

ALTERNATIVE DATA FOR CREDIT SCORING



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ACKNOWLEDGMENTS

This special report is a product of the SME Finance Working Group (SMEFWG) and its members.

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We would like to thank AFI member institutions, partners and donors for generously contributing to the development of this publication.

INTRODUCTION

The importance of micro, small and medium enterprises (MSMEs) in the global economy is multifaceted, encompassing their role in employment generation, innovation, economic growth, poverty reduction, and regional development.

The need to support and foster the growth of MSMEs is key to sustainable and inclusive economic development. Access to finance is often cited as a significant impediment for MSMEs, hindering growth and development.

41%

It is estimated that 41 percent of MSMEs in developing countries have unmet financing needs.¹ This gap represents about 23 percent of the total financing needs of women-owned/led MSMEs globally. This is a significant gap, considering that women-owned/led MSMEs represent a major portion of businesses in developing countries.

¹ SME Finance Forum. N.d. MSME Finance Gap. Washington D.C. International Finance Corporation (IFC). Available at: <https://www.smefinanceforum.org/data-sites/msme-finance-gap#field-data-sites-tabs-tab-4>

Key challenges of MSME access to finance include a lack of credit history, making it difficult for financial institutions to assess their creditworthiness.

In most jurisdictions, financial institutions rely on credit reporting systems to make informed decisions when evaluating loan applications, extending credit or determining interest rates. Essentially, credit reporting systems collect, compile and maintain information about individuals' and businesses' credit and financial histories.

Credit scoring is a risk management tool used by lenders to effectively manage, understand, and model the credit risk they face. This is achieved by analyzing historical customer information such as default behavior, repayment patterns, income, and date of birth. However, some traditional credit scoring models might inadvertently disadvantage women. For example, if a credit scoring model primarily relies on individual credit history and women are more likely to have gaps or limited access to credit due to societal factors (e.g. gender-based income disparities, caregiving responsibilities), they may score lower than men, even if their business is equally or more profitable. There are two main approaches to assessing credit risk: the judgmental approach and the statistical approach. The judgmental approach involves a qualitative or subjective evaluation based on the five Cs: character, capital, collateral, capacity, and condition. With the emergence of statistical classification in the 1980s, banks began to favor the data-based statistical approach, which uses statistical analysis of historical data to identify the optimal multivariate relationship between a customer's characteristics and their likelihood

BOX 1. KEY COMPONENTS OF A CREDIT REPORTING SYSTEM

CREDIT BUREAU OR CREDIT REPORTING AGENCY - Entities responsible for collecting and maintaining credit information on individuals or businesses from various sources. The data is compiled into a comprehensive credit report that provides an overview of individuals' or business' credit history.

CREDIT REPORTS - Detailed records of an individual's or business's credit history which include information on current and past credit accounts, payment history, outstanding balances, credit limits, and any defaults or late payments. Credit reports are used by lenders to assess the creditworthiness of potential borrowers.

CREDIT SCORES - Credit scores are numerical representations of creditworthiness derived from the credit information collected on the individual or business. These scores help lenders quickly assess the risk associated with lending to a particular borrower.

of being a good or bad credit risk.² The regulation of credit reporting and scoring practices can vary significantly across jurisdictions. Regulatory frameworks are typically determined by national or regional authorities, and the rules and guidelines may differ based on legal, cultural, and economic factors.

The Policy Model for MSME Finance³ published by AFI in 2021, identifies six pillars that highlight the minimum policy guidance for developing an MSME Finance Policy. Notably, Pillar 3 addresses Credit Infrastructure which lists as a guiding principle that policy guidance must be provided on alternative credit scoring. The document recommends the “adoption and use of alternative data sources for credit assessments and scoring for MSMEs, especially in their use of digital payments and platforms (the data points may include, utility payments, e-commerce purchases, social media, and psychometric information).”

This AFI special report aims to provide an overview of alternative credit scoring, encompassing its benefits and challenges, and an outline of datasets used. It will provide an analysis of 32 AFI member countries, gathered from a survey with respect to credit reporting and scoring practices. It shall consider policy considerations, including data protection, from the perspective of the 32 member countries.

RESEARCH METHODOLOGY

This report was compiled through different primary and secondary sources namely, desk-based research, a survey conducted across 32 member jurisdictions between August and October 2023, and insights gathered from discussions during the AFI Virtual Member training on Alternative Credit Scoring for MSME Credit Worthiness held in November 2023.

² Baesens, B. Roesch, D. Scheule, H. 2016. Credit Risk Analytics: Measurement Techniques, Applications, and Examples in SAS. New Jersey. John Wiley & Sons. Available at: <https://www.wiley.com/en-fr/Credit+Risk+Analytics%3A+Measurement+Techniques%2C+Applications%2C+and+Examples+in+SAS-p-9781119143987>

³ SME Finance Working Group. 2021. Policy Model for MSME Finance. September 2021. Kuala Lumpur. Alliance for Financial Inclusion (AFI). Available at: https://www.afi-global.org/wp-content/uploads/2021/09/MSME-finance_PM_2022.pdf

1. THE REGULATORY FRAMEWORK FOR CREDIT REPORTING

1.1 INTERNATIONAL BEST PRACTICE

Credit reporting infrastructures play a critical role in the functioning of the lending industry. Its potential impact on domestic and global financial stability is significant. Furthermore, the interconnectedness of the financial sector underscores the importance of effectively managing risks within credit reporting systems. The providers of such services face various risks including operational, cyber, reputation, model⁴, regulatory, and compliance risks. Moreover, the rising adoption of innovative technologies and alternative data sources presents additional inherent risk. Accordingly, effective supervision and regulation seek to effectively manage such risks.

The World Bank recommends that a legal and ethical framework is required to govern and provide specific guidance to credit services providers which would promote appropriate oversight and responsible use of credit scoring, whilst considering the protection of consumer rights and data protection.⁵ The General Principles on Credit Reporting (GPCR)⁶ provides guidance on the regulation and supervision of credit reporting infrastructures and sets out five key principles. The principles are aimed at ensuring that credit reporting systems “...effectively support the sound and fair extension of credit in an economy as the foundation for robust and competitive credit markets.”

⁴ Per the corporate finance institute, a model is “a quantitative system of mathematical representation that processes input data to derive quantitative estimates”. Model risk arises should the model have fundamental inaccuracies that produce erroneous results or through inaccurate or inappropriate use of the model. In the context of the credit bureau, this refers to the algorithm that is used to derive the credit score (Corporate Finance Institute. N.d. Model Risk. Available at: <https://corporatefinanceinstitute.com/resources/financial-modeling/model-risk/#:-:text=Model%20risk%20is%20the%20potential,implementation%2C%20or%20use%20of%20models>)

⁵ The World Bank Group. 2019. Credit Scoring Approaches Guidelines. Washington D.C. World Bank Group. Available at: <https://pubdocs.worldbank.org/en/935891585869698451/CREDIT-SCORING-APPROACHES-GUIDELINES-FINAL-WEB.pdf>

⁶ International Bank for Reconstruction and Development. 2022. Key Principles for Effective Regulation and Supervision of Credit Reporting Service Providers. Washington D.C. The World Bank. Available at: https://documents1.worldbank.org/curated/en/099915010282240277/pdf/P166475009f6f302e083e503257ba9fc_d72.pdf

BOX 2. GENERAL PRINCIPLES ON CREDIT REPORTING

Source: International Bank for Reconstruction and Development. 2022. Key Principles for Effective Regulation and Supervision of Credit Reporting Service Providers. Washington D.C. The World Bank. Available at: <https://documents1.worldbank.org/curated/en/099915010282240277/pdf/P166475009f6f302e083e503257ba9fcd72.pdf>



GENERAL PRINCIPLE 1

DATA

Credit reporting systems should have relevant, accurate, timely, and sufficient data, including positive data, collected on a systematic basis from all reliable, appropriate, and available sources and should retain this information for a sufficient amount of time.



GENERAL PRINCIPLE 2

DATA PROCESSING: SECURITY AND EFFICIENCY

Credit reporting systems should have rigorous standards of security and reliability and should be efficient.



GENERAL PRINCIPLE 3

GOVERNANCE AND RISK MANAGEMENT

The governance arrangements of credit reporting service providers and data providers should ensure accountability, transparency, and effectiveness in managing the risks associated with the business and provide users with fair access to the information.



GENERAL PRINCIPLE 4

LEGAL AND REGULATORY ENVIRONMENT

The overall legal and regulatory framework for credit reporting should be clear, predictable, non-discriminatory, proportionate, and supportive of data subject and consumer rights. The legal and regulatory framework should include effective judicial or extrajudicial dispute resolution mechanisms.



GENERAL PRINCIPLE 5

CROSS-BORDER DATA FLOWS

Cross-border credit data transfers should be facilitated where appropriate, provided adequate requirements are in place.

BOX 2. GENERAL PRINCIPLES ON CREDIT REPORTING

ROLES OF KEY PLAYERS

ROLE A:

Data providers should report accurate, timely and complete data to credit reporting service providers on an equitable basis.

ROLE B:

Other data sources, in particular public records agencies, should facilitate access to their databases to credit reporting service providers.

ROLE C:

Credit reporting service providers should ensure that data processing is secure and should provide high quality and efficient services. All users having either a lending function or a supervisory role should be able to access these services under equitable conditions.

ROLE D:

Users should make proper use of the information available from credit reporting service providers.

ROLE E:

Data subjects should provide truthful and accurate information to data providers and other data sources.

ROLE F:

Authorities should promote a credit reporting system that is efficient and effective in satisfying the needs of the various participants and supportive of data subject/consumer rights and of the development of a fair and competitive credit market.



RECOMMENDATIONS FOR EFFECTIVE OVERSIGHT

RECOMMENDATION A:

Credit reporting systems should be subject to appropriate and effective regulation and oversight by a central bank, a financial supervisor, or other relevant authorities. It is important that one or more authorities exercise the function as primary overseer.

RECOMMENDATION B:

Central banks, financial supervisors, and other relevant authorities should have the powers and resources needed to effectively carry out their responsibilities in regulating and overseeing credit reporting systems.

RECOMMENDATION C:

Central banks, financial supervisors, and other relevant authorities should clearly define and disclose their regulatory and oversight objectives, roles, and major regulations and policies with respect to credit reporting systems.

RECOMMENDATION D:

Central banks, financial supervisors, and other relevant authorities should adopt, where relevant, the General Principles for credit reporting systems and related roles and apply them consistently.

RECOMMENDATION E:

Central banks, financial supervisors, and other relevant authorities, both domestic and international, should cooperate with each other, as appropriate, to promote the safety and efficiency of credit reporting systems.

1.2 REGULATORY APPROACHES IN SURVEYED JURISDICTIONS

The regulation and supervision of credit reporting infrastructures differ across jurisdictions. From the survey, most jurisdictions regulate credit reporting through one central authority. Thirty of the 32 jurisdictions surveyed reported that credit reporting bureaus are regulated whereby regulation is done primarily by the central bank, with notable exceptions being Philippines, where it is regulated by the Securities and Exchange Commission and Nepal, where it is regulated by the Ministry of Finance.

TABLE 1. REGULATORS OF CREDIT BUREAUS

COUNTRY	INSTITUTION RESPONSIBLE FOR THE REGULATION OF CREDIT BUREAUS
Afghanistan	Da Afghanistan Bank
Angola	Banco Nacional de Angola
Armenia	Central Bank of Armenia
Bangladesh	Bangladesh Bank
Burundi	Banque de la République du Burundi
Dominican Republic	Superintendency of Banks of the Dominican Republic
Ecuador	Superintendencia de Bancos
Egypt	Central Bank of Egypt
El Salvador	Banco Central de Reserva
Fiji	Reserve Bank of Fiji
Ghana	Bank of Ghana
Haïti	Banque de la République d'Haiti
Honduras	Comision Nacional de Bancos y Seguros
Jordan	Central Bank of Jordan
Kenya	Central Bank of Kenya
Liberia	Central Bank of Liberia
Maldives	Maldives Monetary Authority
México	Comisión Nacional Bancaria y de Valores
Mongolia	Financial Regulatory Commission
Mozambique	Banco de Moçambique
Nepal	Ministry of Finance
Palestinian Authority	Palestine Monetary Authority
Philippines	Securities and Exchange Commission
Rwanda	National Bank of Rwanda
Senegal	Central Bank of West African States (BCEAO)
Seychelles	Central Bank of Seychelles
Tajikistan	National Bank of Tajikistan
The Gambia	Central Bank of The Gambia
Zambia	Bank of Zambia
Uzbekistan	The Central Bank of Uzbekistan

Source: Survey on Alternative Data for Credit Scoring

The regulatory framework differs based on whether the credit bureau is privately owned and operated or managed by a public entity. Jurisdictions surveyed showed no preference to one or the other, with 50 percent of jurisdictions claiming to have a credit bureau managed by a public sector entity. Moreover, 19 respondents reported that credit bureaus are managed by the private sector, representing 59 percent of respondents. Eight respondents⁷ reported more than one bureau in operation, operated by both the public and private sector. In these jurisdictions, there is more than one bureau in operation. Most

jurisdictions have one credit bureau, with the largest count being four bureaus.

Nevertheless, from the pool of jurisdictions, alternative data is not widely governed, both from the perspective of credit bureaus creating ratings from the data and from the financial institutions which would make use of alternative data in credit assessments. Only five jurisdictions surveyed reported the existence of a framework which governs the use of alternative data for credit scoring by credit reporting bureaus. Nevertheless, it was found that 12 reported that alternative credit scoring is permissible to complement traditional credit assessment.

⁷ Armenia, Ecuador, El Salvadore, Jordan, Kenya, Phillipines, Tajjiskistan and Uzbekistan.



COUNTRY OVERVIEW: SEYCHELLES

Since 2012, the Central Bank of Seychelles (CBS) managed the Credit Information System (CIS), established under the Central Bank of Seychelles (Credit Information System) Regulations, 2012, enacted through sections 32A and 50 of the CBS Act, 2004. As part of its ongoing commitment to strengthening the financial infrastructure of the nation, CBS has recently undertaken a comprehensive review of its credit reporting framework. This has culminated in the launch of the Seychelles Credit Information System (SCIS) on 11 September 2024, which is governed by the Credit Reporting Act, 2023 (CRA).⁸

The CRA provides for the establishment, operation, regulation and oversight of the SCIS, ushering a new era for credit reporting in Seychelles. The Act emphasizes the protection of personal data, clearly defining the roles and responsibilities of data providers, data users, and data subjects. Most importantly, it expands the scope of data to be included, allowing the system to incorporate alternative data from non-traditional sources which constitute an arrangement or means by which a debt is incurred by a data subject. These

include entities such as insurance companies, telecommunications, utility companies, hire purchase and credit sales organizations, the tax authority, judiciary, government and private enterprises. By factoring in data from these diverse sources, the SCIS presents a more comprehensive view of the creditworthiness of individuals and businesses alike.

The SCIS represents a significant upgrade from its predecessor, the CIS, with enhanced automation and minimal manual intervention, which helps reduce the risk of inaccuracies in credit reporting. The SCIS seeks to improve the accuracy and depth of credit information exchanged between participating institutions. The current participants of the SCIS include the commercial banks, Credit Union, Development Bank, and the Housing Finance Company (HFC). The SCIS will continue to expand with the addition of other participants through a phased approach, to include other entities as provided for by the CRA.

The Central Bank of Seychelles continues to serve as the operator of the SCIS, ensuring the smooth technical and operational functioning of the system. In its supervisory role, CBS is also responsible for the regulatory oversight of the SCIS, making certain that all processes align with the requirements of the CRA and that the integrity and security of credit data are upheld.

⁸ Central Bank of Seychelles. 2024. CBS launches new credit information system (SCIS) in accordance with the Credit Reporting Act, 2023. 11 September. Victoria. Central Bank of Seychelles. Available at: [https://www.cbs.sc/Downloads/Pressrelease/CBS%20launches%20new%20credit%20information%20system%20\(S%20CIS\)%20in%20accordance%20with%20the%20Credit%20Reporting%20Act,%202023.pdf](https://www.cbs.sc/Downloads/Pressrelease/CBS%20launches%20new%20credit%20information%20system%20(S%20CIS)%20in%20accordance%20with%20the%20Credit%20Reporting%20Act,%202023.pdf)



COUNTRY OVERVIEW: ARMENIA

Armenia has two major credit bureaus: the Central Bank of Armenia's Credit Registry and the Armenian Credit Reporting Agency (ACRA).

The Credit Registry is operated by the Central Bank of Armenia and is an information system that collects and stores information about borrowers and loans provided to them. Information collected in the Credit Registry forms a credit history for each borrower. The Credit Registry information is used by the Central Bank exclusively for monitoring and analytical purposes. Banks and credit organizations provide information to the Credit Registry upon registration and licensing, in accordance with the procedure established by the Central Bank. The Credit Registry does not provide borrowers with information about their credit obligations.

ACRA Credit Reporting is licensed by the Central Bank of Armenia. Members of ACRA who provide credit information concerning data subjects include all financial and non-financial institutions that issue loans, perform credit sales, provide telecommunication services, utilities, as well as state institutions which provide data from public databases, as defined by the Government of the Republic of Armenia. The entity uses the FICO score, allowing lenders to understand consumers' credit risk. The score is calculated on the basis of 30 percent of amounts owed, 10 percent of new credit, 15 percent of length of credit history, 35 percent of payment history and 10 percent of credit mix.⁹

⁹ ACRA Credit Reporting. 2017. FICO Score. Yerevan. ACRA Credit Reporting. Available at: <https://acra.am/%d5%bd%d6%84%d5%b8%d6%80/?lang=en>



COUNTRY OVERVIEW: ECUADOR

Ecuador's credit reporting system is regulated by the Superintendencia de Bancos (Superintendency of Banks). The operation and regulation of credit bureaus is governed by a legislative framework. Two private sector managed bureaus operate in Ecuador, namely Equifax and DataCrédito.

In Ecuador, the ability to pay is evaluated considering the credit report; however, there are entities that assume the risk by granting a loan with the demonstration, for example, of job stability, payment invoices for basic services, and income from leasing. These entities include both financial institutions and FinTech companies that leverage non-traditional data sources to evaluate the creditworthiness of individuals and businesses.

2. DATASETS IN ALTERNATIVE DATA

Credit scores are derived from various factors relating to credit history using algorithms that may vary across credit scoring models. Traditionally, credit data including such data as credit amount, credit type, credit maturity, guarantees, and historical payment performance data has been used.

Over time, the data used has expanded to include other types which we refer to as alternative data.

Alternative data refers to non-traditional information or unconventional data sources that are not typically used in traditional credit scoring models. These data types provide additional insights into creditworthiness beyond the information found in credit reports from major credit bureaus. For women-owned/led MSMEs that have traditionally been underserved by formal financial systems, these new models can potentially improve their access to credit. For example, platforms like PayPal and Kiva use alternative credit data to evaluate borrowers. Examples of alternative data can be diverse and include the following:

TABLE 2. TYPES OF ALTERNATIVE DATA

DATA TYPOLOGIES IN CREDIT SCORING

Cash-flow data	Cash-flow sources, which include sources of cash-flow data included transaction account data from banks, business accounting software, payments processors, and e-commerce platforms, as well as copies of pay stubs, invoices, bill statements and similar materials provided by applicants can be used to extract relevant financial indicators related to income, expenses, balances, and activity levels. Cash-flow data can be used to assess the business’s historical and projected performance. The data includes incoming revenue, receivables, expenditures, and business obligations, average monthly revenue, and transaction volume. ¹⁰
Bill payments	Regular and timely payments of bills which include: <ul style="list-style-type: none"> ✓ utility bills (electricity, water, gas) ✓ telecommunication bills (internet and telephone) can indicate responsible financial behavior and may be used to assess creditworthiness.
Rental data	Information about rental payments can showcase ability to manage monthly obligations, thus reflecting creditworthiness.
Public records on employment	Consistent employment history and higher income levels may positively influence credit scores.
Public records on legal proceedings and disputes	Public records related to legal proceedings can have a significant impact on credit scoring, as they provide insight into financial behavior and responsibility, and legal obligations and liabilities. For example, filing for bankruptcy will lower a person’s credit score as it is an indication of financial distress and increased credit risk. Foreclosure proceedings on a property indicate that the individual was unable to meet their mortgage obligations. Divorce proceedings will involve related issues such as spousal support and division of property.

¹⁰ FinRegLab. 2020. The Use of Cash-Flow Data in Underwriting Credit: Market Context & Policy Analysis. February 2020. Washington D.C. FinRegLab. Available at: https://finreglab.org/wp-content/uploads/2023/12/FinRegLab_2020-03-03_Research-Report_The-Use-of-Cash-Flow-Data-in-Underwriting-Credit_Market-Context-and-Policy-Analysis.pdf

Public records on traffic violations	While traffic violations may not impact the credit score directly, unpaid fines could lead to a court judgement or could be sent to a collection agency which, if reported to a credit bureau, could negatively impact a persons' credit score.
Public records on delinquency	Public records on delinquency typically refer to legal documents or filings related to an individual's failure to fulfill financial obligations, particularly debts. This can have a negative impact on credit scores.
Court judgments	If a court has issued a judgment against an individual for unpaid debts, it can also appear on their credit report. Judgments indicate that a creditor has taken legal action to collect a debt, which can reflect poorly on the individual's creditworthiness. Like bankruptcies, judgments can have a negative impact on credit scores.
Behavioral data/ psychometric data	Behavioral or psychometric data refers to information about an individual's behavior, personality traits, preferences, and other non-financial attributes which can provide insight into an individual's risk profile and financial behavior.
Social media data	Analysis of social media activity or online presence can provide supplementary information on lifestyle and financial habits.
Data from mobile phone applications	Mobile applications may collect data, such as transport movements, geolocation, and transactional data and can be used to assess the behavioral patterns of mobile users.
Insurance data	A history of maintaining consistent insurance coverage may indicate financial responsibility and risk management skills. Timely payment of insurance premiums would be considered a positive credit behavior.
Tax payments	Unpaid tax liens can also be reported in public records and included on credit reports. Tax liens indicate that a government agency has a claim against an individual's property due to unpaid taxes.
Public records on immigration status	Public records on immigration status generally do not have a direct impact on an individual's credit score. Nevertheless, the broader socioeconomic factors may impact an individual's creditworthiness such as a lack of credit history, or documentation.

It is to be noted that the list is not exhaustive and that additional typologies may be used as credit bureaus attempt to develop more comprehensive and predictive credit scoring models.

The effectiveness of some of these alternative datasets has been assessed. For example, it has been found that a credit scoring model that contains "email usage and psychometric variables, as well as demographic variables, can give greater predictive accuracy than a model that uses demographic data only and that the predictive accuracy is sufficiently high for the demographic and email data to be used when

conventional credit history data is unavailable"¹¹. Research excluding alternative data such as an applicant's social network default status, regional economic ratings, and local population characteristics shows a reduction in model performance highlighting the potential of alternative data to enhance model accuracy and decision-making .¹²

¹¹ Djeundje, V. B., Crook, J., Calabrese, R., Hamid, M. 2021. Enhancing credit scoring with alternative data. *Expert Systems with Applications* Volume 163, 2021, 113766, ISSN 0957-4174. New York. Pergamon Press. Available at: <https://doi.org/10.1016/j.eswa.2020.113766>

¹² Hlongwane, R., Ramaboa, KKKM. Mongwe, W. 2024. Enhancing credit scoring accuracy with a comprehensive evaluation of alternative data. *PLOS ONE* 19(5): e0303566. San Francisco. Public Library of Science (PLoS). Available at: <https://doi.org/10.1371/journal.pone.0303566>

2.1 DATASETS USED BY SURVEYED JURISDICTIONS

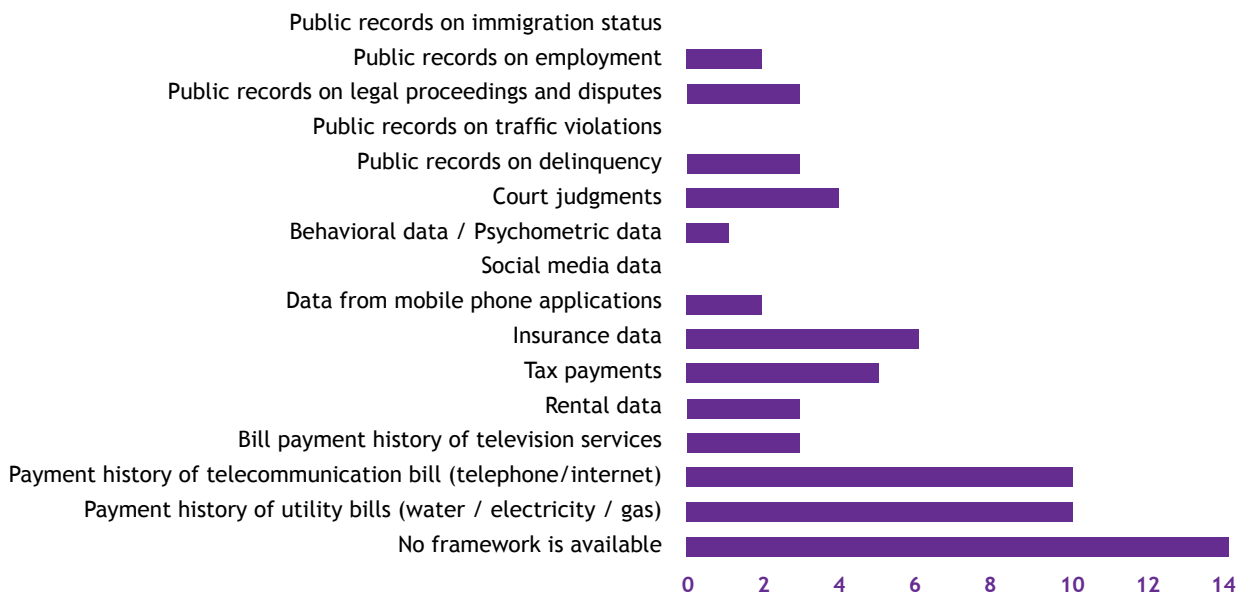
Different jurisdictions adopt different data typologies for credit scoring to align with the specificities of the jurisdiction with the ultimate intention of enhancing accuracy, fairness and a predictive model. Legal, economic, technological and cultural factors would ultimately contribute towards the decision process when adopting datasets. These are discussed further in Chapter 5.

Jurisdictions surveyed were provided with selected data typologies and were asked to clarify which data sets are permitted by their respective credit scoring frameworks.

It was found that the most popular use of alternative data, with 10 respondents each, was payments of utility bills inclusive of water, electricity, and gas, as well as telecommunication bills, inclusive of telephone and internet. Insurance data was the second most popular dataset with six jurisdictions, followed by tax payments with five jurisdictions. Less popular sources included bill payment history for television services, rental data from mobile phone applications, public records on delinquency, public records on legal proceedings and disputes, and public records on employment. Only one jurisdiction reported the use of behavioral or psychometric data.

No jurisdiction reported the use of public records on traffic violations, immigration status or social media data.

FIGURE 1. ALTERNATIVE DATA PERMITTED FOR CREDIT SCORING



COUNTRY OVERVIEW: MEXICO

Three private credit bureaus operate in Mexico. They are regulated by the National Banking and Securities Commission (CNBV) to ensure compliance with regulations governing credit reporting practices. The Federal Law for the Protection of Personal Data in Possession of Individuals (LFPDPPP) sets guidelines for data reporting, consumer rights, data privacy, and dispute resolution procedures to protect the interests of consumers and promote transparency in credit reporting. Buro de Crédito is one of the largest credit bureaus in Mexico. It collects credit information from various financial institutions, including banks, non-bank lenders, retailers, and telecommunications companies.



COUNTRY OVERVIEW: ANGOLA

Licensed by the Data Protection Agency (APD) in February 2022, the Central Privada de Informacao de Credito SA is the first and only private credit information center in Angola. The intention of the credit bureau is to support access to finance with a focus on the underserved segment of society who have no formal access to credit facilities. Data providers to the bureau include banks; telecommunications companies; insurance companies; energy suppliers; water distributors, and various retail companies. Notaries and land registries are providers but not subscribers, meaning that they cannot access the data. In addition to information submitted by companies, the Bureau will also use public data about companies and individuals. Each consumer is assigned a credit score based on a series of criteria that vary depending on the payment of bills, loans, and debts in general.



COUNTRY OVERVIEW: MALDIVES

The Credit Information Bureau is located within the Maldives Monetary Authority (MMA). The Bureau is established under the Maldives Banking Act and governed by the Credit Information Regulation 2022/R120¹³ issued under the Act. It is mandatory that banks and financing companies licensed by the MMA participate in the system. Other entities who wish to participate may apply to the MMA. This includes insurance companies licensed by the MMA that provide credit, companies that provide telecommunications services on credit, companies that provide utility services on credit, government ministries and authorities, and councils that provide credit to the public or part of the public, entities that sell land or apartments or buildings on a credit basis, and individuals that legally provide goods and services to the public on credit. Information on checks dishonored is also provided. The dataset provided is vast but limited to credit information. At present, a credit score is not provided by the credit bureau.

¹³ Maldives Monetary Authority. 2022. Credit Information System Regulation. Regulation number: 2022/R-120. 25 July 2022. Male. Maldives Monetary Authority (MMA). Available at: [https://cib.gov.mv/assets/files/Credit-Information-System-Regulation-\(english\).pdf](https://cib.gov.mv/assets/files/Credit-Information-System-Regulation-(english).pdf)



COUNTRY OVERVIEW: GHANA

The Credit Reporting Act, 2007 (Act 726) provides the framework for credit reporting in Ghana. The act provides the legal basis for the establishment, operation, and regulation of credit bureaus in Ghana and outlines the responsibilities of credit bureaus, financial institutions, and other stakeholders in the credit reporting ecosystem. The Bank of Ghana (BoG) is the primary regulator overseeing the credit reporting system. The Act compels all financial institutions licensed by BoG to submit credit data and obtain credit reports from licensed credit bureaus before approval or refusal of credit facilities to prospective borrowers. Ghana has licensed two credit bureaus to operate under the Credit Reporting Act, namely XDS Data Ghana Limited and Dun & Bradstreet Credit Bureau Limited.

In 2021,¹⁴ the Bank of Ghana issued a notice requiring alternative data to be submitted to credit bureaus. Telecommunication companies, utility companies, retailers, mobile money operators, FinTech companies, government institutions that offer credit to MSMEs, institutions that provide identification documents, entities that supply goods and services on a postpaid or instalment basis, student loan schemes provided by private or government agencies, and other entities that have relevant data and information that comply with permissible purposes of credit bureau are required by law to submit data.

In 2022, Ghana recorded a total of 22 institutions and companies designated as data providers and authorized users of the credit reporting system.¹⁵ In 2022, BoG, in collaboration with the credit bureaus, initiated discussions on the processes leading to the introduction of credit scoring to complement credit reports provided by credit bureaus. This development follows the introduction of the Ghana Card, which presents a unique identifier for credit information subjects.

¹⁴ Bank of Ghana. 2021. Notice To The General Public: Requirement to Participate in the Credit Reporting System Notice No. BG/GOV/SEC/2021/13. Accra. Bank of Ghana. Available at: <https://www.bog.gov.gh/wp-content/uploads/2021/08/BOG-Notice-No.-BG-GOV-SEC-2021-13-Requirement-to-Participate-in-the-Credit-Reporting-System.pdf>

¹⁵ Financial Stability Department. 2022. Credit Reporting Activity Annual Report 2022. Accra. Bank of Ghana. Available at: <https://www.bog.gov.gh/wp-content/uploads/2023/10/Credit-Reporting-Activity-Report-2022.pdf>

The table below provides an overview of the types of data used in jurisdictions where alternative data is utilized for credit scoring.¹⁶

TABLE 3. TYPES OF ALTERNATIVE DATA USED PER JURISDICTION, SURVEY ON ALTERNATIVE DATA FOR CREDIT SCORING

COUNTRY	PAYMENT HISTORY OF UTILITY BILLS (WATER/ ELECTRICITY / GAS)	PAYMENT HISTORY OF TELECOMMUNICATIONS BILL (TELEPHONE/ INTERNET)	BILL PAYMENT HISTORY OF TELEVISION SERVICES	RENTAL DATA	TAX PAYMENTS	INSURANCE DATA	DATA FROM MOBILE PHONE APPLICATIONS
Angola							
Ecuador							
Egypt ⁷							
Fiji							
Ghana							
Haïti							
Kenya							
Maldives							
México							
Mongolia							
Nepal							
Palestinian Authority							
Zambia							

¹⁶ CBE issued regulations regarding Using Alternative Data in Credit Assessment via Behavioural Scoring Models permitted using Financial and non-Financial and social data

3. ALTERNATIVE DATA - BENEFITS, CHALLENGES AND USE CASES

The GPCR¹⁷ recommends that credit reporting service providers are encouraged to collect non-traditional data from alternative sources and where possible, authorities should promote access to alternative data. In the rapidly evolving landscape of data-driven decision-making, the financial industry and other sectors are increasingly turning to alternative data to gain unique insights and competitive advantages. While alternative data can provide advantages, it also raises concerns regarding privacy, data security, and potential biases in scoring models. This section considers the benefits of using alternative data as well as its challenges.

3.1 BENEFITS OF ALTERNATIVE DATA

The inclusion of alternative data within the credit granting framework promotes financial inclusion by enabling or deepening access to finance.

Alternative data allows individuals and businesses with limited or no credit history to be evaluated for creditworthiness. They can establish credit history by making timely payments for utility bills, rent, and other non-credit transactions. This in turn helps build a positive credit profile for consumers who potentially qualify for more traditional credit products in the future, including credit products that they may have been denied using traditional credit scores alone. This is especially beneficial for young adults, immigrants, MSMEs and others who have not yet established a traditional credit history. The potential for an expanded customer base likewise has benefits to the lender who is able to access a larger pool of potential borrowers.

Leveraging additional information can improve efficiency and accuracy in credit risk assessment.

Alternative data can provide a more comprehensive and accurate picture of an individual's financial behavior and repayment capacity. Alternative credit scoring models can be more efficient and automated, allowing lenders to streamline the loan approval process. Women-led MSMEs, particularly in emerging markets, often turn to microfinance institutions (MFIs) for credit. While MFIs may use more holistic or social-based criteria (like group lending models or community trust) to assess creditworthiness, these alternatives can also be influenced by gender-based norms and relationships within local communities. The ability to make faster lending decisions positively contributes to customer experience and is particularly important when facing time-sensitive financial needs. Alternative data can improve granularity of score bands used to compute credit score, helping borrowers in lower score bands to access credit at lower interest rates.¹⁸

Analyzing alternative data can provide valuable, deeper insights into borrower behavior, spending patterns, and repayment habits.

This enables lenders to make more informed credit decisions and mitigate risk more effectively as well as design better risk management strategies. Moreover, by considering alternative data sources, lenders can diversify their risk exposure and reduce reliance on traditional credit metrics, resulting in a more robust and resilient lending portfolio. Overall, this may reduce default rates.

Leveraging additional information promotes competitive lending products in the market.

Alternative data provides insights into consumer preferences and financial habits, allowing lenders to personalize lending decisions and to tailor loan products and terms to meet the needs of individual borrowers. Moreover, the insights would allow them to be more flexible and responsive to changing customer demands and market trends.

¹⁷ International Bank for Reconstruction and Development. 2022. Key Principles for Effective Regulation and Supervision of Credit Reporting Service Providers. Washington D.C. The World Bank. Available at: <https://documents1.worldbank.org/curated/en/099915010282240277/pdf/P166475009f6f302e083e503257ba9fcd72.pdf>

¹⁸ Chopra, S. 2021. Current Regulatory Challenges in Consumer Credit Scoring Using Alternative Data-Driven Methodologies. Vanderbilt Journal of Entertainment and Technology Law 23, no. 3 (2021): 625+. Gale General OneFile. Available at: https://link.gale.com/apps/doc/A665415451/ITOF?u=ull_tt&sid=summon&xid=d7546033

Credit may become more affordable.

Streamlining the credit evaluation process through alternative data can result in cost savings for both lenders and borrowers, as it reduces the need for manual underwriting and associated administrative expenses. For consumers with limited credit history or a borderline credit score, alternative data can provide additional evidence of creditworthiness. This may lead to improved loan terms, such as lower interest rates or higher credit limits, making credit more affordable and accessible.

Overall, alternative data can be a valuable tool for lenders to improve risk assessment, expand their customer base, and enhance the overall lending process. In addition, it helps lenders provide financing more quickly and easily to clients, which attracts a greater number of non-bank clients. It also provides easy and fast channels to support the availability of finance for micro and small enterprises.

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From a financial inclusion perspective, the key benefit of using alternative data for credit scoring is the increased accessibility of formal credit for the unbanked and underserved. In fact, promotion of alternative data is among the strategic initiatives in the Philippines' National Strategy for Financial Inclusion 2022- 2028.



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3.2 CHALLENGES OF ALTERNATIVE DATA

Challenges regarding alternative data are multifaceted. Understanding and overcoming these challenges are both essential for businesses and financial institutions who seek to leverage alternative data effectively while mitigating risks and ensuring the accuracy and dependability of their decision-making processes.

Ensuring reliability of the data inclusive of source trustworthiness, quality control and consistency is imperative.

One of the primary challenges in alternative data is assessing the reliability of the sources. Many alternative data sources are not as established or regulated as traditional sources, which can lead to concerns about the accuracy and credibility of the information they provide. Credit reporting agencies have encountered accuracy issues even with traditional data, indicating similar concerns with the much higher volume of information generated by alternative data collection.¹⁹ It is crucial to conduct due diligence on the source's reputation and data collection methods. Moreover, unlike traditional financial data, alternative data may not have standard collection processes. For example, the core banking system of a financial institution may differ from the system used by a utility company. Ensuring the quality of the data is challenging, as there may be errors, inconsistencies, or biases in the information. Implementing robust quality control measures is essential to filter out unreliable data points. Alternative data sources can be dynamic, changing rapidly over time. This dynamism can lead to challenges in maintaining a consistent level of reliability, especially if the source undergoes significant changes or disruptions. Regularly reassessing and validating the reliability of alternative data is critical.

The ability of lenders and credit reporting bureaus to adapt is crucial given differences in data format and structure, the need to be technologically current, and changing data landscapes.

Alternative data sources may provide information in diverse formats, structures, and units. This lack of standardization poses challenges in integrating and aligning the data with existing systems and analytical

¹⁹ Chopra, S. 2021. Current Regulatory Challenges in Consumer Credit Scoring Using Alternative Data-Driven Methodologies. *Vanderbilt Journal of Entertainment and Technology Law* 23, no. 3 (2021): 625+. Gale General OneFile. Available at: https://link.gale.com/apps/doc/A665415451/ITOF?u=ull_tt&sid=summon&xid=d7546033.

tools. Developing adaptable systems capable of handling diverse data formats is essential. Integrating alternative data into existing technological infrastructure can be complex. Traditional systems may not be designed to handle the volume or variety of data generated by alternative sources. Implementing adaptable technologies, such as advanced analytics and machine learning, is crucial for extracting meaningful insights. Moreover, the landscape of alternative data is constantly evolving, with new sources emerging and existing ones evolving. Staying adaptable to these changes is essential for organizations looking to leverage the latest and most relevant alternative data for decision-making.

Ensuring stability of the data may be a challenge given data source longevity constraints, the volume of the data, and external factors.

Some alternative data sources may lack stability in terms of longevity. They might be startups or experimental projects that could have changed their focus over time or be discontinued. Relying on such sources for critical decision-making without considering their stability can pose risks. As the volume of alternative data increases, scalability becomes a significant challenge. Organizations need to ensure that their systems can handle the growing volumes of data without sacrificing performance. Scalable infrastructure and algorithms are crucial for maintaining stability as data volumes expand. Moreover, alternative data can be influenced by external factors, such as changes in regulations, market dynamics, or geopolitical events. These external influences can introduce volatility and instability into the data, requiring organizations to build models and systems that can adapt to a changing environment.

The challenges of data privacy and ownership in alternative data usage require organizations to adopt a proactive approach to build trust and ensure ethical practices.

Ensuring effective data protection is key. This requires that organizations prioritize obtaining informed consent, comply with stringent data protection regulations, and employ advanced techniques to balance data utility with individual privacy. Most importantly, companies must commit to ethical data use by ensuring compliance to privacy laws.²⁰

²⁰ Lavrinenko, S. 2024. *Understanding Alternative Credit Scoring*. 30 August. Data Forest. Available at: <https://dataforest.ai/blog/understanding-alternative-credit-scoring>

Transparency is critical to ensure effectiveness and accuracy.²¹

Without clear information on data collection, processing, and validation methods, organizations struggle to verify the reliability of alternative data sources, undermining trust in the information. This opacity complicates the identification and mitigation of biases, impedes seamless integration into existing systems, and hampers the interpretability of predictive models. Addressing this transparency deficit involves advocating for clearer disclosure practices from data providers and fostering industry standards to ensure the trustworthy and ethical application of alternative data.

The complexity of algorithms used in credit scoring creates model risk and can make the decision-making process obscure.²²

The complex credit scoring algorithms are used to analyze and process significant volumes of data. The data transformation process of raw data includes complex steps, as does the analysis through the complex models that comprise the algorithm. The complexity of this process makes it highly unlikely that consumers can identify data quality issues in the input data feeding the models. Moreover, alternative credit scoring methodologies are protected trade secrets making it difficult to know whether they conform to industry best practices or have been evaluated and developed through consultation with experts.²³

²¹ Lavrinenko, S. 2024. *Understanding Alternative Credit Scoring*. 30 August. Data Forest. Available at: <https://dataforest.ai/blog/understanding-alternative-credit-scoring>

²² Lavrinenko, S. 2024. *Understanding Alternative Credit Scoring*. 30 August. Data Forest. Available at: <https://dataforest.ai/blog/understanding-alternative-credit-scoring>

²³ Chopra, S. 2021. *Current Regulatory Challenges in Consumer Credit Scoring Using Alternative Data-Driven Methodologies*. *Vanderbilt Journal of Entertainment and Technology Law* 23, no. 3 (2021): 625+. Gale General OneFile. Available at: https://link.gale.com/apps/doc/A665415451/ITOF?u=ull_ttfa&sid=summon&xid=d7546033.

3.3 USE CASES ACROSS SURVEYED JURISDICTIONS



KENYA

The Central Bank of Kenya regulates credit reference bureaus through the Banking (Credit Reference Bureau) Regulations, 2020. As at March 2024, three credit reference bureaus (CRB) have been licensed namely TransUnion, Creditinfo Credit Reference Bureau Kenya Limited, and Metropol Credit Reference Bureau Limited.²⁴

The Regulations permit a credit bureau to source credit information from third parties in order to enhance their databases and to provide a complete and comprehensive credit history of the borrower. Through this arrangement, credit reporting bureaus have been able to broaden their databases with data from third-party credit information providers which include, as at June 2022, 1360 non-deposit-taking savings and credit cooperative organizations (SACCOs), 647 entities engaged in trade, 54 insurance providers, 10 development finance entities, seven self-help groups, three parastatals, one learning institution (Kenyatta University) and one community-based organization.²⁵ Nevertheless, it was found that approved data sources differ across credit bureaus. For example, Transunion makes use of 22 sources while Creditinfo Kenya makes use of 88 sources,²⁶ which include traditional financial institutions.²⁷

Kenya has also seen much success through private sector and government-led initiatives. Most notably, Kenya is home to M-PESA, a mobile money service launched by Safaricom in 2007. M-PESA has significantly increased access to finance in the country by providing a convenient, secure, and affordable way for individuals to send, receive, and store money using their mobile phones. M-PESA has bridged the gap between the unbanked and formal financial services allowing lenders to leverage M-PESA's infrastructure to reach underserved segments of the population and extend credit to small businesses and entrepreneurs. Moreover, M-PESA's microfinance services allow MSMEs and individuals to access finance without the need for collateral or traditional credit history. For example, the M-Shwari loans service permits a customer to access credit from between USD7.52 and USD7518.80 and simply requires that the customer has been an M-PESA subscriber for at least six months prior, saves on M-Shwari, and actively uses other Safaricom services such as voice, data and M-PESA.

The government of Kenya has also shown its commitment to financial inclusion through the introduction of the Hustler fund which provides access to finance or "credit on the go" for personal, micro, small and medium-sized enterprises in Kenya. Available to Kenyans, loans can be accessed through a registered mobile number with a recognized mobile network operator in Kenya namely Airtel, Safaricom or Telkom or through a mobile money account with Airtel Money M-PESA or T-Kash. Loans can be requested through USSD codes or the mobile application, and do not require an existing significant credit profile.

²⁴ Central Bank of Kenya. N.d. Directory of Credit Reference Bureaus. Nairobi. Central Bank of Kenya. Available at: <https://www.centralbank.go.ke/wp-content/uploads/2022/11/Directory-of-Licensed-CRBs-November-2022.pdf>

²⁵ Central Bank of Kenya. 2022. Third-Party Credit Information Providers. Nairobi. Central Bank of Kenya. Available at: <https://www.centralbank.go.ke/wp-content/uploads/2022/07/Approved-Third-Party-Credit-Information-Providers-June-2022.pdf>

²⁶ TransUnion LLC. 2021. CRB- Africa Approved Data Sources. Chicago. TransUnion LLC. Available at: <https://www.transunionafrica.com/content/dam/transunion/roa/consumer/doc/kenya-crb-regulations-2020-approved-data-sources.pdf>

²⁷ Creditinfo Kenya. N.d. CBK Approved Data Sources. Nairobi. Creditinfo Kenya. Available at: <https://ke.creditinfo.com/approved-data-sources/>



EGYPT

One credit bureau operates in Egypt. The Egyptian Credit Bureau (I-Score) is supervised by the Central Bank of Egypt (CBE). Credit reporting by the banking sector and other licensed institutions such as non-banking financial institutions (NBFI) is regulated by the central bank and banking law issued by law no 194 of 2020. The law applies to the CBE, the banking sector, currency and foreign exchange companies, money transfer companies, inquiry and credit rating companies, credit guarantee companies, payment system operators, and payment service providers. Commercial banks and NBFIs in Egypt provide data to the credit bureau. The credit score is derived from credit information for individuals and SMEs from commercial banks and NBFIs in Egypt. The model is still under development to enable it to collect financial and non-financial transactions such as utilities and telecommunications transactions.

CBE permitted banks to depend on alternative data for credit scoring. One such source of data comes from alternative credit scoring through the behavioral-scoring model, which is based on customer behavior, social data, and financial and non-financial transactions. This helps determine the client creditworthiness and the size of loan that can be granted.

CBE has issued regulations permitting the banking sector to use alternative credit scoring when lending to micro and small enterprises (with a sales volume of under 20 million Egyptian pounds or USD410,460) without obtaining financial statements approved by the auditor based on Behavioral scoring model.

Alternative data for credit scoring provides an opportunity to expand access to credit, including for the unbanked, and promotes financial inclusion. It does so by providing banks with a comprehensive overview of the financial consumer that is not limited to traditional data - ensuring greater access to financial services, particularly for MSMEs.



ZAMBIA

Credit reporting agencies in Zambia are regulated by the Bank of Zambia (BoZ) under the Credit Reporting Act, 2018. The Act provides the legal framework for the establishment, licensing, and operation of credit bureaus in Zambia and outlines the responsibilities and powers of credit bureaus and the rights of individuals and businesses in relation to their credit information. Credit Reference Bureau Africa Limited is the sole credit reference bureau licensed by the BoZ.

In Zambia, several financial institutions and FinTech companies have started leveraging alternative data within credit assessments to enhance financial inclusion and reach underserved populations. The Microloan Foundation Zambia was launched in 2008 and is committed to serving the poorest segment of the population with a focus on rural women with low levels of education and literacy.²⁸ The program has a repayment rate of 97 percent. Peer-to-peer support, ongoing training, and mentoring from loan and training officers are provided to aspiring entrepreneurs. The smallest loan is worth USD25 with 90 percent of the women within the network being smallholder farmers. A group lending model is adopted whereby capital is lent to groups of five women who support each other. On average, after four months, the women have repaid their loans and are earning a regular income. They can then apply for another loan to grow their business. In this case, alternative data used is business performance data, community reputation, and peer assessments.

²⁸ Microloan Foundation. N.d. A truly social microfinance model. London. Microloan Foundation. Available at: <https://www.microloanfoundation.org.uk/our-work/our-model/>



BANGLADESH

The Credit Information Bureau of Bangladesh is operated by Bangladesh Bank. The Bureau does not collect alternative data. Nevertheless, Bangladesh's National Financial Inclusion Strategy (NFIS) 2021-26 places significant focus on scaling up digital financial services (DFS) and strengthening the policy governance and regulatory environment. This drive towards innovation is evidenced by increased uptake and enhanced innovation in DFS within the market.

In the ABB Digital Transformation Survey conducted in 2023, 29 percent of banks said they use alternative data partnerships to enhance their credit risk scoring models.²⁹

The use of alternative data is also noted within the nano lending space. In 2021, Bangladesh Bank launched a nano lending product in collaboration with a mobile financial services provider. A global FinTech company used consumer data and behavior patterns to complete the credit scoring process for mobile money users. Financial modelling was utilized to determine customers' creditworthiness. By leveraging predictive analytics and automated processes, the scope of errors in the credit rating process can be minimized. Customers can apply for loans through the mobile financial services providers' app ranging from USD4.56 to USD182.25. The loans are instantly transferred into their mobile money wallets.³⁰

²⁹ Pricewaterhouse Coopers Private Limited and Association of Bankers, Bangladesh Limited. 2023. The next banking evolution in Bangladesh: Driven by digital transformation. May 2023. Pricewaterhouse Coopers Private Limited. Available at: <https://www.pwc.in/assets/pdfs/consulting/financial-services/fintech/publications/the-next-banking-evolution-in-bangladesh.pdf>

³⁰ Pricewaterhouse Coopers Private Limited and Association of Bankers, Bangladesh Limited. 2023. The next banking evolution in Bangladesh: Driven by digital transformation. May 2023. Pricewaterhouse Coopers Private Limited. Available at: <https://www.pwc.in/assets/pdfs/consulting/financial-services/fintech/publications/the-next-banking-evolution-in-bangladesh.pdf>

4. KEY REGULATORY CONSIDERATIONS ACROSS SURVEYED JURISDICTIONS

Enhancing alternative credit scoring requires a robust framework that considers multifaceted implications from a regulatory perspective. As the industry evolves, so does the regulatory framework, which must be accommodative while safeguarding consumer interest. It is critical that a holistic strengthening of the regulatory

framework is undertaken. In that regard, respondents were also asked to clarify whether their jurisdictions were working on any of these supporting areas. The areas of focus are included in the table below alongside a summary of their importance and relevance to credit scoring. The rationale draws upon the Key Principles for Effective Regulation and Supervision of Credit Reporting Service Providers as is deemed relevant.³¹

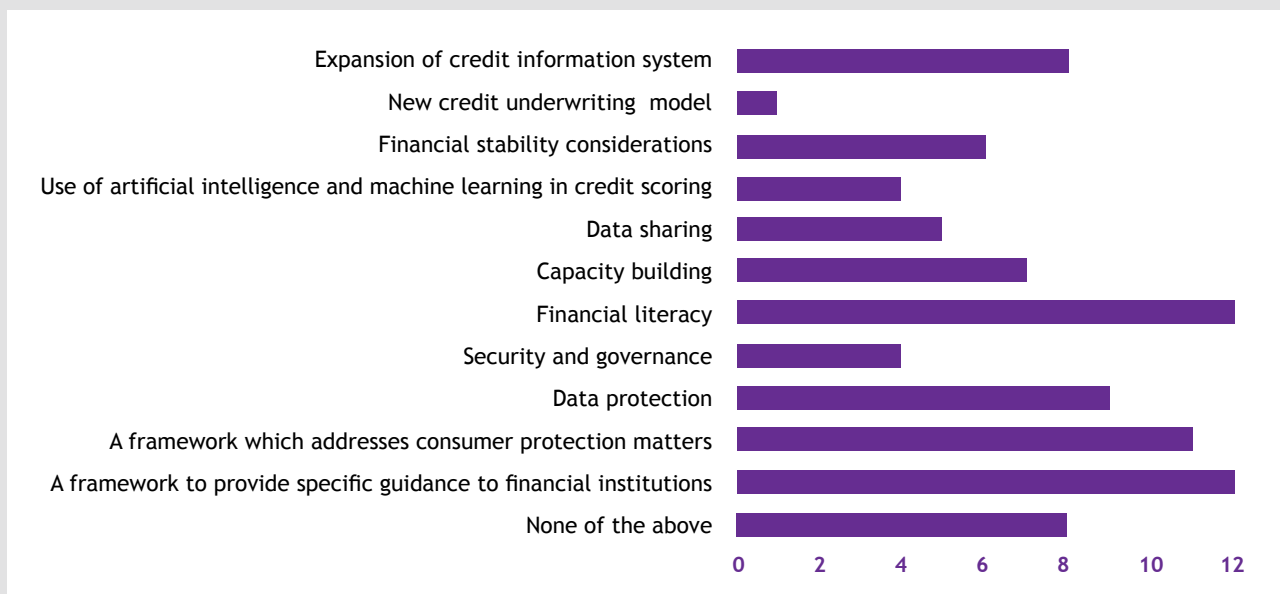
³¹ International Bank for Reconstruction and Development. 2022. Key Principles for Effective Regulation and Supervision of Credit Reporting Service Providers. Washington D.C. The World Bank. Available at: <https://documents1.worldbank.org/curated/en/099915010282240277/pdf/P166475009f6f302e083e503257ba9fcd72.pdf>

AREA OF FOCUS FOR REGULATORS	WHY IS THIS IMPORTANT?
A framework to provide specific guidance to financial institutions	Principle 1 calls for a regulatory framework for credit reporting. Having clear guidance from the regulator provides consistency in practices across financial institutions, allowing institutions to effectively manage risks. It also promotes customer confidence in the financial system.
A framework which addresses consumer protection matters	Financial consumer frameworks promote fair treatment and transparency in credit scoring practices. They also provide redress mechanisms in the case of errors and dispute resolution and prevent abusive and predatory practices. Consent and access rights are integral to these frameworks. This aligns to Principle 12: Consumer Rights.
Data protection	Data protection laws safeguard the collection, processing, storage, and sharing of data to ensure the accuracy, integrity, confidentiality, and security of the data. It enforces accountability and transparency thereby protecting privacy rights. This aligns to Principle 11 on Personal Data.
Security and governance	This aligns with Principle 7: Governance and Principle 9: Data Security. Credit reporting systems should be administered through a governance framework that promotes system efficiency and effectiveness through established policies and procedures, a proper internal control environment, and an appropriate organizational structure with clearly defined duties and responsibilities. Moreover, an appropriate information security framework should govern credit reporting activities to protect the confidentiality, integrity, and availability of information and ensure business continuity and operational resilience.
Financial literacy	As promoted by Principle 6: Access and Transparency, regulatory authorities should promote consumers' financial literacy, enabling them to benefit from credit reporting systems.
Capacity building	Principle 2 addresses the Requirements of the Regulatory Authority. Adequate and qualified human capital is key to allowing the authority to discharge its function.
Data sharing	General Principle 5 on cross-border data flows recommends that cross-border credit data transfers should be facilitated where appropriate, provided adequate requirements are in place.

Use of artificial intelligence and machine learning in credit scoring	The General Principle 1 on data requires that reasonable steps are taken to ensure that data is accurate and valid. Technology is at the core of credit reporting systems and new technologies, such as artificial intelligence, facilitates the processing of data. At the same time, it presents additional risks which regulators must manage.
Financial stability considerations	A sound credit reporting infrastructure contributes to financial stability.
New credit underwriting model	To be able to benefit from the use of alternative data, changes must be incorporated within underwriting models by users. The general principles on credit reporting require that users make use of information available from credit reporting service providers (Role D as set out in Box 2).
Expansion of credit information system	The incorporation of vast quantities of data and the array of data sets that the use of alternative data introduces requires a robust system able to ensure uninterrupted operations. To comply with the Five General Principles on data ³² , operators must ensure that systems are adequate.

As part of the survey, respondents were asked to clarify whether their jurisdictions were working on any of these supporting areas. These are summarized in the graph below.

FIGURE 2. AREAS OF FOCUS WITH REGARD TO ALTERNATIVE DATA



As is evident, most jurisdictions are working on the provision of guidance to financial institutions, financial literacy, consumer protection frameworks, data protection, and expansion of the credit information system. Despite the focus on technology being the future of alternative data, it was noted that only four jurisdictions are working on the use of artificial intelligence and machine learning in credit scoring. Only one jurisdiction is working on a new credit underwriting model.

³² As part of the survey, respondents were asked to clarify whether their jurisdictions were working on any of these supporting areas. These are summarized in the graph below.

4.1 DATA PROTECTION IN CREDIT SCORING

A strong data protection framework is key to supporting a robust credit reporting infrastructure as an increasing amount of data is collected from the public - including personal data - and analyzed. In this regard, part of the survey sought to find out whether jurisdictions have in place regulatory requirements that govern the protection of personal data, including alternative data. It was found that 16 jurisdictions have such a framework in place.



COUNTRY OVERVIEW: PHILIPPINES

Credit reporting bureaus in the Philippines are expected to comply with the Data Privacy Act of 2012 and its Implementing Rules and Regulations.³³ The Act established the National Privacy Commission (NPC) as the primary data protection authority responsible for administering and enforcing the Data Privacy Act, ensuring compliance and complaints handling. The Act sets out data subject rights, granting individuals certain rights over their personal data, including the right to be informed; to access their data; to correct inaccuracies; to object to processing; to erasure or blocking, and the right to damages in cases of unauthorized processing. The Act outlines principles that organizations must adhere to when processing personal data. These include transparency, legitimate purpose and obtaining consent before collecting and processing personal data. Personal information controllers, defined as a person or organization who controls the collection, holding, processing or use of personal data, are required to have security measures in place to protect personal data against unauthorized access, disclosure, alteration, or destruction. When identified, security breaches must be communicated to the NPC and affected data subjects.

The Data Privacy Act regulates cross-border transfers of personal data by requiring organizations to ensure that adequate data protection safeguards are in place when transferring data outside the Philippines. The NPC has the authority to investigate complaints, conduct audits, and impose administrative fines of up to PHP 5 million (USD85,820) for violations of data privacy laws.

4.2 CROSS-BORDER EXCHANGE OF INFORMATION

Principle 4: Coordination and collaboration of the Key Principles for Effective Regulation and Supervision of Credit Reporting Systems addresses the cross-border exchange of credit information.³⁴ “The authorities should coordinate and cooperate with each other, at both the jurisdictional and the international level, to promote the development, safety, and efficiency of credit reporting systems, as well as the cross-border exchange of credit information.” Cross-border data sharing would benefit individuals or businesses who migrate from one country to another, allowing them to access credit in countries where they do not have a local credit history. Many jurisdictions have data sovereignty principles as well as practical challenges for cross-border credit reports, which restrict cross-border exchange of data.

Cross-border exchange of information was likewise explored where respondents were asked to clarify whether they permit the cross-border exchange of alternative data. Only three jurisdictions³⁵ confirmed that this was permitted.

³³ Republic of the Philippines. 2012. Data Privacy Act of 2012. Republic Act 10173. National Privacy Commission. Available at: <https://privacy.gov.ph/data-privacy-act/> and National Privacy Commission. 2016. Implementing Rules and Regulations of Republic Act No. 10173, also Known as The “Data Privacy Act of 2012”. 24 August. Pasay City. National Privacy Commission. Available at: <https://privacy.gov.ph/implementing-rules-regulations-data-privacy-act-2012/>

³⁴ International Bank for Reconstruction and Development. 2022. Key Principles for Effective Regulation and Supervision of Credit Reporting Service Providers. Washington D.C. The World Bank. Available at: <https://documents1.worldbank.org/curated/en/099915010282240277/pdf/P166475009f6f302e083e503257ba9fcd72.pdf>

³⁵ Philippines, Rwanda and Ghana



COUNTRY OVERVIEW: KENYA

Credit reference bureaus in Kenya are expected to comply with the Banking (Credit Reference Bureau) Regulations, 2020.³⁶ Section 41 permits regulators or supervisory authorities and credit reference bureaus or entities performing regulatory or supervisory roles, and institutions performing similar roles, to share cross-border credit information of another person. The Regulations require that this is only done where there is a reciprocal arrangement between the persons sharing cross-border information. The Central Bank of Kenya is required to maintain a list of such arrangements. The Regulations also set out requirements that must be met prior to any exchange. Further, as per Section 42, the Regulations permit that a bureau licensed in Kenya, may with the approval of the central bank, establish a subsidiary, branch, agency, or marketing unit outside Kenya for the purposes of cross-border credit bureau business. Cross-border sharing of credit information must comply with data protection and privacy regulations in both Kenya and the foreign country involved. This includes ensuring that the sharing of sensitive financial data is conducted securely and with appropriate consent from the individuals concerned.

4.3 FINANCIAL STABILITY CONSIDERATIONS³⁷

The use of alternative data in credit reporting and lending can potentially introduce financial stability risks. Some of the potential ways in which alternative data could impact financial stability are as follows:

Reputational and credit risks from inaccurate and unreliable data.³⁸

Alternative data sources may not necessarily have access to financial infrastructures and systems that traditional financial institutions. Thus, they may not be able to collect and report substantive amounts of data accurately. The provision of inaccurate data would impact the ability of financial institutions to make appropriate lending decisions, causing an increase in the default rate. Unreliable data also affects the integrity of the credit reporting systems, creating reputational risks to operators and users alike.

³⁷ Government of Kenya. 2022. Legal Notice No.55 The Banking Act (Cap 488) Arrangement of Regulations. Special Issue Kenya Gazette Supplement No.42 (Legislative Supplement 28). Nairobi. Government of Kenya. Available at: <https://www.centralbank.go.ke/wp-content/uploads/2021/05/Credit-Reference-Bureau-Regulations-2020.pdf>

³⁸ Deloitte Center for Financial Services. 2017. Alternative data for investment decisions: Today's innovation could be tomorrow's requirement. London. Deloitte. Available at: <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/financial-services/us-fsi-dcfs-alternative-data-for-investment-decisions.pdf>

Complexity in algorithms and models adds complexity to the credit process.

Financial institutions which rely on these scores to make credit decisions may be unable to understand the risks or explain lending decisions, undermining public confidence in the financial system.³⁹

Cyber security and data privacy risks are heightened.

Expanding the scope of datasets used and increasingly digitalized processes require more reliance on digital data collection and processing. This raises cybersecurity and data privacy concerns. If alternative data sources are compromised by cyberattacks or data breaches, sensitive personal information could be exposed, undermining trust in financial institutions, and leading to financial instability. Moreover, expanding access to non-traditional entities creates similar concerns. For example, in some markets, utilities companies may not necessarily have the cyber security infrastructures that traditional financial institutions have. Should this remain unaddressed, it would impact the safety and security of the credit information from which data is shared and used.

³⁹ Lavrinenko, S. 2024. Understanding Alternative Credit Scoring. 30 August. Data Forest. Available at: <https://dataforest.ai/blog/understanding-alternative-credit-scoring>

The widespread adoption of alternative data by financial institutions could lead to systemic risks if there is a widespread failure or disruption in alternative data systems. Should a significant number of lenders rely on the same alternative data sources and those sources experience a major outage or data loss, it could disrupt credit markets and impact financial stability.

As part of the survey undertaken, respondents were requested to provide views on whether alternative data creates systemic instability (due to rises in indebtedness and default rate) in the long run. Concern

was raised in terms of countries experiencing a high rate of non-performing loans: it was felt that usage may aggravate the situation if borrower's digital footprints or other non-financial parameters were used to assess creditworthiness of the MSME borrowers. Also of concern was the impact of inadequate regulatory frameworks and the specificities of some markets which may affect the efficacy of alternative data for credit scoring, including a lack of financial literacy and unique identifiers for borrowers. Nevertheless, most respondents felt that the benefits outweighed the risks, which could be mitigated with proper oversight and risk management practices.

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“ The primary challenge for central banks and financial supervisory authorities is to strike a balance between harnessing the opportunities offered by alternative data while minimizing potential risks arising from its use. To do this, the use of alternative data to assess creditworthiness needs to be accompanied by appropriate risk governance standards as well as development of new competencies and skill sets. The BSP fosters an enabling environment for responsible innovation to promote the development of an inclusive digital financial ecosystem that is complemented by a sound risk management system. The BSP also recognizes that expanded competencies and enhanced skill sets will be required to understand and mitigate risks that may arise from the use of alternative data. Capacity building initiatives will help both regulated entities and regulator navigate the challenges on the use of alternative data for credit evaluation. This kind of re-tooling can be acquired through study, practical experience and empirical research.

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5. AN OVERVIEW OF CREDIT BUREAUS PROVIDING ALTERNATIVE CREDIT SCORES

Credit bureaus develop credit scores using complex algorithms that analyze various factors related to an individual's credit history. These statistical modeling techniques weigh these factors and assign numerical values to them based on their perceived importance in predicting credit risk. The resulting credit score provides lenders with a standardized measure of an individual's creditworthiness. Credit bureaus may use slightly different scoring models, leading to variations in credit scores between them. Moreover, the exact methods used by credit bureaus are proprietary and not publicly disclosed. Offerings by international entities may also vary by region.

This section seeks to provide an overview of some credit bureaus which make use of alternative data in their credit scoring models.

5.1 FAIR ISAAC CORPORATION (FICO)

FICO, which stands for Fair Isaac Corporation, is a data analytics company that specializes in predictive analytics and credit scoring. Founded in 1956 by engineer Bill Fair and mathematician Earl Isaac, FICO is best known for developing the FICO Score, one of the most widely used credit scoring models in the United States and many other countries. Other FICO products include UltraFICO and FICO XD. UltraFICO is a credit scoring model that allows consumers to opt in and share their banking information to complement their traditional credit data. It considers factors such as bank account transactions and balances to potentially boost credit scores. UltraFICO has shown better outcomes for both lenders and consumers as it increases the predictive power over the traditional FICO Score 9.⁴⁰ FICO Score XD (Extended View) uses an alternative credit score model which includes data from

utility bills, mobile phone accounts, and other non-traditional sources to assess the credit risk of consumers who have no or limited established credit history.

While FICO is predominant in the United States, it has also seen global success in AFI markets such as Mexico and Egypt through its FICO Score for International Markets product offerings.

Circulo de Credito, a credit Bureau in Mexico used the FICO score to increase credit access for consumers with no credit file or limited credit history. It was found that the FICO Extended Score has increased the scorable rate by 35 percent through the addition of household data to traditional bureau data, contributing to financial inclusion of the population.⁴¹

5.2 TRANSUNION

TransUnion currently operates in numerous countries across Africa,⁴² Asia Pacific, Europe, Latin America and the United States and Canada offering commercial, consumer, insurance and auto risk information solutions across a number of industries, as well as personal credit management solutions. TransUnion offers a range of products which seek to foster financial inclusion. TransUnion's CreditVision solutions provide a broader and deeper view into a consumer's profile,⁴³ incorporating alternative data elements and a longer timeframe of account history data. For example, ID Analytics' supplemental credit score: "ID Analytics A' Credit Optics (TM) helps lenders build 'effective swap-in/swap-out strategies using an alternative view of consumer behavior. In addition, ID Analytics Credit Optics is able to score 100% of applicants - including thin files, no hits and the underbanked. This enables TransUnion customers to accurately uncover consumers who are creditworthy but lack a credit history'".⁴⁴ Approved data sources vary across jurisdictions.

In Kenya,⁴⁵ 20 regulated SACCOS and two government entities provide data to TransUnion.

⁴¹ Fair Isaac Corporation (FICO). 2019. FICO Score Global Success: Case Study. Montana. FICO. Available at: <https://www.fico.com/en/resource-access/download/9832>

⁴² TransUnion Africa. N.d. About us. Johannesburg. TransUnion Africa. Available at: <https://www.transunionafrica.com/about-us/about-transunion>

⁴³ TransUnion LLC. N.d. CreditVision. TransUnion. Available at: <https://www.transunion.co.za/product/creditvision-suite>

⁴⁴ PR Newswire. 2009. TransUnion Enhances Collections, Credit and Identity Risk Offerings with ID Analytics' Suite of Services. October 5, 2009. PR Newswire Association LLC. Gale Academic OneFile. Available at: https://link.gale.com/apps/doc/A209024918/AONE?u=ull_ttda&sid=bookmark-AONE&xid=4278a2b9.

⁴⁵ TransUnion LLC. 2021. CRB- Africa Approved Data Sources. Chicago. TransUnion LLC. Available at: <https://www.transunionafrica.com/content/dam/transunion/roa/consumer/doc/kenya-crb-regulations-2020-approved-data-sources.pdf>

⁴⁰ Shellenberger, D. 2021. Expanding Access to Credit Through Alternative Data. FICO Blog. Bozeman. FICO. Available at: <https://www.fico.com/blogs/expanding-access-credit-through-alternative-data>

6. RECOMMENDATIONS TOWARDS PROMOTING THE USE OF ALTERNATIVE DATA

Promoting the use of alternative data for credit scoring is dependent on key considerations that include the legal and regulatory framework, technological infrastructure amongst others. Guidance from entities such as the World Bank serve to provide jurisdictions with key benchmarks that support individual journeys. Variances in the realities in different jurisdictions make it imperative that these recommendations to are tailored to local contexts.

This section draws on guidance received from the surveyed respondents in terms of what must be considered when implementing alternative credit scoring models. Practical insights are provided alongside high-level recommendations.

A robust legal and regulatory framework is essential.

The framework must address key issues - such as data protection - which govern how consumer data is collected, stored, and shared. The protection of consumers must be considered, including consent requirements when making use of data. Consideration must be given to whether the framework restricts the types of data that credit bureaus may have access to. Credit reporting legislation may have similar restrictions. Practically, legislative requirements may need to be different depending on the institution submitting the data. Clarity in terms of guidance provided by the regulator is important.

Technological infrastructure is the core of credit reporting systems.

Investment must be made in appropriate infrastructure that enables the development of scoring models which can incorporate alternative data sources and provide more accurate risk assessments. Infrastructure should consider machine learning and artificial intelligence. Practically, the underlying algorithm or code for the model should be contextualized to the local economy. Technological

infrastructure must also be considered in terms of the tools used for the transmission and protection of information. Appropriate cybersecurity measures for the development of this technology could also be considered.

The technological infrastructure of financial institutions must be robust, flexible and adaptable.

Financial institutions collaborate with credit bureaus to exchange credit information and generate credit reports. A robust infrastructure facilitates seamless integration with external data sources and systems, ensuring accurate and efficient data exchange with credit bureaus. Credit reporting requires accurate and up-to-date information to assess borrowers' creditworthiness effectively. A robust technological infrastructure ensures that data is captured accurately and reported in a timely manner, minimizing errors and delays in credit reporting processes. Infrastructure with robust cybersecurity measures protects against data breaches, unauthorized access, and other security threats.

Understanding and accounting for cultural factors is required when developing credit scoring models.

Cultural differences in spending habits and financial behaviors influence individuals' credit profiles. Similarly, attitudes towards debt would differ in cultures where debt is stigmatized versus cultures where it is socially acceptable. Moreover, some cultures may prefer informal lending practices which would impact on the reliability of a credit scoring model dependent on reporting from the formal sector. Cultures where multigenerational households are common or where there is a strong emphasis on familial obligations may mean that individuals may have access to familial resources or support networks that can impact their ability to repay debts.

Socioeconomic factors play a critical role in shaping credit profiles and must be understood and considered in credit scoring models to ensure fairness and inclusive access to credit and financial services.

Income levels correlate to the ability to access or repay financing as does employment stability. Similarly, education levels influence credit scoring by affecting individuals' financial literacy, earning potential, and employment opportunities. The ratio of debt obligations to income, known as the debt-to-income ratio, would, if high, indicate financial strain and increase the likelihood of credit defaults, leading to lower credit scores. Housing stability may impact scores as

homeowners may have access to home equity loans or mortgage refinancing options that can affect their credit profiles while individuals with stable housing situations are generally perceived as lower credit risks. Geography can play a role as it contributes factors such as local economic conditions, job opportunities, cost

of living, and access to financial services which tend to vary by location. Individuals from disadvantaged socioeconomic backgrounds face systemic barriers when accessing credit. These include a lack of access to education, employment opportunities, and financial services, which can impact credit scoring.



SUCCESS STORIES

CASE STUDY: ASA PHILIPPINES FOUNDATION



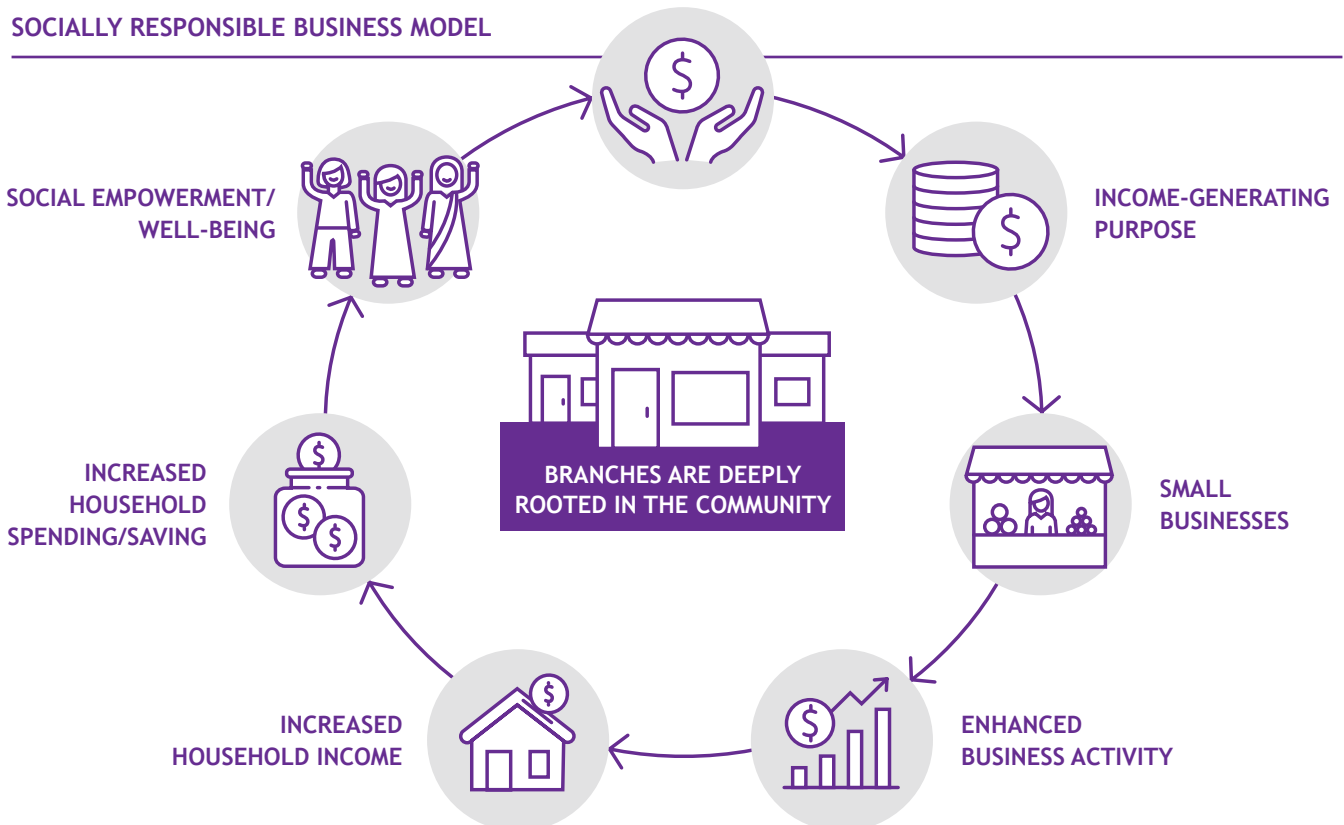
ASA Philippines is a non-profit specializing in microfinance for women micro-entrepreneurs in the Philippines. To date, the NGO has over 2 million borrowers. As at 2023, the NGO has a loan balance of 42 billion Filipino Pesos (USD721 million) and the repayment rate on loans is 93.52 percent. ASA offers uncollateralized loans and savings to entrepreneurs, improving the financial and social lives of communities.

The ASA Model is a decentralized, standardized and sustainable microfinance model that allows for cost efficiency, quick decision-making and replicability, while meeting the basic demand for savings and loans, and over time, also digital financial services.

The success of this initiative can be observed through the stories of the borrowers that ASA serves. For example, one woman entrepreneur has grown a successful sari-sari store (small convenience shop) enabling her to finance a university education for three children.

Source: ASA Philippines Foundation. N.d. *A Foundation Dedicated to Better the Lives of the Poor*. Pasig City. ASA Philippines. Available at: <https://www.asaphil.org/>
ASA Philippines Foundation. 2023. *Annual Report 2023*. Pasig City. ASA Philippines Foundation. Available at: <https://www.asaphil.org/asa-annual-report-2023/>

SOCIALLY RESPONSIBLE BUSINESS MODEL



7. CONCLUSION

Credit scores play a crucial role in accessing formal credit for MSMEs; however, for women-led/owned MSMEs challenges like limited credit history, gender bias, lack of collateral, and systemic barriers often affect how their creditworthiness is assessed.

To bridge this gap, it is important to focus on improving financial inclusion, offering alternative data-based scoring models, and addressing gender biases in lending practices. Leveraging alternative data can be an effective way for lenders to enhance risk assessments, broaden their customer base, and improve the lending process overall.

The survey has shown that the provision of a credit score, which includes alternative data exclusively or alongside traditional data, by credit bureaus is not prevalent in surveyed AFI members. Nevertheless, research has shown that alternative data for credit scoring is practiced by financial institutions and other entities in the lending sector, indicating a gap between regulation and market developments. While there are challenges and risks associated with alternative credit scores, their advantages outweigh these concerns and can be addressed through appropriate regulatory oversight and supervision.

To enhance financial inclusion, it is recommended that member countries consider making these datasets more readily available to lenders and that the use and collection of these data is protected, which calls for regulation. Adopters must consider a sustainable framework that aligns to the specificities of the relevant jurisdiction.

ACRONYMS

ACRA	Armenian Credit Reporting Agency
AFI	Alliance for Financial Inclusion
APD	Data Protection Agency
BSP	Bangko Sentral ng Pilipinas
BOG	Bank of Ghana
BOZ	Bank of Zambia
CBE	Central Bank of Egypt
CBS	Central Bank of Seychelles
CNBV	National Banking and Securities Commission
CRB	Credit Reference Bureaus
CRA	Credit Reporting Act, 2023
FICO	Fair Isaac Corporation
FinTech	Financial technology
GPCR	General Principles on Credit Reporting
MFIs	Microfinance institutions
MMA	Maldives Monetary Authority
MSME	Micro, small and medium enterprises
NPC	National Privacy Commission
SACCOs	Savings and credit cooperative organizations
WMSME	Women-led MSMEs

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