

Building a bespoke in-house counterparty risk platform

BBD's client, a large multinational banking and financial services institution, required support to undertake the ambitious task of developing a bespoke, in-house risk platform – moving away from the limitations and long-term costs of their previous provider. Rather than opting for an off-the-shelf solution that wouldn't be tailored to their specific workloads and requirements, the client sought a custom-built system. The project was also highly time-sensitive, adding to the complexity and urgency of the engagement.

Objectives

- Deliver a custom-built counterparty risk platform to replace an existing system that would support custom risk models for various trade types, to compute market and counterparty risks
- Ensure faster decision-making and improved operational efficiency by streamlining processing times
- Align with both regional and global strategic goals, enabling localised, agile decision-making within the client's global framework
- By utilising custom bespoke software, they are enabling Regional Offices in rest of Africa to perform the same risk calculations

Benefits

- **In-house development:** The platform was developed in-house, allowing the client to support new business with faster turnaround times, as they no longer had to rely on external providers or lengthy change requests
- **Strategic alignment:** The new platform was built to align with the client's regional and global strategic objectives, enabling local and agile decision-making
- **Bespoke risk management:** The platform supports custom risk models for various trade types, including market and counterparty risks, with an in-house quantitative analysis team dedicated to refining and calculating these risks
- **Improved efficiency:** The platform dramatically improved processing times and the ability to scale, leading to faster decision-making and more efficient operations

Overview of the solution

The project was initiated as a replacement for the client's previous counterparty risk system, which would require ongoing costs, and as such the client needed a completely new solution, one that was not just a duplication of the old system but a custom-built platform. The platform was designed from the ground up, incorporating sophisticated risk models and a dedicated team of quantitative analysts to ensure that the risk calculations were accurate and tailored to each of their product offerings.

The BBD team was called in to help meet the tight timeline for delivery. We brought in senior resources with extensive banking expertise, seamlessly integrating into the client's team and helping them meet the project deadline. Since going live in late 2022, BBD has continued to enhance the platform with new features and improvements as the scope of the project has expanded.

Approach

Our approach was rooted in BBD's core values of delivering value to the client. The team worked tirelessly to execute the plan with no challenge too large or small. Key aspects of our engagement included:

Data integration

BBD worked on continuous improvements to the platform's data integrations, both upstream and downstream, to ensure that performance and accuracy remained top-notch. Notably, BBD migrated data storage from SQL Server to Amazon S3, which reduced the time needed to import trade data from 24 hours to just 4 hours

Platform architecture

Ensuring that the microservices architecture was secure, solid, and scalable was critical to the platform's success. BBD's architects played a key role in ensuring the platform could handle large workloads and scale as needed

Leveraging expertise

Given BBD's expertise in the banking sector, we were able to provide valuable insights and solutions, ensuring that previous challenges were resolved with practical, forward-thinking approaches

Key technologies

C# and Python

Used as the project's main development languages

Cloud Services (S3, EC2, Azure AD, Azure Pipelines)

For scalable storage and compute power

SQL Server & MongoDB

For data storage

GitHub

Code repository management

Redis

Used for communication and in-memory caching to optimise performance

Team City

Build server and version control

Microservices Architecture

Ensured flexibility and scalability by enabling independent component deployment

Blazor, WPF, & Excel DNA

Front-end and UI components, including Excel add-ins

Impact of BBD's partnership

BBD's work on the counterparty risk platform has been instrumental in helping the client meet their project goals within the required time frame. The team's dedication, professionalism, and technical expertise were crucial to the success of the project. As noted by the client's CIO of Markets: "BBD's contingent resources played a crucial role in the project's success. Forming most of the delivery team, BBD brought deep experience and seniority that enabled high-quality execution. While strategic technical direction was set by us, the BBD team was instrumental in translating that vision into delivery, and their capability and professionalism were key to the project's success."

This collaboration marks a significant milestone in BBD's long-standing partnership with the client, which spans more than a decade. The project not only delivered a robust, bespoke risk management platform but also reinforced BBD's value as a trusted technology partner for the client.

Get in touch

If you'd like to engage with us on your financial services needs.

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