EXPLAINER

Here's How Alternative Credit Scoring Can Improve the Poor's Access to Loans

Smartphone data, like geolocation and data usage, can be used by financing companies to evaluate the risk level of an individual without a credit history. Photo credit: ADB.

Through machine learning, data from nontraditional sources, such as telcos, are analyzed for credit risk assessment of the unbanked.

Introduction

Access to credit enables investment in human capital and businesses and has the potential to reduce inequality in society and drive economic growth.

However, commercial banks often have limited appetite to lend money to vulnerable groups, such as the poor, women, and small businesses, because of lack of customer data or history to assess creditworthiness. With limited options, these people often turn to informal channels despite high interest rates and risk of exploitation by unregulated players.

At the 3rd Asia Finance Forum, Mohan Jayaraman, the managing director for innovation and strategy of Experian Asia Pacific, points out that lack of data has historically been an obstacle for banks and financial institutions to extend credit to the unbanked, and thus an impediment to achieving financial inclusion. He highlights the use of alternate data as another way for lenders to conduct credit scoring and tap opportunities at the bottom of the pyramid.

What is alternative credit scoring?

Alternative credit scoring refers to the use of data from digital platforms and applications on consumer behavior for credit risk assessment. In the past, credit bureaus were the sole source of consumer credit information, which lending institutions use to reduce bad debt and market risk. Alternative credit scoring demonstrates the potential strength of combining data from multiple sources, like airtime usage, mobile money usage, geolocation, bills payment history, and social media usage.

Source: Experian.

Telecommunication companies (telcos) and utilities are the most common sources of alternate data. Other sources include travel, payments, e-commerce, government transactions, and asset holdings. By showing an individual's preferences and habits, alternate data can enable an extensive evaluation of the borrower's credit risk profile.

Source: Experian.

How does machine learning analyze alternate data?

Analyzing alternate data through machine learning is different from the static data approach of analyzing traditional credit-related data from a bank. Machine learning has a stronger predictive power for credit scoring. It can accommodate micro segmentations from thousands of segments and determine micro patterns on a frequently updated basis. With more nonstandard data points, machine learning boosts acceptance rates and lowers credit losses.

How does telco data scoring for cash loans work?

Telco data is very useful in predicting the risk level of an individual without a credit history. The large set of data that can be potentially collected from telcos include:

Prepaid or Postpaid Service

Information about SIM activation, tenure of customer alongside other details indicated in the application form, postpaid defaults, credit, churn and payment information, and mobile wallet information.

Data Usage

Data used, revenue generated from data, hourly usage of data, data related value-added services,

applications used, and websites browsed during the day and night.

Geolocation

Mobility from call detail record data, roaming transactions, day and night presence, density of location, prominent location with attributes from census, and publicly available data.

Top-Up History

Top-up information, type, size and frequency of top-up alongside channel of top-up, channel of bill payment, invoiced amount, payment terms, and mode of payment—bank, credit, e-wallet, etc.

Calling/SMS Patterns

Statistics on call duration/count, towers, SMS sent and received, time of day calling, inactivity, and calling consistency.

Demographics

Demographics information recorded at the time of customer filing for SIM card, as well as inferred data.

Machine learning can generate telco scores to pick up micro patterns. For example, raw call detail records can be transformed into behavioral patterns to correlate with risk, ultimately providing lead generations for financing companies. The use of telco data and machine learning can give banks better insight. This can increase their sales by 15% through improved credit approval rates, reduce bad debt by 5% through better exposure management, and minimize processing time by 80% through automated decisions.

What are the building blocks of alternate data?

Multiple components are needed to bring alternate data models to life. Consumer consent and collaboration-based models will be the de-facto standard in the new world.

Financing companies that want to reach the “no formal credit” consumers should make faster, more reliable decisions with deeper insight and data points. It is estimated that formal credit scoring models generally use about eight to 10 variables. Meanwhile, alternative data credit scoring has the capacity to use more than 500 data points.

The building blocks of alternate data include:

Data

New data in structured and unstructured form constantly evaluated.

Analytic Techniques

Advanced analytics and machine learning combined with a wide range of accessible data can aid with problem solving as well as improving products, services, and customer insights.

Platforms

Many businesses are putting huge investments on machine learning and advanced analytics. However, many are still struggling to transform results into insights. Platform capabilities are needed to build, manage, and deploy the combination of real-time and batch data capabilities.

Collaborative business models

Partnerships with telcos, utility companies, social media and more can expand the data set.

What is the future of alternate data?

The use of alternate data continues to rise with the explosion of digital interfaces or digital interface points with consumers. Another driving factor is the significant cost reduction of computing power and data storage.

Roughly only about one billion out of 4.6 billion people in Asia have access to formal credit. With the high market penetration of mobile phones and the accelerating growth of e-wallets, the sharing of financial information through open banking provides an opportunity for the digital footprints of more than three billion people without credit history to be tracked.

Resources

ADB Knowledge Events. Alternative Credit Scoring.

ADB Knowledge Events. 3rd Asia Finance Forum: The Future of Inclusive Finance.

Asian Development Bank (ADB). 2017. *Accelerating Financial Inclusion in South-East Asia with Digital Finance.* Manila.

Mohan Jayaraman
Managing Director, Innovation and Strategy, Experian Asia Pacific.

With over 20 years of experience in banking, Mohan is in-charge of driving greater collaboration across Experian's X-Labs, Product, Consultant and Analytics businesses. He also manages Experian Japan's Decision Analytics and Business Information business. Prior to joining Experian, Mohan was with ICICI Bank, where he held a number of senior management roles.

Allison Howells
Head of Product Development Team, Innovation Hub, Experian Asia Pacific

Allison Howells leads new product development for Experian’s Innovation lab for APAC, with a focus on using alternate data to increase financial inclusion within the region. Allison has been a leader in forming technology and data strategies, and has a passion for understanding how digital technology and data capture can enhance customer experience.

Last updated: April 2020