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CASE STUDY

Automating the Borrower Credit Assessment Process at a Universal Bank

THE CLIENT A Commercial bank in Southeast Asia
USERS The Credit Risk team

This long-established commercial bank in Southeast Asia provides individual, Small and Medium-sized Enterprises (SME), and corporate clients with a range of consumer and wholesale banking loans. The credit risk team is responsible for assessing the creditworthiness and debt servicing capacity of company borrowers, and wanted to take the process that was in place to a new level.

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Pain Points

The credit risk team felt its existing credit risk frameworks was outdated, and required validated and ready-to-use scorecard solutions to assess potential credit risk across different industry segments. Together with these scorecard solutions to assess associated companies, the team also needed a tried and tested credit assessment application to automate spreading-rating in the main bank as well as its subsidiaries. Further needs were:

- For credit risk data to be subsequently warehoused so that the resulting loan portfolios could be proactively monitored and analyzed. This data was to be supplemented by that held in the core systems.
- To meet central bank's regulations as well as International Financial Reporting Standards 9 (IFRS 9) requirements that included the calculation of Expected Credit Loss (ECL) on a per borrower-facility basis.

Longer term plans included extending automation to loan origination, so the credit assessment application had to be flexible enough to integrate with the selected platform.

Currently using outdated credit risk frameworks, the credit risk team required validated and ready-to-use scorecard solutions to assess potential credit risk across different industry segments.

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The Solution

There were two parts to the solution provided, jointly supported by S&P Global Market Intelligence (Market Intelligence) and Fidelity National Information Services (FIS).

The first part of the solution was Market Intelligence's Credit Assessment Scorecards:

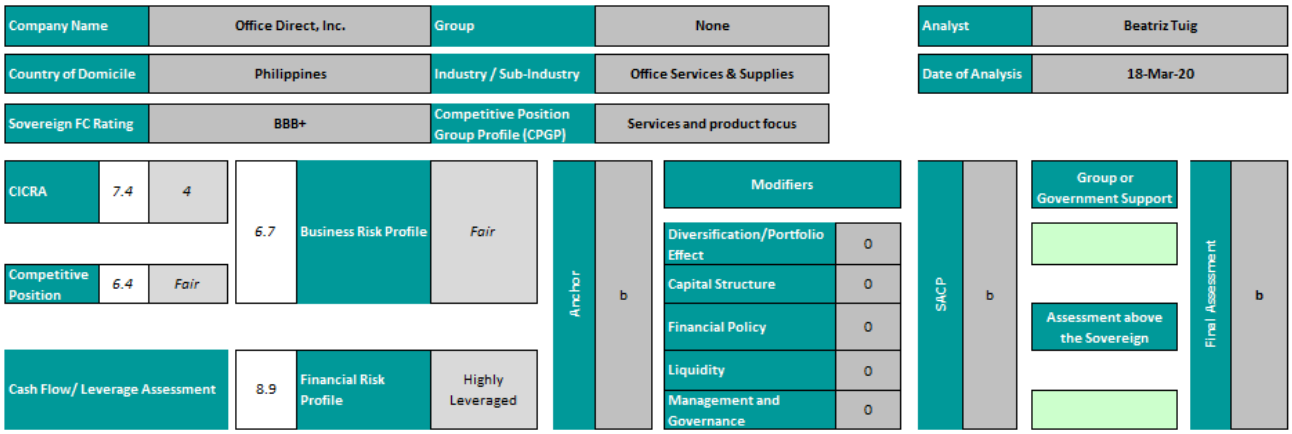
Credit Assessment Scorecards

Market Intelligence Credit Assessment Scorecards provide an effective framework for identifying credit risk, especially for low-default portfolios that lack the extensive internal default data necessary for the construction of statistical models that can be calibrated and validated.

Over 70 Scorecards are available[1], which would enable the credit risk team to choose those most relevant to identify and manage potential default risks of private, publicly traded, rated, and unrated companies across sectors of interest.

Scorecards are delivered in Excel® format that use qualitative assessments and financial ratio analysis to derive stand-alone implied credit scores[2]. These are further supported by historical default data back to 1981.

Figure 1: Sample Market Intelligence Generic Corporate Credit Assessment Scorecard



Source: S&P Global Market Intelligence. For illustrative purposes only.

[1]As of October 2019
[2]S&P Global Ratings does not contribute to or participate in the creation of credit scores generated by S&P Global Market Intelligence. Lowercase nomenclature is used to differentiate S&P Global Market Intelligence PD credit model scores from the credit ratings issued by S&P Global Ratings.

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As shown in Figure 1, the combination of business risk and financial risk determines the entity's 'anchor' Stand-Alone Credit Profile (SACP) [3]. This anchor acts as a starting point for calculating the actual SACP for a firm. It essentially represents the baseline creditworthiness of a representative company operating in that market.

The assessment of business and financial risk is based on an analysis of several credit risk factors. The anchor score is then adjusted upwards or downwards based on credit risk modifiers that measure aspects such as management and governance, liquidity, and financial flexibility. Once the SACP of the entity is derived, it is possible to factor in any explicit external support that might come from a group or government.

The IFRS 9 standard requires firms to use Probability of Defaults (PDs) to calculate expected credit losses. Given this, the bank needed to adjust the long-term, through-the-cycle PDs, which are smooth, using different macroeconomic scenarios to create point-in-time and lifetime PDs, which move up or down depending on the credit cycle. The credit risk team utilized Market Intelligence's Credit Cycle Projection Overlay to make this adjustment. This overall approach using Market Intelligence's Scorecards along with the Credit Cycle Projection Overlay enabled the bank to meet two reporting needs: one that adhered to the regulatory capital requirement, and one that adhered to IFRS 9. For regulatory capital, the long-term PDs using the Scorecards determined the provisioning that was necessary. For IFRS 9, the additional step of the credit cycle adjustment using the Overlay captured the potential impact on the bank's profitability to provide a clearer view of provisioning needs.

Importantly, the Scorecards can be integrated into the bank's loan origination system once selected. This will enable credit risk information to be captured as part of a borrower's credit profile to provide important details for subsequent data analysis. In addition, training workshops help users understand the methodology behind the Scorecards and how they can add value to the credit assessment process.

[3]The SACP is S&P Global Ratings' opinion of an issuer's creditworthiness in the absence of extraordinary support or burden.

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The second part of the solution was Fidelity National Information Services (FIS) modular credit assessment application – Optimist.

Credit Assessment Automation

FIS offered its modular credit assessment application – Optimist – to the credit risk team to facilitate the automation process.

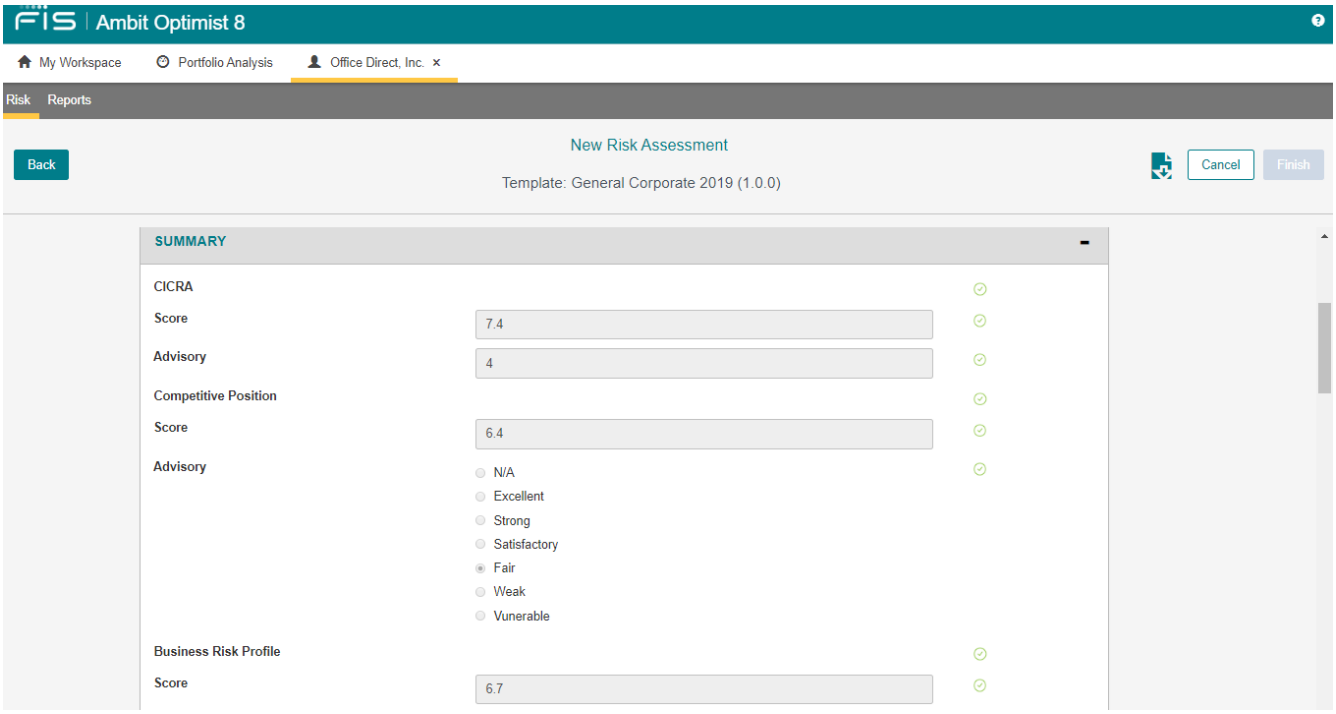
Optimist provided the credit risk team with the ease to automate their process by:

- Spreading over multiple financial statement periods, and to local standards.
- Rating through use of the Market Intelligence's scorecards housed in a purposely designed engine.
- Warehousing of captured credit and risk data for subsequent portfolio monitoring and analysis.

This was made possible through the inherent flexibility built into Optimist, which is through configuration (i.e. parameters) rather than by way of coding. Optimist was delivered to the bank in standard or non-customized software form reducing the time that the credit risk team spent on testing.

Optimist risk assessment has replicated the Market Intelligence's scorecards, including all quantitative variables automatically calculated from the spread financial statements. While risk assessments can still be run on a borrower-by-borrower basis, it is now possible to "batch" rate an entire portfolio when the need arises.

Figure 2: Sample Generic Corporate Optimist Risk Assessment



Source: FIS. For illustrative purposes only.

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Key Benefits

Market Intelligence's Credit Assessment Scorecards

The credit risk team is benefitting from using Credit Assessment Scorecards in the following manner:

- An approach that is useful and relevant for low default portfolios when there is a **lack of internal data** available to construct statistical models that can be calibrated and validated.
- **A rigorous methodology and annual review process** that validates that the Scorecards are analytically sound and that the User Guide is up to date.
- The ability to **integrate the Scorecards in third-party systems** to support digitization initiatives and big data analysis.
- **Training and on-going support** to help groups understand the range of available capabilities and continue to get the most out of the solutions.

To learn more about Credit Assessment Scorecards, please visit our website.

FIS's Credit Assessment Automation

A DataMart has been created for the risk team into which core banking data is being fed. Optimist dashboards have been configured to monitor this data, which will shortly be supplemented by financial and risk data to provide an all-round credit and risk view of the loan portfolios.

The credit risk team is benefitting from using Optimist in the following manner:

- Storage of spreading and rating data stored in a **central transaction repository** rather than individual files.
- **Framework upon which further automation projects can be successfully pursued** inclusive of loan origination, and digitalization.

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- Creation of a Credit Risk DataMart containing information pertinent to the **monitoring and analyzing the resulting portfolios** more successfully. Additionally, for regulatory compliance inclusive of **subsequent IFRS 9 provisioning**.
- **Comprehensive training and support** to maintain the application and Market Intelligence's scorecards deployed therein.

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