experian.

AWS migration

Score validation white paper

Financial Stability Risk Score v2 — machine learned (FSRv2-ML)

Background

As part of Experian's commitment to deliver best-in-class technology and innovative products to our clients, Experian's Business Information Services (BIS) is transitioning our data and technology platforms to the cloud. This technology transformation will enable BIS to take advantage of the latest proven technologies with speed to new innovations. For our clients, this technology means greater capability to determine risk exposure using real-time data and analytics. Additional client benefits include:

- **Accelerated innovation**: Benefit from faster and easier data discovery.
- **Responsiveness and scalability**: Gain actionable insights with real-time streaming analytics to enable informed business decisions.
- **Cloud compliance and security**: Cloud technologies offer an additional layer of robust security infrastructure, supporting the most sensitive data.

This transformation is being completed in phases and ultimately all Experian's BIS data and scores will be available only from the cloud environment.

With any technology transformation, changes are expected. However, Experian® conducted a comprehensive validation of each score to minimize any variations such that the cloud-generated data and score outputs have insignificant differences from the original environment.

To demonstrate that there are insignificant differences and to facilitate a seamless transition from the legacy mainframe environment to the cloud environment, the following provides comparisons of the score and a score validation pre- and post-transition.

Methodology

Overview

To demonstrate that scores are predictive and stable after the platform transition, the scores have been calculated for the same businesses as of the same time period using both platforms. Score migration and score validation analyses were performed to compare those pulled from the legacy system and those pulled via the new cloud system.

Population

A random sample of about seven million businesses was observed. Each business must have a valid score at observation, must not be "bad" at observation and must have some account activity within the performance window.

Observation and performance periods

Each business was scored as of June 2021 with a 12-month performance window ending June 2022.

Bad definition

Severe financial distress is represented as a business having at least 75% of balances that are 90+ days past due within 24 months of observation. Credit risk models were validated on a 12-month score-to-outcome measurement period.

Model history

Financial Stability Risk v2 — machine learned

First launched in 2020, FSRv2-LR score is a machine-learned model designed to predict severe financial duress, at least 75% of balances 90+ days past due within 24 months. The model, developed on almost 6 million records had observation points of April 2017 and April 2019. The model input variables included BizAggs. The score ranges from 300 to 850 with higher scores indicating lower risk. The risk class ranges based on the development sample are outlined below.

Score range	Risk class	Risk description
781–850	1	Low
721–780	2	Low–medium
661–720	3	Medium
601–660	4	Medium–high
300–600	5	High

The model includes two exception scores:
- 998 = a business had a bankruptcy within the prior 24 months
- 999 = insufficient information to calculate a score

Cloud migration results

Score predictiveness

The key predictive metrics of KS, GINI and bad capture rate at 20% closely align for the new cloud-generated scores versus the legacy mainframe scores. In addition, the odds charts are very similar indicating that business strategy and score cutoffs require adjustments.
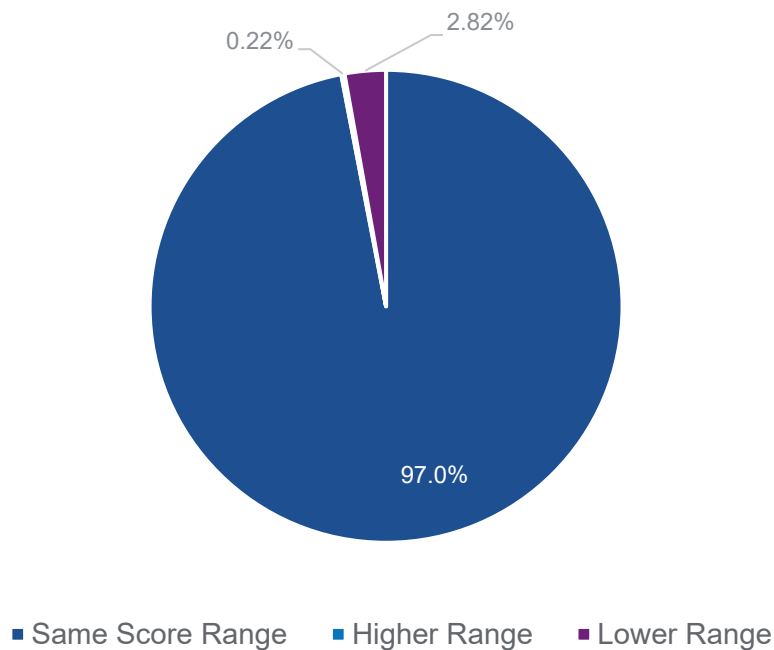

FSRv2 ML	Score range	Cum. bad%	
		Mainframe	**Cloud**
1	796–850	0.05%	0.05%
2	742–795	0.13%	0.12%
3	688–741	0.29%	0.28%
4	634–687	0.47%	0.46%
5	580–633	0.62%	0.61%
6	526–579	0.71%	0.71%
7	472–525	0.81%	0.80%
8	418–471	0.91%	0.90%
9	364–417	0.99%	0.98%
10	300–363	1.02%	1.02%

Score migration

97% of the businesses evaluated remained within the same risk range. Of the 3% of the population that shifted, most shifted to an adjacent range.

FSRv2 ML		Cloud							
		300–600	601–660	661–720	721–780	781–850	998	999	Total
Legacy Mainframe	300–600	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.9%
	601–660	0.2%	19.7%	0.1%	0.0%	0.0%	0.0%	0.0%	20.0%
	661–720	0.0%	1.0%	40.8%	0.1%	0.0%	0.0%	0.0%	41.9%
	721–780	0.0%	0.0%	1.3%	22.6%	0.0%	0.0%	0.0%	23.9%
	781–850	0.0%	0.0%	0.0%	0.4%	5.4%	0.0%	0.0%	5.8%
	998	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%
	999	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.4%
	Total	8.1%	20.7%	42.2%	23.1%	5.4%	0.1%	0.4%	100.0%

Pie chart: 0.22%, 2.82%, 97.0%

■ Same Score Range ■ Higher Range ■ Lower Range

What else you should know

All clients are expected to transition to the cloud by October 2024.

BIS will make every effort to ensure a smooth transition for you and your teams.

Please bookmark the **BIS Technology Transformation** website and check back for periodic updates.

If you have specific questions about this transformation, please contact your account executive or our Customer Support team at the number below.

Customer Support
1 800 520 1221, option 3
8 a.m.–5 p.m. CT
biqsupport@experian.com

Our Technical Support teams will continue to support you throughout this transition. Their numbers are listed below for your reference:

Experian Technical Support — for technical issues during normal business hours:
1 800 854 7201, option 3
tscbissupport@experian.com
7 a.m.–8 p.m. CT, Monday through Saturday
7 a.m.–7 p.m. CT, Sunday

Experian's Global Operations Center — for urgent issues after normal business hours:
1 800 553 4785