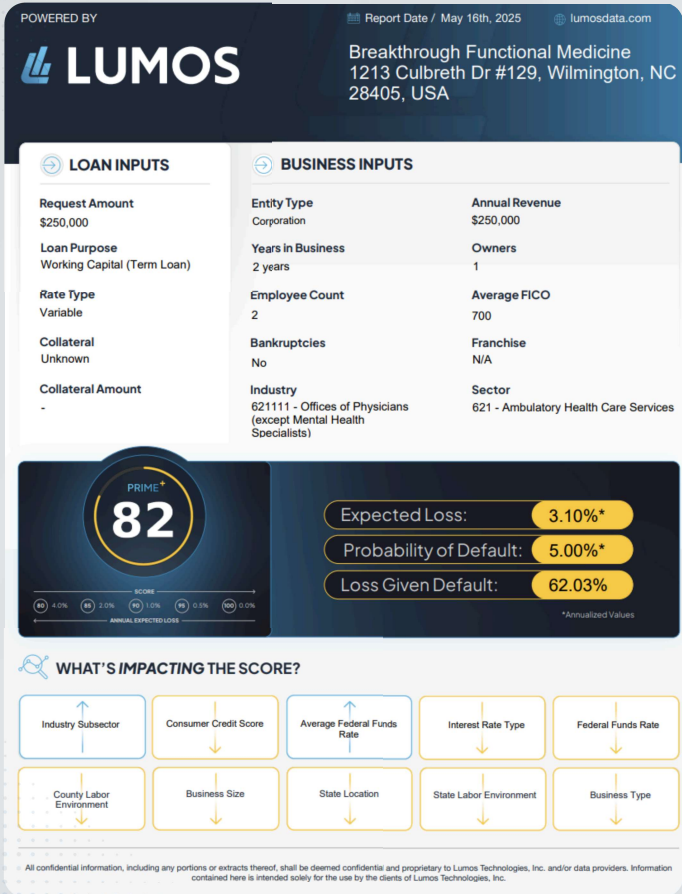




A More Accurate & Fairer
Small Business Credit
Score



Presentation Overview

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Who We Are

LUMOS at a Glance



INDUSTRY EXPERTISE

With over 100 years of combined experience in small business lending—spanning credit, finance, analytics, and operations—our team is passionate about helping small businesses grow by empowering lenders to say yes with confidence.



PROBLEM THAT WE'RE SOLVING

We're making small business lending more accessible by reducing risk and improving scalability. The PRIME+ Score changes that—with a model that's accurate and fair.



Proven Performance

Compared to a credit score-only approach, our credit model delivers **48% more approved** loans with the same level of risk, or **37% less risk** with the same volume of loans.

The most commonly used scores only tell part of the story and are potentially inaccurate or unfair to small businesses

Consumer Credit Scores

- Consumer credit scores are designed to predict credit risk of the owner
- Personal credit scores are important factors, but only tell part of the story

Business Credit Scores

- Business scores are designed to predict credit risk of the small business
- Business scores are typically built on data unavailable to new, small businesses



Source: Internal Lumos analysis of 33 thousand business credit scores and 169 thousand owners' consumer credit scores. The data covered over 7.9 million monthly payment periods of under \$350,000 term and revolver small business loans.

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PRIME + a Comprehensive Small Business Loan Scoring Model


LUMOS PRIME+
**Consumer
Credit Scores**
**Business Credit
Scores**

 Consumer Credit Data	Consumer payment history Amount outstanding owed Length of credit , Credit mix, New credit			
 Business Factors	Business age Size of the business Annual revenue			
 Loan Attributes	Rate type Loan type Collateral			
 Economic factors	Employment environment Inflation rate environment Interest rate environment			



We combined Lumos' **small business credit data** with **top-tier machine learning** to create a more accurate, fairer scoring model



PROPRIETARY SBA PERFORMANCE DATA

Our database contains proprietary data on over **2 million SBA loans** to over **1.2 million small businesses**.



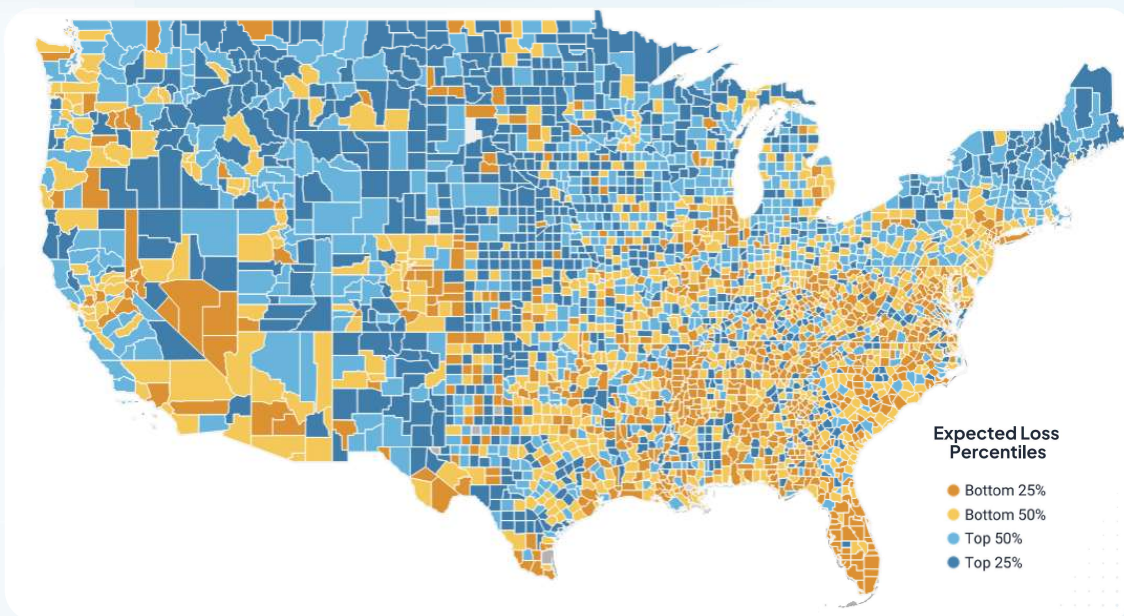
ROBUST LOSS DATA

Extensive loss data with over **400 thousand defaults** and **300 thousand charge-offs** to calculate PDs, LGDs, and expected loss.



3 DECADES OF ECONOMIC DATA

3 Decades of loan and **macroeconomic data** covering the Dotcom Crash, Great Recession and Covid.



Model Risk Management Aligned with FDIC & OCC Standards

Source: Internal Lumos analysis on historical SBA loans

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PRIME + represents an **average annual expected loss %** of a small business loan

Understanding the score

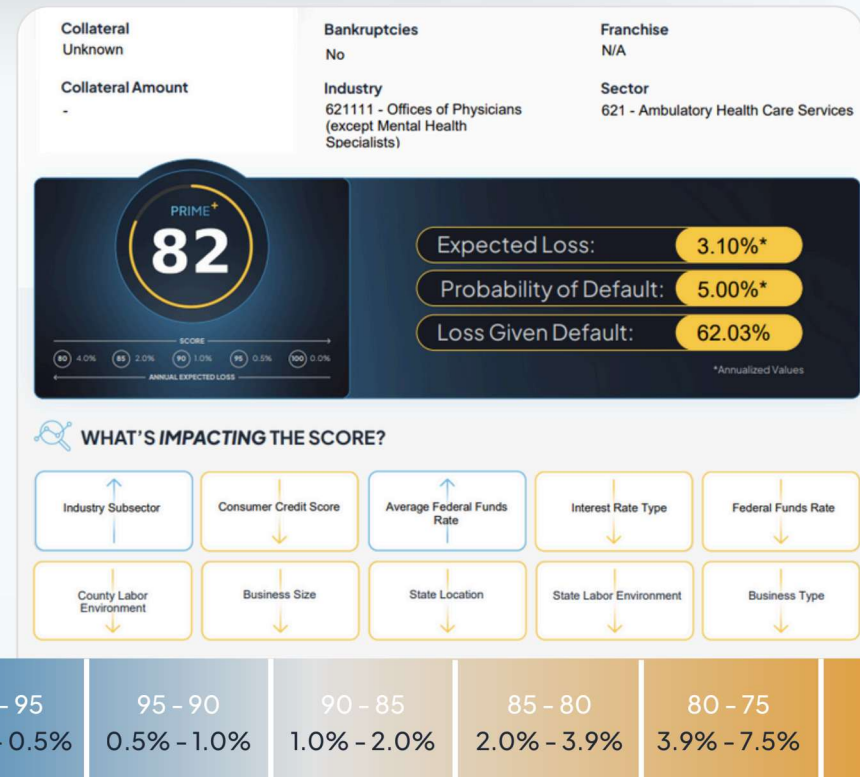
Expected Loss (EL) =

Exposure at Default (EAD) x Loss Given Default (LGD) x Probability of Default (PD)



The score ranges from 0 - 100 representing the average annual expected loss % of a small business loan.

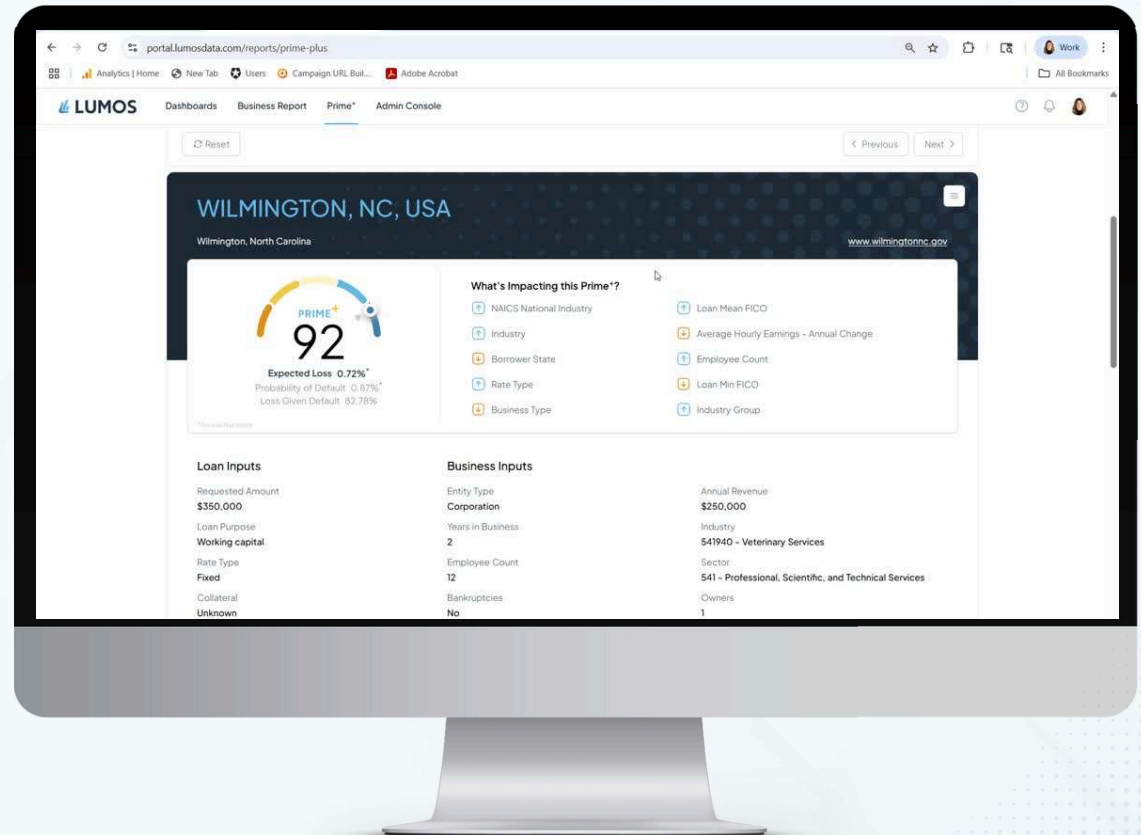
↓ Every 5 point decrease represents a doubling of loss risk





Predict credit losses with **dynamic weightings** based on relationships between **economic, credit, and business factors**

See in real time how input changes impact the PRIME+ score. The example below compares a veterinary startup to a limited-service restaurant, highlighting the difference in performance drivers.





PRIME + incorporates consumer and business credit data but is also driven by a variety of other economic and business factors

Borrowers with the same consumer credit score and in the same industry can have very different PRIME+ scores due to other economic & business factors



94

EL of 0.55%

Fixed rate term loan to a Jersey Mike's with 15 employees. They've been in business for 6 years and the owner has a **750 credit score**. Business is located in St. Paul, MN where the current unemployment rate is 2.90%.

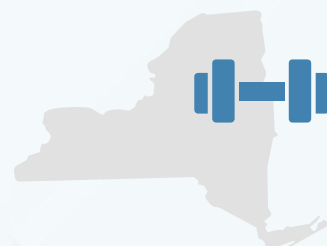


85

EL of 2.04%

Variable rate term loan to a Jimmy John's with 10 employees. They've been in business for 1 year and owner has a **750 credit score**. Business is located in Los Angeles, CA where the current unemployment rate is 5.30%.

A borrower with a good consumer credit score can have a PRIME+ score less than or similar to one with a lower consumer credit score due to other factors



80

EL of 3.77%

Variable rate term loan to a non-franchise fitness center startup with 3 employees. Owner has a **780 credit score**. Business is located in Brooklyn, NY where the current unemployment rate is 5.20%.



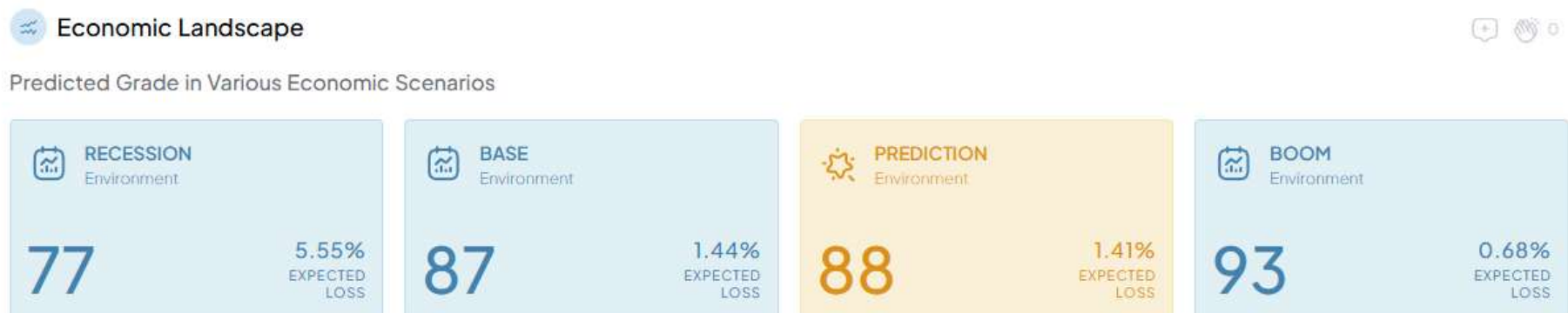
82

EL of 2.81%

Variable rate term loan to a non-franchise veterinary clinic with 20 employees. They've been in business for 10 years and owner has a **680 credit score**. Business is located in Raleigh, NC where the current unemployment rate is 3.0%.



PRIME+ includes sensitivity analysis for stress testing across economic scenarios.



Economic Sensitivity Analysis

See how a loan's performance is expected to shift under different economic conditions — baseline, boom, and recessionary — helping you assess risk and stress test across scenarios.



Our model risk management process follows modeling best practices and is aligned with FDIC and OCC regulatory guidelines.



Model Risk Management

140+ page MRM documentation and checklist



Third Party Evaluation

Independent validations of the PRIME+ model



Data Monitoring

Live health monitoring, audit trails, & access controls



SOC 2 Type II Certification

We are committed to always provide secure and reliable products to our clients

3 Term PD Model Executive Summary

3.1 Model Development Purpose, Intended Use and Approach

The purpose of the model is to develop and deploy an accurate and fair model to predict annual defaults for small business term loans under \$350,000 leveraging SBA data and macroeconomic factors. The intended use of the Lumos model is to inform management for decision making and to provide predictive information on the potential for delinquency or default that may be used in the loan approval process and risk pricing. This in turn, should reduce loan approval times, manage credit losses, and increase profitability.

A data validation check was necessary to ensure the modeling data matched the actuals after processing and removing null rows. In this process it was discovered that the minority class was overrepresented during certain dates in the model dataset. Oversampling the majority class by randomly duplicating non-defaulting loans to mirror the historical data gave the best result of balancing the default behavior over time and not removing informative data.

3.2 Model Description and Overview

The particular model referenced in this document: eXtreme Gradient Boosted Trees Classifier with Early Stopping (learning rate =0.01) (Fast Feature Binning). This model was developed in a project created with v8.0.7 of DataRobot. This model is denoted within DataRobot by the Project ID: 63af114ebae2280e48d5a356 and the Model ID: 63b4271ba1f47f5aa3ac19a1.

The model development workflow process (i.e., the model blueprint) is detailed in the figure below.





PRIME+ effectively reduces risk while lowering costs
see real-time back testing results that demonstrate its impact

Bank's legacy
thresholds



700 FICO minimum

175 SBSS minimum

2-year loan data, analyzed 9/2024

Loans Scored



627

Minimize Risk

34 loans have defaulted, 28 would have been declined by Lumos at Origination

Bank Defaulted loans



34

Lumos Declined Loans

 28

Net Savings

Mitigate risk and scale down operating cost by efficiently identifying non-performing loans early.

Net savings (Unguaranteed dollars of originations)

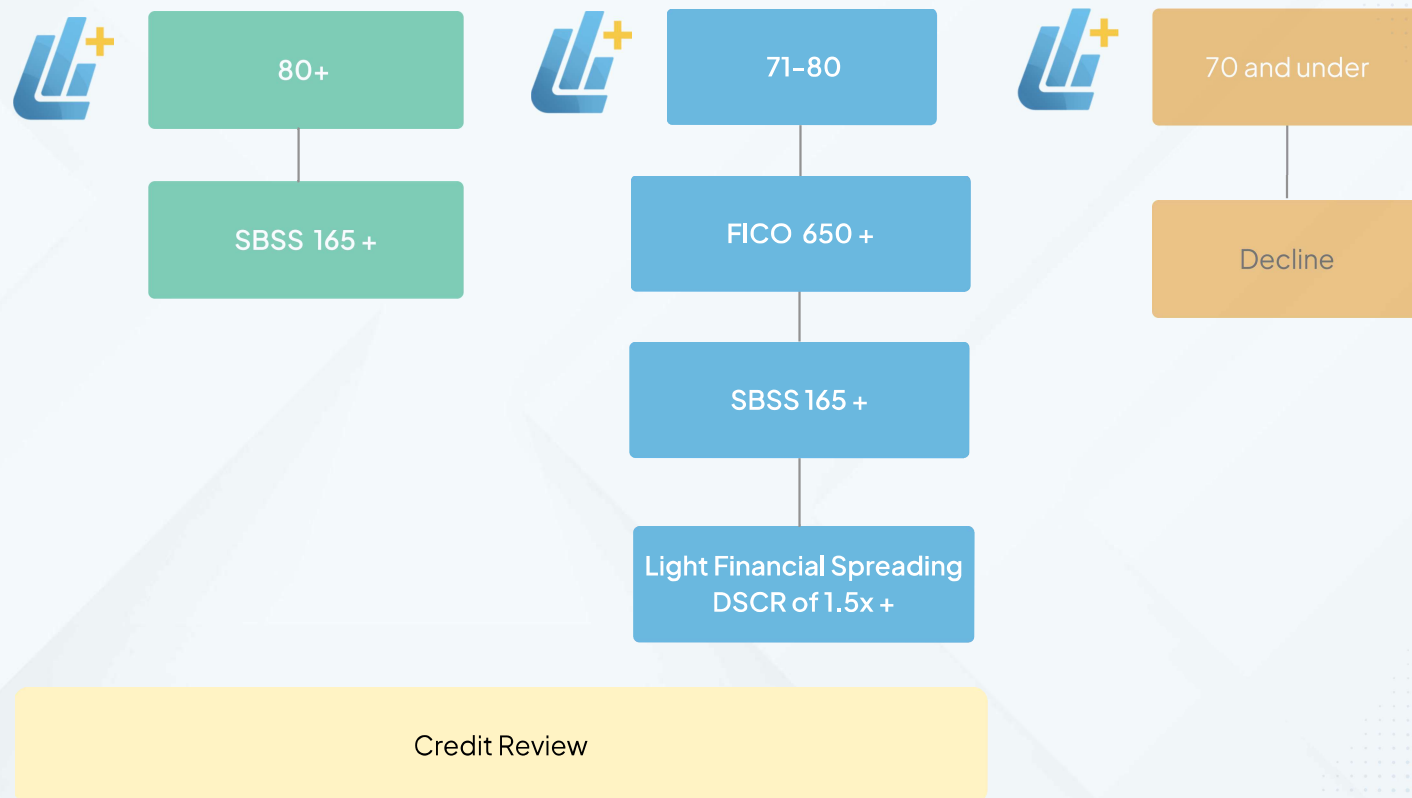


\$1.4 MM

Conditional Approval

We combine automation with lender oversight—our most common use case involves leveraging the PRIME+ Score as one input in the decisioning process, helping to efficiently screen out high-risk loans while keeping flexibility for deeper review when needed.

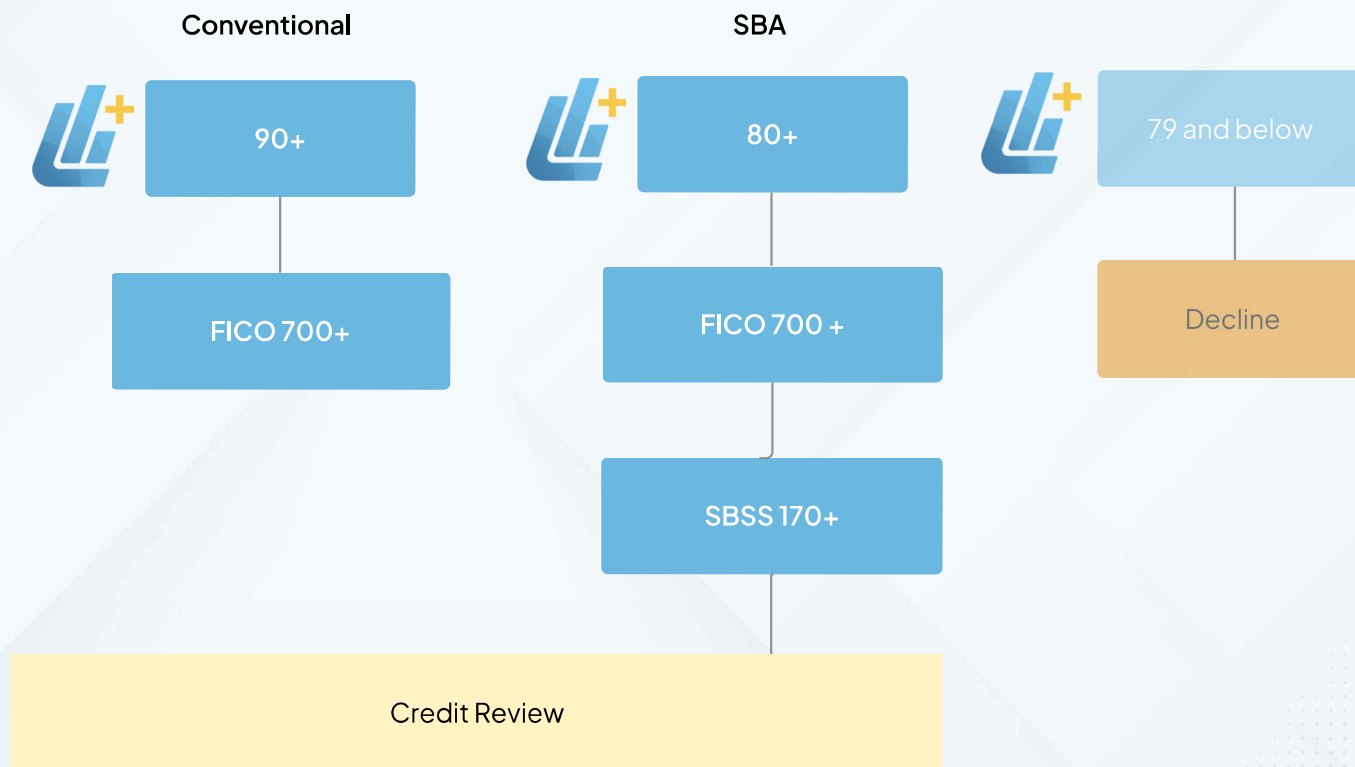
Quickly rule out high-risk loans, apply logic to mid-performers, and speed up decisions across the board



Conditional Approval

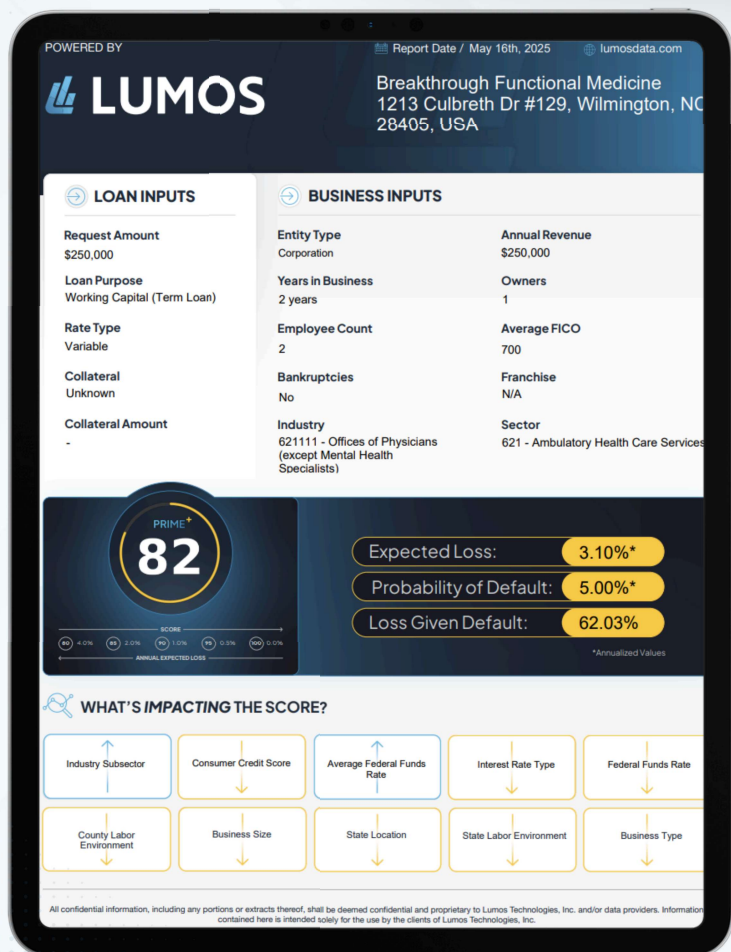
We combine automation with lender oversight—our most common use case involves leveraging the PRIME+ Score as one input in the decisioning process, helping to efficiently screen out high-risk loans while keeping flexibility for deeper review when needed.

Streamlined Conditional Approval Across Lines of Businesses





Integrate PRIME+ directly into your workflow



AVAILABLE THROUGH A USER INTERFACE

Access PRIME+ through the Lumos Portal and generate a report in seconds



DIRECT API INTEGRATION

Connect to Lumos' API to access PRIME+ inputs, outputs and full PDF report all within your custom internal system



LOAN ORIGATION SYSTEM INTEGRATIONS

In collaboration with our partners access PRIME+ inputs, outputs and a full PDF report all directly in your workflow



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