P Powerlytics

Accurately Predict Consumer Default Risk

Make the Loan Journey Easier for the Right Customers

The Challenge

A US based financial lending institution sought to sharpen its ability to identify good credit prospects who could be quickly approved for a loan vs. those consumers who were more likely to default and may require deeper analysis.

The Solution

By combining Powerlytics Data Platform with the financial institution's customer loan data, we were able to identify the consumer tax return variables that have significant predictive power between the default and non-default populations.

Once the Powerlytics variables are identified, they can be leveraged in predictive models, scores or indexes for a variety of reasons that include but are not limited to the following:

- Streamlining approval process for loans
- Incorporating into credit line assignment or increase strategies
- Incorporating into behavior scores for portfolio monitoring (e.g., should accounts go into proactive loss mitigation?)
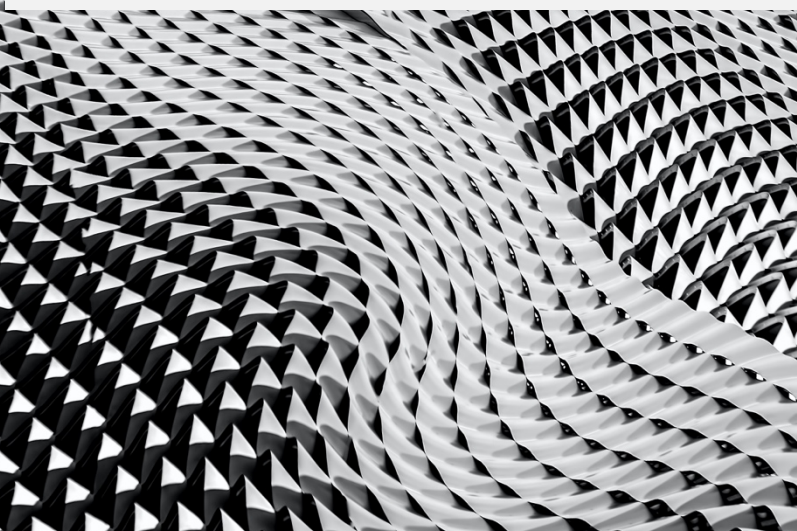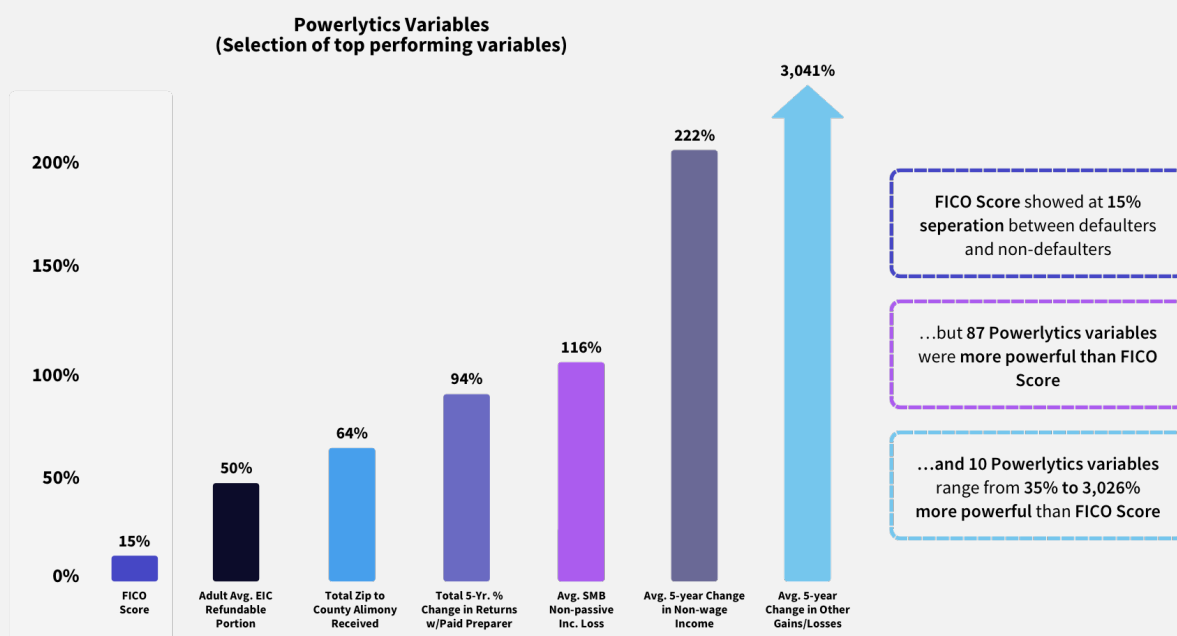- Identifying fraudulent applications

The Impact

The Powerlytics variables showed significantly more accurate predictive power when compared to the customer's FICO Score.

Specifically, Powerlytics had 46 tax variables that are more powerful than the FICO Score for separating consumers that default from consumers that do not default.

The Top 10 Powerlytics variables range from 35% to 3,026% more powerful than FICO in predicting consumers that default from consumers that do not default.

Retro-analysis for Bank - % Difference between Defaulters & Non Defaulters

**Powerlytics Variables
(Selection of top performing variables)**

200%
150%
100%
50%
0%

3,041%
222%
116%
94%
64%
50%
15%

FICO Score
Adult Avg. EIC Refundable Portion
Total Zip to County Alimony Received
Total 5-Yr. % Change in Returns w/Paid Preparer
Avg. SMB Non-passive Inc. Loss
Avg. 5-year Change in Non-wage Income
Avg. 5-year Change in Other Gains/Losses

FICO Score showed at **15% seperation** between defaulters and non-defaulters

…but **87 Powerlytics variables** were **more powerful than FICO Score**

…and **10 Powerlytics variables** range from **35% to 3,026% more powerful** than **FICO Score**

Please note that the average differences above are across multiple FICO Score bands and income ranges. For example, the average difference of the FICO score for defaulters vs. non-defaulters was 15% while the average different between those populations for the Powerlytics variable "Average 5-year Change in Other Gains/Losses" was 3,041%.

In other words, the Powerlytics data variable was over 200 times more predictive (3,041%/15%) than the FICO score.