White paper

A case study on the Brazilian Development Bank

Examining the successful transition from discrete credit risk tools to a centralized and connected solution from Bureau van Dijk's FACT team

The **Fact** Framework

"We needed to find options to minimize our operational risk. The Fact Framework was the best option."

BUREAU VAN DIJK

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BNDES

BNDES

An overview of BNDES and the challenge it faced

The Brazilian Development Bank – or Banco Nacional de Desenvolvimento Econômico e Social (BNDES) – is the main financing agent for development in Brazil.

Since 1952, BNDES has played a fundamental role in stimulating the expansion of industry and infrastructure in the country. It offers several financial support mechanisms to Brazilian companies of all sizes, as well as public administration entities, enabling investments in all economic sectors.

Before working with FACT, BNDES's internal rating models ran in a dispersed, unsecured spreadsheet environment, meaning data input and financial calculations were time-consuming and error-prone.

To meet the bank's steady business growth and stay compliant, its credit department was looking for a software solution to support its rating system and implement its internal probability of default (PD) models. It needed a high level of flexibility so it could independently manage and update its models to meet current and future regulatory requirements and internal credit policies. And, to successfully complete the rating process, it needed a better spreading tool to support its financial analysis.

The **Fact** Framework

What is The Fact Framework?

Fact is part of Bureau van Dijk's Custom range. Used by banks and financial institutions worldwide, it's a flexible, fully configurable framework for financial spreading and analysis, rating, credit risk modelling and credit application workflows.

Its credit risk framework comprises three modules, which can be combined or used on their own:
* **Spreading and financial analysis** – securely collect, analyze and store information in a central database.
* **Risk rating engine** – integrate any credit model in FACT, from simple scorecards to models with complex financial logic.
* **Credit application workflow** – centralize all your credit data and manage user access; and automate all your rating approval procedures and credit application policies.

Customizable, scalable, secure and reliable, FACT has three major elements:
* **Framework** – FACT integrates efficiently with clients' existing workflows and internal systems, incorporating all processes and stakeholders.
* **Data** – FACT can integrate and map data from multiple sources. This can be banks' internal data, external data or anything from Bureau van Dijk's range, such as company information from Orbis, its global database of more than 200m private and public companies.
* **Models** – users can create their own scoring and analytical rating via FACT's integrated models or using their own methodology.

Highlights of Bureau van Dijk's FACT solution for BNDES

The bank's expectations:

- To improve the efficiency and traceability of its rating processes
- To create a centralized automated rating system that optimizes its credit decisions based on more sophisticated rating models
- To define banking business rules within a common platform to improve the quality of the credit system
- To provide greater transparency and disclosures of the assignment of ratings, leading to better limit checking, stricter control and easier audits of ratings
- To allow its methodology team to internally develop and maintain changes to the scorecards independently of Bureau van Dijk

Solutions provided by FACT, the bespoke credit risk solution from Bureau van Dijk:

- A rating system covering a variety of entities, such as banks and corporates on a national and international level, sovereigns, operations and industries
- Deployment of 16 internal PD rating models
- An automatic exchange rate feed from Bureau van Dijk's Orbis Bank Focus database
- Secure and centralized archive of ratings history
- Financial information integration from various providers and accounting practices, such as Orbis, S&P, Capital IQ and BNDES's internal databases
- 24/7 service to 100 concurrent users throughout the organization
- Different rights and roles for granular control of access permissions to the application
- Integration with internal banking workflow tools
- Portuguese and English interfaces

The view from BNDES: why we chose FACT to centralise our credit risk operations

BNDES chose the FACT credit risk solution to centralize its credit risk operations into a seamless and powerful platform that would increase efficiency in its credit business processes. Did it succeed?

During the whole process of implementation – outlined in detail later in this case study – Bureau van Dijk was able to adapt to BNDES's evolving needs and changing priorities, and accept the change of requirements the bank submitted.

Roberto Elias Afonso, Head of the Department of BNDES Credit Policies, explains: "The software has proven to be flexible enough to configure internal scorecards and integrate the process of credit risk analysis with other corporate systems."

The project plan was actively managed to provide the necessary scope. The execution of the project was transparent – BNDES and Bureau van Dijk's teams were constantly well informed and on track to meet schedules and ensuring expectations. This also allowed both teams to collaboratively manage each challenge, scope change and mitigate the risks by adapting the project goals and strategies.

"The FACT implementation project at BNDES was very successful and reached not only schedule but also budget goals," adds Roberto, who also praises Bureau van Dijk's support and training.

Healthy collaboration between Bureau van Dijk and BNDES was at the heart of the project's success. "The team responsible for the project at Bureau van Dijk has shown a high level of knowledge and commitment," says Roberto.

Manuela Lopes, an economist at BNDES, adds to the picture.

Before working with FACT, "we used spreadsheets, with templates saved on our department's file," she says. "Every analyst would make a copy and work on that, and once a week analysts reported their ratings to a committee via a big PDF that the secretary would compile."

This was all done manually and entered into an Access database, recalls Manuela, with "no control systems in place".

Roberto Elias Afonso

A senior economist at the bank, her manager Victor Pina explains that a few years ago he and the team became increasingly concerned about the use of these files. "We needed to find options to minimize our operational risk," he says, both in terms of data security and in the reliability of credit assessments. "FACT was the best option." Why?

Says Manuela: "In the past anyone could open up the files and accidentally save something over them or change the data." FACT guards against this, she says.

> **"The FACT implementation project at BNDES was very successful and reached not only schedule but also budget goals"** — Roberto Elias Afonso

One of the "main problems it solves is traceability," says Manuela. "FACT traces every step – date, time, who accessed the system, any ratings that were cancelled. So it's easier to answer internal questions, such as how many ratings have been downgraded for whatever reason, and we can see this on its dashboard."

Everything is now centralized and the information can very easily be presented to auditors if requested. "In the past we'd have had to print things out," she adds, "and there'd have been no way of showing that we hadn't changed the parameters."

Indeed, at BNDES, some of the model's internal parameters are intentionally hidden from view. "We felt that if our analysts knew too much there was a risk they could trick the system and take advantage of it," says Manuela. So the bank's decision to hide them from the scorecard was cultural.

But, being an entirely bespoke system, FACT's settings can, if required, be made entirely transparent. Everything is designed in consultation with the client.

While clients can use FACT as a workflow tool, at BNDES it's used as a sophisticated calculator, complementing the bank's own workflows – and it helped shake up their systems. In what ways?

Victor Pina

"FACT was the trigger for standardisation. It was a great excuse to put order to things so they made sense," says Manuela. "People already had this goal in mind but if it hadn't been for FACT, we wouldn't have had a good enough argument to do it."

Manuela and Victor agree that FACT's adoption at the bank has been a great success. "We can now work in a much more trustworthy way, questions are dealt with more quickly and effortlessly, and we work better," says Manuela. But has it fundamentally changed the bank's decision-making processes?

They now work with a number of good, creditworthy organisations that they might have avoided using their old risk assessment tools. Victor also says that "before FACT we didn't have time to analyse individual projects, so instead we had to review a group of projects or portfolio of companies together".

Manuela Lopes

And now?

"Now we can easily and quickly analyse each company within a portfolio," Victor continues. "A good example of this is in wind power plants. There are lots in Brazil and they're all very small. We can now look at each one and make better, more reliable decisions."

> **"before FACT we didn't have time to analyse individual projects, so instead we had to review a group of projects or portfolio of companies together"** — Victor Pina

Project phases

Following a project charter, the project comprised four successive phases. Delivered in less than 18 months, well within the timeframe BNDES specified, it's summarized here:

Project Charter

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Start date: July 2014

Phase 1

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January 2015

Initial application setup

Release of diverse reports, integration services and features that enable two groups of credit analysts to start working with FACT

Architecture and design of upcoming phases

Phase 2

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July 2015

Implemenatation of four new rating models, allowing two additonal groups of credit analysts to use FACT

Financial information from new data providers integrated into system

Phase 3

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October 2015

Special attention given to implementation of 14 dashboard reports, bringing extra added value to interface

New PD models integrated into system

Phase 4

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Finish Date: December 2015

Integration of remaining PD models, some very complex, such as project finance, leasing and Brazilian public entities

Integration of new model of exposure limit controls

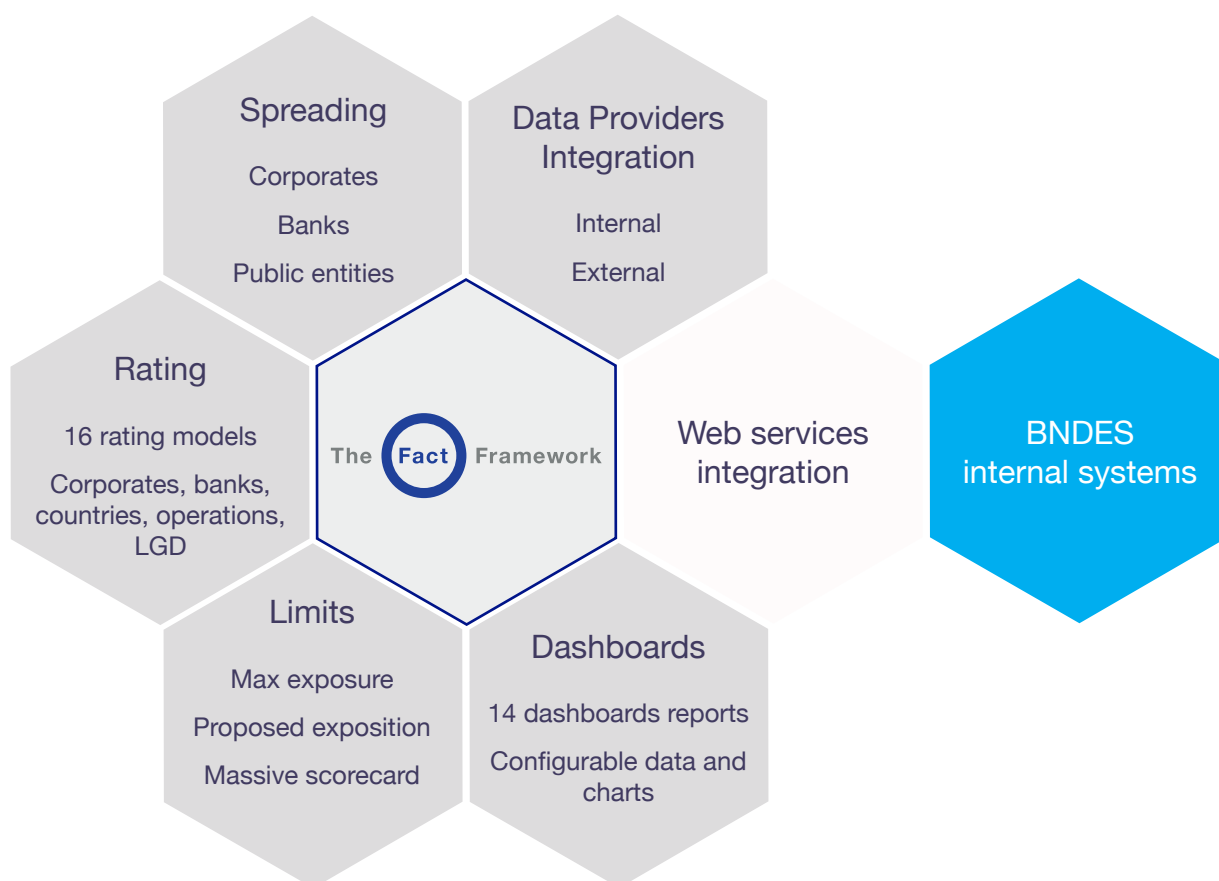Installation of new back-office system to deal with credit limits

Day-to-day use of FACT

BNDES now uses FACT as an integrated platform for daily work in its credit department. Providing several different business concepts in one single web-based platform, the tool supports credit analysts with tasks such as:

- Synchronizing financial information from different sources
- Evaluating credit risks through advanced rating models
- Archiving and storing data for audit purposes
- Presenting information graphically in modern dashboard screens

The diagram below and the bullets on the next page summarize the content FACT handles for BNDES, its functionality and its output. It also highlights that the bank's own systems and web services are integrated with FACT, which pushes ratings through to BNDES's core banking system.

With the FACT solution from Bureau van Dijk's Custom range, BNDES now benefits from:

- Shorter 'time-to-market' for implementing new rating policies and integrating existing rating models
- International access to the solution and quick local deployment
- Management of multi-standard financial data (IFRS and Local GAAP) from Bureau van Dijk and internal banking data
- Integration with the bank's internal systems, namely its workflow and financial information
- Data storage with the facility to produce historical auditing and thorough data validation
- A dashboard module to display ratings and financial key indicators for all the entities
- Ongoing support: maintenance, training and development
- The creation of a robust, flexible and scalable solution, enabling the bank to implement its current and future requirements.

The solution provides independent analysis and validation for the following credit risk policies:

- Financial data management
- Entity ratings of:
  - National and international banks
  - National and international corporates
  - Country risk
  - Industry risk (for banks, corporates, government and the like)
  - Corporate airlines
  - Public and governmental entities
  - Project finance
  - Operational risk
  - Sovereign governments

This included the integration of worksheets and formal analytical processes that used a range of templates to compute counterparty ratings and exposure at default (EAD) or PD.

Ongoing development

Since implementing FACT in 2014 as a rating and spreading system within the bank, BNDES has continually deployed new releases to enhance its credit risk process.

Bureau van Dijk and BNDES are currently analyzing and working on limits stabilization, a new rating model and a new data provider for insurances companies, while constant updates are made to the existing rating models.

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