

Green Lend

Inclusive Credit Risk Assessment Across Value Chains



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Background

Financiers are generally reluctant to finance climate-smart small and medium-sized enterprises (SMEs) because they operate with technologies or business models which financial institutions, such as commercial banks, are often unfamiliar. Additionally, enterprises seeking growth financing lack substantial credit history, and many of them are unable to offer any collateral. In light of these interrelated challenges, solutions are required to overcome the following and deliver long-term financing to climate-smart “missing middle” SMEs looking to scale their activities and contributions to socially inclusive, green development:

- **SMEs’ lack of credit history** resulting from limited available data on credit worthiness
- **High risk aversion of financiers** to early and growth stage SMEs
- **Lack of new data sources** across value chains employed in traditional risk assessments

Solution Overview

Green Lend is a credit risk assessment mechanism (risk scorecard) designed to increase lending to climate-smart SMEs through risk assessment catered to the needs and data available to these enterprises. This mechanism leverages data that traditionally are overlooked by commercial banks to build a credit risk framework responsive to climate-smart SMEs that embraces the reality of the diverse and often messy data availability of climate-smart SMEs across their complex value chains.

Value chain analysis and the use of data across different nodes of the value chain can support both SMEs and financiers to overcome challenging and often hazy data collection and analyses within credit risk assessments. A value chain approach to credit risk that incorporates new data forms will look to which data are found along a specific value chain – collecting data from key actors at different stages from inputs to production, processing and distribution, marketing and consumption. For example, warehouse receipting could be used to mirror a credit history of SMEs (also in the informal sector) and provide additional “new” data relevant

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to assessing the credit worthiness or risk of financing these enterprises.

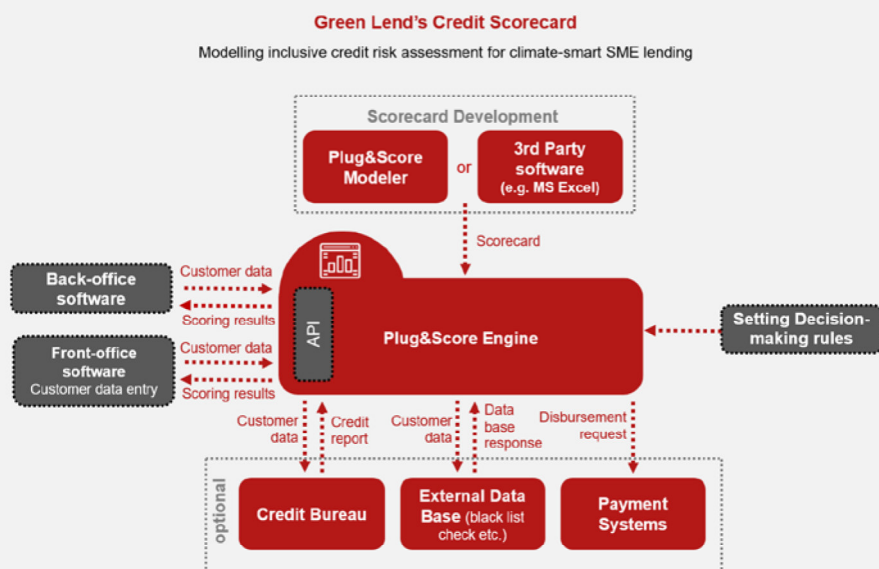
The proposed credit risk model **offers a risk management mechanism** catered to the needs of small and growing climate-smart enterprises that will:

- **Manage risk** by identifying clients who are at risk and using this to better understand how clients at risk progress from arrears (overdue debt), to default, to unrecoverable. In the proposed credit risk assessment model, the statistical equivalent is sensitivity where $S = \frac{\text{Identified defaulters}}{\text{True defaulters}}$.
- The model offers risk management that is **balanced**, meaning that it does not penalise clients who are unlikely to default. Accordingly, this balanced approach applies the statistical equivalent for precision or specificity, $S = \frac{\text{Identified non-defaulters}}{\text{True non-defaulters}}$.
- Furthermore, Green Lend’s risk assessment model is applied in a **sustainable manner** with a strong ability to forecast on new data points, where the statistical equivalent is out-of-sample performance.

Key Features

Green Lend’s model for credit risk assessment breaks with traditional credit risk models by employing alternative data. This approach is unique in its ability to provide information to prospective lenders when:

- Incomes are informal (and unrecorded)
- Credit history is unavailable
- Income levels are low in the market



In particular, this inclusive credit risk assessment model capitalises on the trend of a **societal drive towards increased data collection**. As SMEs and entrepreneurs' data footprint increases, more information is available to relate to credit risk outcomes. Available data – or alternative data, from the perspective of the banking sector – includes call records which are increasingly stored, cleaner and more accessible; health record information (e.g. on vitality); and social media data (under certain circumstances). By leveraging readily available data, financial institutions can have a clearer picture of the reliability and riskiness of their clients, greatly reducing their risk aversion to financial data-poor climate-smart SMEs.

Target Market

This credit risk assessment model is specifically catered to the business models of climate-smart and socially inclusive SMEs that offer combined environment, economic and social benefits across their value chains, especially to women and youth as suppliers, employees and customers. In particular, these enterprises support marginalised communities to better adapt to and mitigate the impacts of climate change. In South Africa and the region many of these enterprises fail to attract investment beyond the scale of microloans or grants (10,000 – 20,000 EUR) and below the scale of commercial finance (100,000 – 200,000 EUR and above) that is required to scale-up their activities. This credit risk model intends to provide a better picture to commercial banks of the credit worthiness of these “missing middle” enterprises by locating and collating data that these enterprises are readily able to provide.

Impact Potential

The climate finance solution for credit risk rating that incorporates alternative forms of data will increase investment in climate-smart SMEs at the base of the South African, regional and global economies. This solution offers commercial banks effective tools to better understand and develop targeted lending solutions for these enterprises offering innovative climate-

smart products and services, which catalyse socially inclusive and green economies.

Solution Developer



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SEED Practitioner Labs Climate Finance engage financial institutions, funders, intermediaries and other SME ecosystem stakeholders to co-create innovative climate finance products and mechanisms that extend access to long-term financing opportunities for “missing middle” small and growing climate-smart enterprises that struggle to advance beyond the start-up stage and multiply their contributions to climate-smart and socially inclusive economies.