk management requirements*

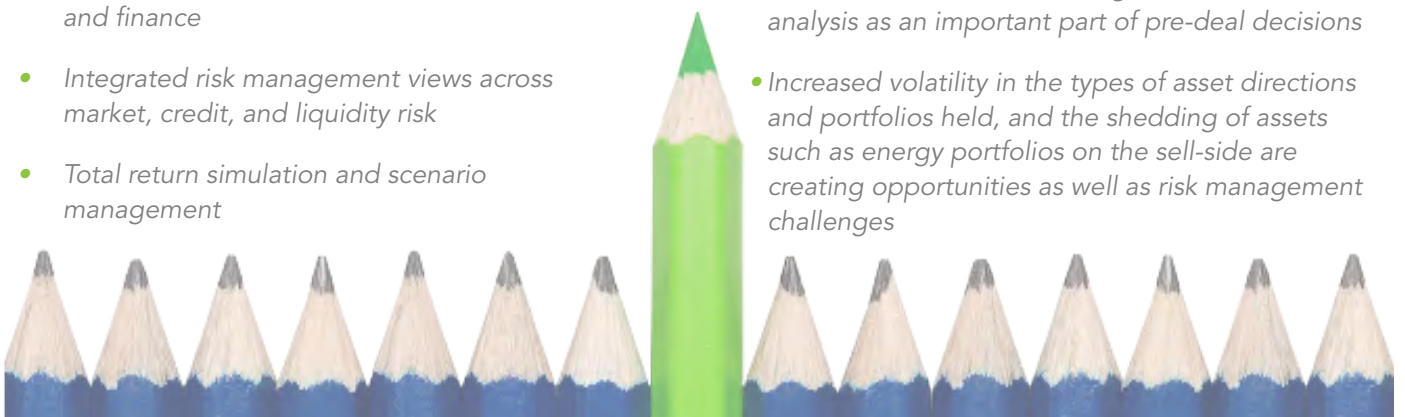
For both, the priority is to enable the firm to follow high standards on corporate governance and to facilitate the necessary tasks that come with it, including:

- *Data management, analysis, and reporting*
- *Trade capture, complex/structured products, and hedging strategies*
- *Pricing, valuation, risk measurement, regulation, and finance*
- *Integrated risk management views across market, credit, and liquidity risk*
- *Total return simulation and scenario management*

Market changes, the economic downturn, and increasing regulatory requirements are putting pressure on business operations to improve internal return on capital and have a much better understanding of trading risks. It is no longer sufficient to have a simple regulatory capital number at the end of the day. Firms need a solid understanding of their intra-day risk exposures across a wide range of measurements with a higher level of detail and transparency. Firms also need to understand enterprise risks and the threats from certain financial products, such as CDOs.

Several trends are emerging:

- *There is an increased use of Value-at-Risk (VaR) as a tool to measure and communicate risk*
- *Firms want to integrate collateral management and collateral optimization with their risk, treasury, and finance management, and, where possible, outsource collateral operations*
- *Firms want to increase and integrate scenario analysis, stress testing, reverse stress testing, liquidity testing, and capture and define tail risk*
- *Firms are becoming more vigilant with respect to counterparty credit risk and its costs, including reviews of clearing members, exchanges, and collateral and margin requirements*
- *Initial and variation margin is being integrated into the front office, with margin scenario and CVA analysis as an important part of pre-deal decisions*
- *Increased volatility in the types of asset directions and portfolios held, and the shedding of assets such as energy portfolios on the sell-side are creating opportunities as well as risk management challenges*



- Solutions need to be more open, more flexible, and adaptable enough to follow and incorporate future risk, financial, and regulatory requirements. The reduction of total cost of ownership and greater demand for hosted/serviced solutions

Chartis, a provider of research and advisory services covering the global market for risk management technology, conducted in-depth independent research on vendor solutions available to buy-side firms for adapting to the new market and regulatory environment and for managing risk. The report uses Chartis RiskTech Quadrant® to explain the structure of the market.

The RiskTech Quadrant® includes a sophisticated ranking methodology to explain which solutions would be best for buyers, depending on their implementation strategies. Based on its completeness of offering and market potential, Chartis considers Quantifi to be a leading vendor in the buy-side risk analytics market.*



As cited by Chartis, Buy-Side firms are witnessing a rapidly changing operating environment and need to not only comply with regulations but also adapt to a new marketplace. Quantifi's solution for Buy-side Analytics is an integrated Portfolio Management System (PMS) that delivers cross-asset trading, front-to-back operations, position management, market, credit, counterparty and liquidity risk management, margining, and regulatory reporting all on a single integrated real-time platform. As well as integrating all regulatory and industry practices, Quantifi applies the latest technology innovations to provide new levels of usability, flexibility, and ease of integration. This translates into dramatically lower time to market, total cost of ownership, and significant improvements in operational efficiency.

Quantifi's coverage of trading, risk, and operations



Key features offered by Quantifi

The Quantifi solution includes risk analytics for the buy-side, risk reporting, and operations solutions. The most important features offered by the solution include:

- Support for a broad range of major asset classes
- Trade capture and extensive pre-trade analysis
- Trade lifecycle management
- Streamlined and customizable workflow
- Real-time risk and P&L
- OIS discounting for valuation
- Integrated margining and collateral
- Flexible reporting
- Out-of-the-box market data, prime broker, OMS and fund administrator interfaces
- An agile system with fast implementation, reporting, and operations solutions.

“We have been impressed by the depth and breadth of functionality provided by Quantifi and their holistic, integrated approach that breaks down barriers between front, middle, and back office functions. A key differentiator for Quantifi is its open, service-based technology architecture which makes the solution easier to integrate, more flexible, and easier to support.”

Peyman Mestchian, Managing Partner, Chartis

*This RiskTech Quadrant® is based on an independent and comprehensive methodology comprising of rigorous and detailed evaluation criteria. To fully understand and interpret the RiskTech Quadrant® please contact Chartis at www.chartis-research.com. Please note that the findings, conclusions, and recommendations that Chartis Research delivers are based on information gathered in good faith, whose accuracy we cannot guarantee. Chartis Research accepts no liability whatever for actions taken based on any information that may subsequently prove to be incorrect or errors in our analysis. © Copyright Chartis Research Ltd 2013. All Rights Reserved. RiskTech Quadrant® is a Registered Trade Mark of Chartis Research Limited

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Deputy Head of the Funding and Markets Division



Vietnam Commerce, marche, femme, légumes, Nils Devernois pour l'Agence Française de Développement

What is the history and background of your company?

The Agence Française de Développement (French Agency for Development - AFD) is a public development finance institution that has been working to fight poverty and foster economic growth in developing countries and the French Overseas Provinces for seventy years. It executes the policy defined by the French Government. AFD is present on four continents where it has an international network of seventy agencies and representation offices. It finances and supports projects that improve people's living conditions, promote economic growth and protect the planet, such as schooling for children, maternal health, support for farmers and small businesses, water supply, tropical forest preservation, and the fight against climate change.

In 2012, AFD approved €7 billion to finance activities in developing countries and France's overseas provinces. The funds will help get 10 million children into primary school and 3 million into secondary school; they will also improve drinking water supply for 1.79 million people. Energy efficiency projects financed by AFD in 2012 will save nearly 3.6 million tons of CO₂ emissions annually.

What are your views on the current market?

New banking regulations have been introduced in response to the credit crisis, together with new

obligations that may turn into operational risks (and financial risk) if not managed properly within small-sized structures such as AFD. As an example, under EMIR, central clearing for certain classes of OTC derivatives requires AFD to daily compute, reconcile and process payments for margin calls (initial margin and variation margin) like any other "conventional" Investment Bank.

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Furthermore, it requires the application of risk mitigation techniques for non-centrally cleared OTC derivatives such as timely confirmation, portfolio reconciliation and compression, dispute resolution, marking-to-market and marking-to-model, exchange of collateral to cover the exposures arising from OTC derivatives, not cleared by a CCP, and reporting to trade repositories. In light of these new challenges, AFD on-boarded a clearing broker and new risk

management (Quantifi) and reconciliation tools. Due to its singular mission, AFD does not aim to generate profit like other conventional banks.

Therefore, any impacts generated by derivatives pricing or regulation constraints can become significant with regards to AFD's P&L i.e. CVA requirement as part of Basel III (capital costs) but also IFRS 13 (P&L), OIS discounting, valuation of currency basis risks, CCP and clearing fees, DTCC and TriOptima fees, etc. Given the above, we consider the real challenge market participants, of a similar size to AFD, face (both in terms of staff resourcing and P&L levels) relates to anticipating and effectively managing these impacts, both financially (P&L) and organizationally (people and IT).

What key challenges and/or opportunities does the current environment bring to your business?

Given its role and mission, AFD benefits from dual status: as a specialised financial institution, regulated by the banking authority, and a French Public Entity (EPIC). Our peers in the development business are not constrained by the same banking regulation. For instance, some bilateral development agencies have gained exemption from EMIR and derivatives central clearing, as have multilateral development banks explicitly (e.g. IMF, World Banks, EIB...). Consequently, this increases the necessity to manage both revenue and risk more efficiently, in order to identify new opportunities for optimizing.

What is your approach to risk management?

As previously stated, AFD's business is predominantly based on lending to sovereign and non-sovereign counterparties in emerging markets, where conventional banks are not able to offer an alternative. AFD faces inherent counterparty risk on top of interest rate and foreign exchange risk. Therefore, it's necessary for AFD to hedge against all these risks. Exposure to credit risk includes balance sheet risk, notably exposure to loans, equity stakes, financial instruments and derivatives, as well as off-balance sheet exposures (financing commitments and



Comores, cours de broderie © Nawal Moline pour l'Agence Française de Développement

guarantees given). AFD records items guaranteed by the French State on its balance sheet and off-balance sheet.

AFD hedges credit exposures to its non-sovereign customers by utilising different types of guarantees (letters of intention, liens on businesses, etc). AFD does not execute credit derivative transactions, either on non-sovereign entities (which may not be available in the markets) nor derivatives banking counterparts.

AFD's sole purpose of utilising OTC derivatives is to hedge against interest rate and FX risks. These transactions, when not centrally cleared, are ruled by CSA that mitigates credit risk. AFD subsequently computes CVA to capture the remaining credit risks to a given counterparty's derivatives' portfolio. This Counterparty risk on financial instruments is managed using a set of limits and management rules, of which principles and main characteristics are set by the Board of Directors.

As AFD's funding principally relies on floating-rate resources, fixed-rate loans are covered by a micro-hedge that protects the net interest margin. Also, AFD's general policy is to systematically hedge FX loans through cross-currency swaps. Given that AFD does not hold speculative positions, market risk is limited to FX risk, which is below the threshold set by CRBF Regulation 95-02 on capital adequacy with regard to the market.



Laos Vientiane Etienne Woitellier et Christine Corlier pour l'Agence Française de Développement

Helping Local Communities Prosper

"Quantifi has long been a believer in corporate citizenship. The company and its employees have a history of giving back to local communities. I am very happy to announce Quantifi is formalising and extending this with a commitment to donate 3 percent of all profits to charitable causes. I think this is a great way for Quantifi to share its current success. We look forward to an exciting 2014 where we continue to provide long-term benefits to our clients, partners, employees and communities." Rohan Douglas, CEO, Quantifi.

Quantifi Achieves Record Growth in 2013 Opening New Offices in Paris and Frankfurt

Quantifi has had one of its strongest years to date with a 44% growth in new business balanced across all regions and sectors. Matching strong client growth, Quantifi has increased global staff by 48% with additional support, implementation, research, development, and sales hires. In addition, Quantifi has opened new offices in Paris and Frankfurt to capitalise on new opportunities in these regions and to better serve clients locally. To round off a solid 2013, Quantifi was named 'Category Leader' in the Chartis RiskTech Quadrant® for Buy-Side Analytics. This is a strong endorsement of the positioning and value of our solutions.

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Past Events

Continuing our tradition of thought leadership, Quantifi hosted two industry seminars recently with EY and Capco respectively. The events were attended by 120+ delegates from across the financial services industry.

- Quantifi and EY, London
'CVA, Clearing and Basel III Capital Charges'
- Quantifi and Capco, New York
'Making Strides in Counterparty Credit Risk'

View seminar video highlights:

<http://www.quantifisolutions.com/videos.aspx>

Whitepapers

- IFRS 13 Accounting for CVA & DVA
- Comparing Alternate Methods for Calculating CVA Capital Charges under Basel III
- OIS & CSA Discounting
- Buy-Side Risk Analytics - RiskTech Quadrant®
- Managing CCR: Capital Requirements for Retail, Commercial and Proprietary Portfolio Strategies



Request a copy:

enquire@quantifisolutions.com

ABOUT QUANTIFI

Quantifi is a specialist provider of analytics, trading and risk management software. Our suite of integrated pre and post-trade solutions allow market participants to better value, trade and risk manage their exposures and respond more effectively to changing market conditions.

Founded in 2002, Quantifi is trusted by the world's most sophisticated financial institutions including five of the six largest global banks, two of the three largest asset managers, leading hedge funds, insurance companies, pension funds and other financial institutions across 16 countries.

Renowned for our client focus, depth of experience and commitment to innovation, Quantifi is consistently first-to-market with intuitive, award-winning solutions.

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