

Overview

We built an automated SME/Corporate rating tool, reducing risk with a second look.

- Extremely low volume portfolio with short history
- External data sources explained previously unexplained effects
- Deep dive on data guided changes to applications to gather more relevant factors

Context

A Big 4 Indian bank's top end SME underwriting was based entirely on expert underwriters, largely making subjective decisions. This task is highly reliant on expensive experts, time consuming, and declines many accounts out of an overabundance of caution.

Verde was asked to build an automated tool to provide a second look, giving an objective measure and an independent score.

Challenge

- Highly customized SME loan portfolio, with each loan having special conditions and term structures
- Extremely limited volume within portfolio and few comparable accounts
- Relatively short time frame encompassed few economic cycles
- Loan application failed to capture many important factors about the ownership and structure of the SME, as well as sector and operations
- Many important factors are rarely reported or unreliably reported

Solution

Highly detailed analysis of internal data consistency led to a confidence metric on each element of the application. Principal component analysis and inter-correlation built minimal spanning trees, extracting the most important data and highlighting the areas of weakness. Transactional data was isolated, extracted, and incorporated, and modifications to the application were made to collect more of it.

Additionally, external data was brought in to help explain economic trends. Highly useful indicators were extracted, allowing the bank to take actions based on a set of leading economic indicators, effectively predicting the growth rate of their customers up to 3 years ahead.

Results

- High acceptance rate – Falsely rejected less than 2% in the bank's test set
- Reduced credit losses by up to 96%
- Increased the portfolio's profits by 50%, nearly tripling ROA