



Business challenge

Trading decisions on Over-the-counter (OTC) derivatives were based on multiple modeling techniques. Traders could either run overly conservative add-ons, or call risk teams for internal model results.

Transformation

Intesa and IBM built a solution that lets traders run what-if analysis on counterparty risk in real time, providing more accurate exposure measures that are consistent with the risk team's models.

Business benefits:

Reveals

real-time risk via a single internal model for both traders and risk managers

Strengthens

trading and risk management operations towards regulatory compliance (CCR)

Leverages

a technology environment for future regulatory developments (FRTB)

Intesa Sanpaolo

Applying an internal models approach to real-time counterparty risk exposures

Intesa Sanpaolo is an Italian banking group with a market capitalization of EUR 48.7 billion (July 2017) and a leading position in retail banking, corporate banking and wealth management. Its investment banking division, Banca IMI, employs more than 800 people at its headquarters in Milan, offices in Rome and Italy, and a subsidiary in New York, and trades in equities, bonds and derivatives with 350 clients in more than 70 markets.

"The IBM Algo One platform puts us in a strong position to manage counterparty risk in an accurate way."

Rita Gnutti
Head of Internal Model Market & Counterparty Risk
Intesa Sanpaolo

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Harmonizing risk modeling across the front office and risk management

Like many banks, Intesa Sanpaolo is transforming its risk management infrastructure to deliver on-demand risk analytics to support its investment banking division and make risk management processes more efficient.

The bank wanted to help front- and middle-office teams work together more effectively, by enabling its trading desks to access the same approved internal models for counterparty risk that its risk management team was already using.

This would empower traders to gain deeper insight into the total exposure to a given counterparty much more quickly, helping them understand the limits before making a trade, and avoid the risk of breaching those limits.

Opening up these sophisticated counterparty credit risk models to the front office would also help to harmonize the whole bank's approach to risk modeling – a key requirement of prudential regulations.



Moreover, once it had established a harmonized counterparty risk framework, the bank would also be in a position to expand the environment to market risk, putting it in a strong position to meet the Fundamental Review of the Trading Book (FRTB) requirements of the Basel Committee.

The FRTB will require extremely complex reporting on market risk, down to the level of individual trading desks. Intesa believed that taking an even more rigorous and consistent approach to risk modeling across the front and middle offices would be a significant first step.

The bank saw an opportunity to replace this spreadsheet-based process with a less time- and resource-intensive workflow.

Finding the best way forward

Intesa Sanpaolo considered a number of different approaches to the problem, such as upgrading the front-office trading platform with more powerful modeling capabilities, or building a bespoke solution in-house.

However, after carefully reviewing all the options, the bank decided that the best strategy was to give its trading desks access to the risk management department's existing IBM® Algo One® platform.

The main advantage of this approach was that the Algo solution had already achieved internal model approval from the local regulator for market risk and counterparty credit risk. As a result, the risk metrics from Algo were regarded as the “official numbers” within the bank for optimizing regulatory capital requirements. In addition, the bank had already implemented the Algo real-time credit engine to deliver counterparty risk metrics in real time.



To help front-office users adopt the tool, the project team designed an intuitive interface that not only enables what-if analysis of potential deals, but also provides useful metrics such as current exposure, expected positive exposure (EPE) and potential future exposure (PFE) for each counterparty and for the bank's top ten counterparties.

All these metrics are updated in real time whenever a new trade is made.

Around 90 percent of the bank's trading desks have already implemented the solution, including all OTC traders and the sales force for OTC derivatives.

Other trading desks are now asking

the risk team to extend the solution to cover other asset classes and instruments – especially Securities Financing Transactions (SFTs), where opportunities can arise and expire quickly, so it is important to move fast.

Laying a firm foundation for FRTB compliance

With the IBM Algo One solution in place, Intesa Sanpaolo can give its traders the ability to run what-if analyses in real time and assess the impact of each trade on the bank's overall risk profile – helping them make swift, confident decisions on trades while adhering to set credit limits.

Unlike earlier modeling techniques such as add-on tables, the real-time credit engine of Algo One uses an incremental simulation approach to take risk-mitigating factors such as netting into account. As a result, the solution can identify risk-reducing trades and reduce credit-line utilization under existing limits.

From an operational perspective, both front-office and middle-office personnel now have more time to focus on other aspects of their jobs, such as working on new projects and providing deeper levels of insight for senior managers and regulators.

Next comes another challenge: preparing the bank for the FRTB. Intesa believes that the IBM Algo® platform puts it in a strong position. By combining its methodologies with IBM's technical expertise, the bank is confident that it will stay on track to meet the FRTB requirements.

Solution components

- IBM® Algo One®

Take the next step

IBM is working with organizations across the financial services industry to use IBM Cloud, cognitive, big data, RegTech and blockchain technology to address their business challenges. Watson Financial Services merges the cognitive capabilities of Watson and the expertise of Promontory Financial Group to help risk and compliance professionals make better informed decisions to manage risk and compliance processes. These processes range from regulatory change management to specific compliance processes, such as anti-money laundering, know your customer, conduct surveillance and stress testing.

To learn more about IBM financial risk and regulatory compliance solutions, visit ibm.com/RegTech and follow us on Twitter @IBMFintech

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