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Credit Reporting Knowledge Guide 2019



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Acronyms and Abbreviations

ACAFI	Azerbaijan and Central Asia Financial Infrastructure
AI	artificial intelligence
API	application program interface
AR	augmented reality
B2B	business to business
B2G	business to government
BCBS	Basel Committee of Banking Supervision
BCEAO	Banque Centrale des Etats de l’Afrique de l’Ouest
BOG	Bank of Guyana
BOJ	Bank of Jamaica
CCR	central credit register
CIB	Credit Information Bureau
CIBIL	Credit Information Bureau Ltd. (India)
CIC	credit information company
CICRA	Credit Reporting Act (India)
CII	Credit Information Index
CIP	credit information provider
CIR	credit information report
CRA	Credit Reporting Act (Jamaica)
CRSP	credit reporting service provider
EFT	electronic funds transfer
EMV	Eurocard, Mastercard, Visa (electronic credit standard)

ESCB	European System of Central Banks
F&M	Finance and Markets (Global Practice)
fintech	technology-enabled financial services
FSAP	Financial Sector Assessment Program
G2G	government to government
GNI	gross national income
ICCR	International Committee on Credit Reporting
IDG	IFC Development Goals
IFC	International Finance Corporation
IoT	internet of things
JLG	joint liability group
KYC	know your customer
MFI	microfinance institution
MFIN	Microfinance Institutions Network
MIS	management information system
MSME	micro, small, and medium enterprises
NBFC	nonbanking financial company
NCB	national central bank
NIST	National Institute of Standards and Technology (United States)
NPL	nonperforming loan
P2B	person to business
P2G	person to government
P2P	person to person
RBI	Reserve Bank of India
regtech	regulatory technology
SHG	self-help group
SME	small and medium enterprise
UEMOA	Union économique et monétaire ouest-africaine (West African Economic and Monetary Union)
VAS	value-added service
WAMU	West African Economic and Monetary Union



Preface

The Global Credit Reporting Program launched by the International Finance Corporation (IFC) in 2001 and later renamed Credit Information Solutions to better reflect the nature of its goal, has supported the development of credit bureaus and public registries in over 90 countries through a combination of analytical and operational work.

Since the launch of the program, the World Bank Group has helped to develop favorable credit reporting environments in many countries around the world and to implement reforms improving these countries' credit information systems. This third edition of the *Credit Reporting Knowledge Guide*, like the two earlier editions, disseminates knowledge on best practices in credit reporting development, based on the experiences of the World Bank Group. In the years since the previous edition (2nd ed., 2012), many nations have made great strides in credit reporting. In 2015, for example, Kenya and Uganda made large improvements by expanding borrower coverage (14.8 percent of the adult population). Similarly, the credit bureaus or registries in the Lao People's Democratic Republic, Mauritania, Rwanda, Uganda, and Vietnam expanded coverage to at least 5 percent of their adult populations. Between 2014 and 2015, Afghanistan, the Comoros, Guyana, Lesotho, and the Seychelles all established a new credit bureau or registry. Many countries improved their regulatory frameworks for credit reporting: Latvia, The Bahamas and the Organization of English Speaking Caribbean States (OECS), adopted credit bureau laws with the aim of promoting responsible borrowing and lending while protecting the rights of borrowers; Namibia improved access to credit information by legally guaranteeing borrowers' rights to inspect their

own data; and Peru fully implemented its new law on personal data protection, requiring stronger safeguards in administering borrowers' personal data. In addition, over the past few years, nations in Sub-Saharan Africa, the region with the largest number of reforms, focused on improving the availability of credit information: In Rwanda, Zambia, and Zimbabwe, credit scoring was introduced as a value-added service to banks and other financial institutions to support their ability to assess the creditworthiness of potential borrowers.

The original *Credit Bureau Knowledge Guide* (2006) and its second edition (2012) elaborated on the World Bank Group's knowledge gained over several years of running the Global Credit Reporting Program and provided a variety of stakeholders, primarily in emerging markets, with a comprehensive information resource to help them develop their own credit reporting systems. This third edition reflects on the experiences and lessons learned in the last seven years, with greater emphasis on credit reporting for businesses, the impact of new technologies and data on credit reporting, and the development of new products and services catering specifically to the needs of users and borrowers. In discussing how the credit reporting arena is adapting to a rapidly changing technological and fintech environment, the Guide seeks to align the adoption of these disruptive technologies with the core Bali Fintech agenda around enabling fintech while ensuring financial sector resilience, addressing risks and promoting international cooperation. Several new case studies enhance the theoretical discussions, highlighting different aspects of developing credit reporting systems and the importance of these systems to the countries implementing and improving them.

Under the guidance of Sebastian Molineus and Mahesh Uttamchandani, this Credit Reporting Knowledge Guide was prepared by the Global Credit Reporting Team within the World Bank Group's Finance, Competitiveness & Innovation Global Practice. The Guide was drafted by a team comprised of Shalini Sankaranarayanan and Guy Patrick Ewoukem Elat, with the support from the Credit Infrastructures team of specialists: Luz Maria Salamina, Oscar Madeddu, Fabrizio Fraboni, Colin Raymond, Pratibha Chhabra, Nina Pavlova Mocheva, Ghada O. Teima, and Fredesvinda Fatima Montes. The authors would like to thank colleagues in the World Bank Group for

their continuous support of the work of the Credit Information Solutions Program and the preparation of this Guide.¹ We are also grateful to the supervisors, credit bureaus and registries around the world whose work and employees made the development and publication of this Guide possible.²

The team gratefully acknowledges the generous financial support of the Swiss State Secretariat for Economic Affairs (SECO).

We hope this Guide will prove both informative and useful to all those working in the area of credit reporting development.

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Overview

Since the first Knowledge Guide was written thirteen years ago, global financial markets have grown by leaps and bounds, leveraging a host of new technologies and data. The rapid growth in innovative products and services is a direct response to the huge unmet demand for financial services that the traditional financial landscape had been struggling to meet. According to the World Bank, approximately 2 billion adults around the world still lack a basic account (World Bank 2017). Some key obstacles to financial inclusion are affordability of financial services, distance to provider, lack of trust, and potential borrowers' lack of necessary documentation.

More broadly, inadequate access to finance and credit continues to exert a critical constraint on economic development. Around 2.5 billion people lack access to formal financial services (World Bank 2015), and an estimated 70 percent of formal small- and medium-sized enterprises in developing economies are either unserved or underserved by the formal financial sector (Stein, Ardic, and Hommes 2013). The total credit gap amounts to US\$1.3 to US\$1.6 trillion (US\$700 to US\$850 billion excluding firms in OECD high-income economies) (Stein, Goland, and Schiff 2010). In emerging markets, an estimated 1.9 billion people are employed in the informal sector as smallholder farmers, household-based entrepreneurs with retail shops, street vendors, artisans, and other service providers (ILO 2018). A disproportionate percentage of this population of potential borrowers are women: Women represent 76 percent of total borrowers from microfinance institutions (World Bank 2010). These populations generally rely on personal savings or loans from friends, family, or moneylenders to meet their businesses' capital requirements. Being self-employed or part of the

informal sector, these workers frequently lack formal salary slips or other traditional income statements used by lenders to ascertain whether a prospective borrower possesses a steady source of income with which to service a loan or other credit reliably. Without acceptable proof of income, these potential borrowers must possess collateral—mostly fixed assets such as land, buildings, and so on—before lenders will consider their credit applications. Once again, disenfranchised, lower-income segments of the population frequently cannot meet collateral requirements or provide relevant legal documentation regarding assets.

Lenders, too, face several challenges in seeking to provide credit to these populations. Lenders often lack the information necessary to assess the creditworthiness of potential customers, including reliable identification for individuals and businesses. In the absence of automated screening methods, the relative costs of personal screening and due diligence are very high, while the loan amounts tend to be modest. Potential customers are often widely dispersed in rural areas in which lenders may not find it cost effective to operate branch networks. With limited access to inclusive and timely data, lenders face concerns that borrowers might accumulate many loans from multiple lenders, potentially resulting in over-indebtedness on the part of borrowers and an unacceptably large portfolio of nonperforming loans on the part of lenders. Moreover, weak regimes for creditor and bankruptcy protection, coupled with unreliable property rights, often make attempts at collateral collection ineffective.

In markets facing these challenges, credit reporting service providers perform the crucial functions of

gathering and distributing reliable credit information across the entire borrower population, thus improving creditor protection and strengthening credit markets. In effect, the need for physical collateral can be replaced by—or at least supplemented with—reputational collateral. Credit reporting service providers can reduce information asymmetry, thus reducing default rates, which in turn should result in lower average interest rates, customized products and services, enhanced competition in the credit market, and ultimately, increased access to credit.

The newly developing area of financial technology, known as *fintech*, provides an innovative approach to delivering financial services in different markets around the world that reflects the actual or perceived inability of traditional lenders, including banks, microfinance institutions, and even moneylenders, to provide optimal financial services to underserved or unserved borrower segments. While the jury is still out on where the traditional financial sector and the new fintech sector will meet and what this encounter will mean for credit reporting as a whole, to the extent that these new entrants extend credit using whatever means available, they should be considered stakeholders in the credit reporting system, and the rules for sharing credit information should generally apply equally to these new players.

This third edition of the *Credit Reporting Knowledge Guide*, in the spirit of the earlier two editions, continues to disseminate knowledge on best practices in credit reporting development, based on the experiences of the World Bank Group. The original *Credit Bureau Knowledge Guide* (2006) and the second edition (2012) presented knowledge gained over several years of running the Global Credit Reporting Program, and they provided a variety of stakeholders, primarily in emerging markets, with a comprehensive information resource to help them in developing their own credit reporting systems. This third edition reflects on the experiences and lessons learned over the last seven years, with emphasis on credit reporting for businesses, the impact of new technologies and data on credit reporting, and the development of new products and services catering specifically to the needs of users and borrowers. Several new case studies enhance the theoretical discussions, highlighting various aspects of developing credit reporting systems.

Chapter 1 introduces key concepts in credit reporting: Why is access to credit important? What are the factors limiting access to credit? How can credit reporting services improve access to credit, and what role do they play in ensuring financial stability? And, finally, who are the key actors in credit reporting systems? The chapter

examines the problem of asymmetric information: when borrowers know more about their ability and willingness to repay loans than do lenders. The chapter presents evidence from empirical research that validates the importance of credit reporting in the overall agenda for access to finance.

Chapter 2 introduces the different types of credit reporting service providers (CRSPs) that collect information on borrowers' credit histories from creditors and available public sources. Unlike credit rating agencies, CRSPs focus on individuals and small businesses. The three basic types of CRSPs are credit bureaus, credit registries, and commercial credit reporting companies. Each has its strengths and weaknesses, and no single type is inherently better than the others for any given market condition. Indeed, given adequate demand, the three types of service providers can coexist in a market under a variety of ownership structures or a single entity can provide one or more of the functions provided by these different entities. Chapter 2 also discusses the commercial credit reporting space, which had not been treated extensively in earlier editions of the Guide.

Chapter 3 covers the evolution of the credit reporting industry to today, including key trends now emerging and external trends affecting its development. The second edition of the Guide introduced the General Principles for Credit Reporting, the first set of universal standards for credit reporting, developed by a task force led by the World Bank and the Bank for International Settlements (see Appendix 3). Since the General Principles were released, the task force has been formalized as the ICCR, and it has since worked on developing additional publications to provide guidance on the various aspects of credit reporting systems; these are also described in this chapter. Recognition has been growing regarding the value that credit reporting can bring to micro, small, and medium enterprises (MSMEs), as well as to the search for alternative data forms to enhance lenders' ability to serve borrowers lacking formal credit histories. In addition to developments in consumer and commercial credit reporting, greater recognition has been given to the use and importance of credit reporting data for prudential supervision and regulation. This chapter discusses how new technologies, new big data, and related new products and tools have the potential to transform the credit and the credit reporting industries, including a balanced view of the potential risks and uncertainties surrounding these new tools and the challenges they pose.

Chapter 4 outlines the legal and regulatory framework options for credit reporting systems. The legal

framework for credit reporting differs from country to country. It may include a combination of credit reporting laws, banking laws, data protection laws, consumer credit protection laws, fair credit granting and consumer credit regulations, personal and corporate privacy and secrecy provisions, bank secrecy laws, and commercial laws. Credit reporting activities can and do take place in the absence of a clear legal and regulatory framework; however, in the long run, best practice indicates credit reporting systems benefit from a legal and regulatory framework that is clear, predictable, nondiscriminatory, proportionate, and supportive of data-subject and consumer rights. As recognition grows that credit reporting systems are vital to strengthening financial infrastructure and ultimately access to finance, more and more countries are increasing their efforts to create the ideal legal and regulatory environment for these activities. With the increasing availability of data—and of technologies to harness the power of these new data—also comes increasing risks associated with safeguarding data and the underlying privacy of the data subjects.

Chapter 5 summarizes the World Bank Group’s 15 plus years of experience in developing credit bureaus and credit registries around the world. The chapter presents various approaches to the development of credit reporting and discusses the business, technological, financial,

and other operational and practical considerations that a developing credit reporting service provider must address. It also reflects on the World Bank Group’s experience in establishing new credit reporting markets.

Chapter 6 presents an overview of the value-added services typically offered by established credit bureaus through the repurposing of algorithms and data and the products and services offered by commercial credit reporting companies. The information provided by both financial and nonfinancial institutions allows credit bureaus to provide comprehensive analysis of borrower creditworthiness, information for portfolio monitoring, and fraud detection. The chapter also discusses the use of credit reporting information by financial system supervisors and regulators to perform prudential supervision and systemic risk monitoring of an economy as a whole.

Chapter 7 rounds out the theoretical discussions and practical guidelines with nine case studies of recent developments in credit reporting spanning the globe. The objective of the case studies is to provide practitioners with real examples of how credit reporting systems have developed over time in various markets, including the challenges they faced and the successes they achieved.



CHAPTER 1.



The Importance of Credit Reporting Systems

Credit infrastructures, including credit reporting systems, secured transactions and collateral registries, and insolvency and bankruptcy regimes, are critical in any economy for expanding access to finance, extending financial inclusion, and supporting the development of stable financial systems. Broadly speaking, credit reporting systems comprise the institutions, information, technologies, rules, and standards that enable financial intermediation. When comprehensive credit infrastructures are available, efficient, and reliable, the cost of financial intermediation falls; financial products and services become accessible to greater numbers of borrowers; and lenders and investors have greater confidence in their ability to evaluate and price risk (IFC 2009). The information captured by credit reporting systems is critical to ensuring stability in the financial markets.

Access to finance is an essential component of economic development and job creation. A host of studies have shown a positive correlation between financial development and economic growth (Taiwan and Nene 2016). Well-functioning financial systems offer a variety of financial products for savings, credit, and risk management to a wide range of people and businesses. Access to financial services enables rural and urban households to smooth consumption curves and acquire essential services, including food, housing, health, and education (World Bank 2015). Micro, small, and medium enterprises (MSMEs) require access to financing to meet short- and long-term capital needs and to grow and expand their businesses.

Individual borrowers' credit needs typically involve personal loans, auto loans, mortgage loans, student

loans, and other short-term credit needs. Small business loans are generally necessary to meet working capital requirements, to maintain assets for production, or to expand business operations. In the case of very small businesses, the business owner's personal finances tend to be commingled with the business's finances, as the owner may draw on personal financing sources to fund the business in its early stages.

Access to finance is also critical for larger corporations and conglomerates, which, given their size, performance, and assets, typically meet funding requirements through capital markets and other sources. Credit reporting systems are less relevant for these businesses, as lenders to these large entities rely on a variety of other sources of information when making credit-related decisions. This Guide focuses therefore more on the credit needs of individuals and of the micro, small, and medium businesses that stand to benefit most from the development of credit reporting systems.

1.1. The Role of Credit Reporting Systems

Despite the tremendous need, a large proportion of the world's population lacks access to credit. Worldwide, an estimated 2.5 billion people are currently without formal financial services (World Bank 2015). In developed economies, approximately 90 percent of adults have access to formal financial services, as compared with 41 percent in emerging markets (Demirguc-Kunt and Klapper 2012). The World Bank Enterprise Surveys database reports that, globally, 27 percent of firms identify access to finance as a major constraint. A recent report by IFC and the SME (small and medium enterprise)

Finance Forum found that 65 million enterprises—40 percent of formal MSMEs—have an unmet finance need of \$5.2 trillion a year, or 1.4 times the current level of MSME lending. Women-owned businesses comprise 28 percent of MSMEs and account for 32 percent of the formal MSME finance gap (IFC 2017).

Access to credit is largely hindered by the lack of sufficient information or information asymmetry regarding the ability of potential borrowers to repay debts and by the lack of a supporting financial infrastructure to make such information available (Demirguc-Kunt and Klapper 2012). Over the years, the basic approach to formal lending has remained traditional: Decisions are based on subjective judgments about a borrower's propensity to repay, supported by alternative risk-mitigating mechanisms, including group guarantees, a requirement for (mostly fixed) collateral, higher interest rates, shorter financing terms, and similar arrangements. In most markets, commercial lending traditionally focuses on large companies and select retail clients with proven income, capacity to repay, and/or suitable collateral. The credit needs of smaller entrepreneurs and individual borrowers are primarily met through informal financial services and nonbank credit.³

Microfinance continues to be an important source of access to credit and financial services for the vast majority of the global population unserved or underserved by formal financial channels. The growth of the microfinance industry was driven in part by global recognition of its value as a development tool and in part by its promotion by national governments, international development bodies, donors, and socially oriented investors. What started as a movement led largely by NGOs and cooperatives has rapidly expanded to include downstream lending by larger commercial lenders as more emphasis was placed on serving low-income consumers and entrepreneurs through low-value, short-tenure loans with flexible installment plans. The number of borrowers served by microfinance institutions (MFIs) is estimated at around 130 million (IFC). The field's initial rapid growth and high reputation was built on strong asset quality combined with low delinquency rates; however, sometime in the late 2000s, the industry suffered setbacks as portfolios deteriorated globally. The increasing portfolios-at-risk values were attributed to inadequate risk management systems and controls, internal organizational weaknesses, lack of data

sharing with CRSPs, and excessive growth in narrow geographies, combined with unhealthy lending practices that affected borrower repayment incentives and behaviors. These factors resulted in over-indebtedness, as witnessed in several markets, including Bosnia and Herzegovina, Cambodia, Egypt, India, Morocco, and Pakistan (Lyman et al. 2011).

Small- and medium-size enterprise finance can be distinguished from microfinance in two respects: First, it covers a wider range of entrepreneurial clientele, and second, SMEs are often larger and therefore represent a greater risk exposure than do microfinance clients. SMEs thus require a more in-depth credit review process than do microfinance clients. Still, SMEs often fall into the middle market: too big for traditional microfinance, yet too small for mainstream banks.

Access to finance is a key constraint to SME development and growth, especially in emerging markets. In their early stages, SMEs are often financed internally by the owner's savings or earnings and by personal borrowing in the owner's own name. Sustained growth, however, usually requires external funding. A 2003 World Bank study (Love and Mylenko 2003) that looked at data from 5,000 firms, across 51 countries, found that in countries without credit bureaus, 49 percent of small firms reported facing high financing constraints, as opposed to 27 percent in countries that did have credit bureaus. The study also found that in countries with credit bureaus, the probability of a small firm obtaining a bank loan was 40 percent, versus 28 percent in countries without credit bureaus. Another World Bank study based on data from 99 developing countries found that small firms are large contributors to total employment and job creation, but their productivity growth is lower than that of larger firms (Meghana, Demirguc-Kunt, and Maksimovic 2011). The study showed that SME growth and productivity is hampered by inadequate financial infrastructure and regulatory environments (in addition to other obstacles), and it called on authorities to design policies to overcome these challenges.

Historically, small business borrowers have represented a difficult-to-serve market because of the traditionally high cost of subjective credit evaluation. The SME business owner's personal finances are often comingled with those of the business, and this distinction is not immediately apparent to lenders. The difficulty in assessing the creditworthiness of SME businesses causes

3. This Guide discusses only the supply side of providing access to formal finance, but the demand side can also limit financial inclusion. The informal sector is sometimes unwilling to join the formal sector, which it can perceive as imposing greater tax burdens and regulatory burdens.

lenders to adopt protective measures, such as imposing higher interest rates, requesting substantial collateral, or denying credit to SME borrowers altogether.

SMEs typically look to internal and external financing mechanisms to meet working capital requirements and/or to finance capital expenditures and maintenance. In the absence of structured and cohesive information on the creditworthiness of SMEs, creditors rely on alternative financing, including heavy reliance on relationship lending, collateral based lending, factoring, leasing, and other similar measures.

Both lenders and SME borrowers are faced with challenges, however, when it comes to granting and taking credit against collateral. The two main challenges are:

- In most jurisdictions, the definition of collateral generally implies fixed/immovable assets, such as land and property, and ignores the moveable assets more common among SMEs. Because moveable assets such as vehicles, equipment, and inventory are not considered formal collateral, lenders are unwilling to grant credit against them. In the emerging economies, 78 percent of the capital stock of business enterprises is typically in movable assets, such as machinery, equipment, or receivables, and only 22 percent is immovable property (Safavian, Fleisig, and Steinbuks 2006). Because most SME borrowers have more movable than immovable collateral, they are unable to meet collateral requirements for securing a loan. Lenders lose out as well, as they are unable to tap into the huge borrowing base of SME and micro borrowers with movable assets, which tend to be underutilized or unrecognized by law as an asset type.
- Weak legal and regulatory frameworks concerning the use of collateral can present challenges to lenders attempting to collect debts. If legal enforcement mechanisms are weak or ineffective, the costs to lenders of pursuing delinquent debtors increase. Faced with the potential of higher costs to obtain a legal remedy, through either the judicial system or extrajudicial processes, lenders may grant credit only at unfavorable terms to SME borrowers and micro clients or may deny credit to these markets altogether.

1.2. The Costs of Asymmetric Information

Credit markets are typically characterized by a fundamental problem: asymmetric information (Stiglitz, and Weiss 1981), with borrowers knowing the odds they will repay their debts much better than lenders do. The lender's inability to accurately assess borrowers'

creditworthiness contributes to higher default rates and smaller loan portfolios, which affect financial institutions' profitability. Differentiating between good and bad clients becomes very difficult, almost impossible, when credit reports are lacking. Without this information, the risk of lending is higher, both raising the costs of borrowing and reducing the availability of credit, as lenders hesitate to extend credit to unknown borrowers and seek to offset the costs of default through higher interest rates.

Lenders typically address these problems by requiring collateral to cover the loss in the event of a default or by investigating a borrower's ability to repay. As mentioned, requiring collateral is often problematic, especially in developing countries and particularly in the case of new firms and MSMEs, which often lack significant assets that are formally (legally) recognized as usable collateral. In the case of women borrowers, the problem is further exacerbated as women typically do not hold fixed assets in their names. In addition, the costs to lenders of seizing and liquidating assets used as collateral can be significant and the process lengthy. According to the 2019 World Bank Doing Business survey on enforcing contracts, in most developing economies it takes from one to three years to enforce a contract, with costs reaching 25 to 50 percent of the debt. In extreme cases, for example in Guinea-Bissau, it takes on average four and a half years to enforce a contract, and in Timor-Leste it may cost up to 164 percent of the value of the claim.

To investigate a borrower's ability to repay, a lender might hire investigators to check the borrower's background, but this is also expensive. Conducting in-depth background checks, while justifiable for larger loans, is not always possible or cost effective for small loans. Lack of low-cost information often restricts lenders' ability to lend profitably to informal retail, micro, and small business borrowers.

Monitoring and screening borrower behavior offers one way to minimize problems of asymmetric information. Past behavior is seen as a reliable predictor of future behavior. Banks in many countries, for example, commonly grant credit to a firm only after the firm has had an account with a bank for at least six months to a year, which allows the creditor bank to observe the firm's cash flow. Similarly, the group lending approach, mostly used by microlenders, allows the lenders to provide loans to individual borrowers who, through participation in the group, have developed a credit history with the lending institution. In these examples, the credit history—sometimes referred to as

“reputational collateral”—minimizes the perception of risk, thus enabling an individual or a firm to gain access to financing. Nonetheless, the relevance of past behavior should be considered in context since it cannot explain all behavior and could be irrelevant if adverse economic conditions change borrowers’ circumstances. Even a good borrower may default if faced with economic hardship or other adverse circumstances.

Credit reporting systems are those critical elements of a country’s credit infrastructure that address the asymmetric information challenges characteristic of most lending relationships. At their core, credit reporting systems consist of databases of information on debtors, together with the institutional, technological, and legal framework supporting the databases’ efficient functioning. Database operators are broadly categorized as (i) credit bureaus (consumer and commercial), with the primary objective of improving the quality and availability of data so lenders and creditors can make better-informed decisions, and (ii) credit registries, with the main objectives of assisting governments in bank supervision and of enabling regulated financial institutions to access data that can help improve the quality of their credit portfolios (World Bank 2011; also see section 2.1 in this Guide).

Credit reporting systems help ensure financial stability by enabling more responsible access to finance, and they can also play an instrumental role in expanding access to credit and other credit-related services to the underserved and unbanked. They facilitate lending processes by providing lenders with objective information that can lead to reduced portfolio risk and transaction costs and expanded lending portfolios. By doing so, credit reporting systems enable lenders to expand access to credit to creditworthy borrowers, including individuals with thin credit files, particularly women borrowers; micro-entrepreneurs; and small and medium enterprises.

1.3. Key Concepts in Credit Information Sharing

A credit reporting system comprises the institutions, individuals, rules, procedures, standards, and technology that facilitate the flow of information relevant to credit agreement decision making (World Bank 2011). Developing an effective credit reporting system is a lengthy process requiring sustained commitment from all stakeholders. The entire process of setting up a credit reporting system—from initial discussions, to

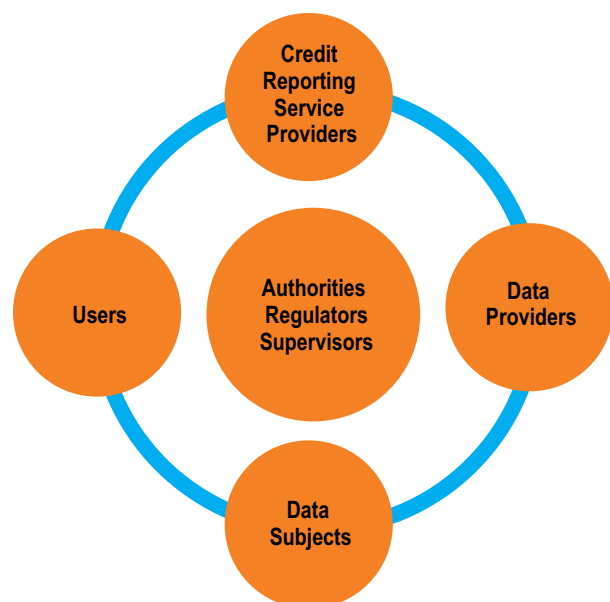
public education and work on the legal and regulatory framework, to actual system implementation, including uploading data and issuing the first credit report—may take between three and five years, if not longer. The credit information cycle of collecting, producing, storing, processing, distributing, and using information to support credit-granting decisions and financial supervision involves a number of actors: individuals, MSMEs, CRSPs, data providers, authorities, regulators, and supervisors. Active participation by each of these stakeholders is critical to ensuring the effectiveness of the credit reporting system. Stakeholder participation is further enhanced by government support for the system as a whole. These actors and their roles are shown in Figure 1.1 and described below.

Credit Reporting Service Providers (CRSP)

Credit reporting service providers (CRSPs) are institutions that collect information on a borrower’s credit history from creditors and available public sources. The CRSP compiles information on individuals and/or small firms, including credit repayment records, court judgments, and bankruptcies, and creates a comprehensive credit report that it then sells to credit providers.

CRSPs specialize in monitoring and screening borrower

Figure 1.1. Key Stakeholders in Credit Reporting Systems



Source: IFC 2017.

behavior to address issues of asymmetric information. Lenders share information accumulated through their lending operations with a CRSP. The CRSP collates, validates, cross-checks, and aggregates this data across lenders and then disseminates credit reports to lenders, generally on a reciprocal basis. Credit reports allow lenders to better assess credit risks, and they allow potential borrowers with good payment histories to negotiate more favorable terms on credit applications. Lenders can therefore make better-informed lending decisions, thus not just avoiding loans to high-risk applicants but also rewarding good payment behavior with better terms and conditions.

CRSPs differ from credit rating agencies, such as Standard & Poor's, Moody's, and Fitch, which collect financial information on large companies; conduct detailed analyses of those companies' operations, finances, and governance; and then issue credit ratings. CRSPs focus on smaller creditors, concentrating on credit repayment records and statistical analyses of large samples of borrowers, rather than on in-depth analyses of individual companies, to produce credit scores.

The CRSP runs and operates a credit reporting service on a day-to-day basis. A CRSP can be a credit bureau, a credit registry, or a commercial credit reporting company (discussed further in chapter 2). The CRSP bears primary responsibility for ensuring the system's safety and efficiency. The CRSP's duties are discharged by the on-site management team and operational staff, whose responsibilities include collecting, validating, and merging data; producing and dispersing credit reports to subscribers and other users; implementing appropriate governance arrangements; and handling personnel matters. The CRSP, in the form of a credit bureau or commercial credit reporting company, is also responsible for the sustainability of operations, including increasing membership, developing new and innovative customer-focused products and services, reporting to shareholders (where applicable), complying with regulatory requirements, and dealing with consumer complaints.

Data Subjects: Consumers and Firms

Data subjects are consumers, MSMEs, and large businesses whose data is collected, processed, and collated into reports provided by the CRSP to its subscribers or members. (The less cumbersome term *consumers* is sometimes used in this Guide to replace *data subjects*.) Data subjects are the focus of lenders' efforts to assess the risks of default and nonpayment before approving new loans or advancing further credit.

Data Providers

Data providers play a key role in the successful operation of a CRSP since the CRSP relies on their proactive supply of information. Traditional data providers include commercial banks, other financial institutions, and credit card issuers. Nontraditional data sources include retailers and utility providers. In addition, all private and public entities that collect information on consumers are potential data sources for CRSPs. For instance, a CRSP may have agreements with other parties to access databases on court judgments, information on unpaid debts, personal identity records, and registries of collateral, such as vehicles, real estate, and companies. The financial landscape has been rapidly evolving over the past few years as emerging innovative technologies enable financial services (fintech) and alternative lenders. Among these players are alternative lenders like Tala, Kabbage, and others that derive insights from "new data" sources, such as consumer behavior on social media and payment platforms, and then make lending decisions based on these insights. As lenders who actively provide credit to consumers and small businesses, these new entities can also be potential data providers for CRSPs when they exchange information with them.

Users

The CRSPs produce information of interest to a variety of users. These users "query" or submit an inquiry to the CRSP on a data subject that has approached them for credit. Users, also known as members or subscribers of the CRSP, typically include financial institutions and nonbank creditors who contribute credit information about their own customers' accounts. Credit information might also be of interest to other users, ranging from financial supervisors and central banks to users in other sectors of the economy, such as employers (particularly where a position involves significant financial responsibility), insurers, or landlords (where legally permitted). In keeping with the principle of reciprocity, only subscribers contributing information to the CRSP should receive credit information reports from it. Some CRSPs charge their users membership fees as well as a pay-per-use fee.

Regulators

In jurisdictions where credit reporting activities are regulated, the regulator is the authority with statutory powers of supervision over credit reporting activities and services. Statutory powers may include the power to issue licenses and to create operational rules and regulations. The division of responsibilities among

authorities for regulating and overseeing credit reporting systems varies depending on a country's legal and institutional framework. Sources of authority and approaches to regulation and oversight may take different forms. An authority may have regulatory and oversight responsibility for a credit reporting system provider that is registered, chartered, or licensed as an entity falling within a specific legislative mandate. The regulator may also have the power to stipulate compliance conditions for CRSPs, to penalize them for violations or noncompliance, or to cancel their licenses.

Credit reporting systems also may be overseen by an authority that exercises customary or other forms of responsibility for oversight that does not derive from a specific legislative mandate. Once a CRSP is fully operational, the regulator's role is to monitor compliance. In addition to direct regulation, CRSPs may also be indirectly subject to other laws, for example, business or company law, consumer credit protection law, and information privacy law. As such, they may also have compliance obligations imposed by other regulators.

A vast majority of countries assign regulation of, and authority over, credit reporting services to their central banks. A few countries have a regulatory authority specifically dedicated to credit reporting, for example, the National Credit Regulator in South Africa. In other countries, a government agency assumes that role; for example, the Federal Trade Commission in the United States had the authority to enforce the Federal Credit Reporting Act (which applies to credit bureaus) as part of its mandate to ensure consumer protection in credit and lending practices. In addition, as of September 30, 2012, the U.S. Consumer Financial Protection Bureau has been charged with making markets work for consumer financial products and services and with supervising credit bureaus (United States 2012).

In some countries (China, for example), the central bank acts as both the industry regulator and the CRSP operator. Despite the apparent conflict of interest, such systems operate reasonably well as long as the two functions are undertaken by separate departments under different directorships: that is, the department issuing operating licenses and supervising credit bureaus is not the same department that operates the credit registry. The General Principles assume that credit reporting service providers with the same function, whether public or private, will be subject to the same rules; that is, all operate on a level playing field.

Since the core business of credit reporting involves the flow of information through a network of stakeholders, credit reporting activities touch on sensitive issues, such as the individual privacy rights of consumers and the protection and security of the data subject's data. A robust legal and regulatory framework covering all relevant aspects of credit reporting is essential for the sound functioning of credit reporting systems. The legal and regulatory frameworks may need to provide a balanced resolution of the natural tension between the objectives of accessing broad sources of information for enhanced credit reporting and of preserving individual privacy. No clear consensus exists over what constitutes an optimal legal and regulatory framework for credit reporting. In addition to contractual agreements, a clear trend worldwide is the enactment of laws to help protect privacy and allow data subjects to access and correct information about themselves.

1.4. Comprehensive (Positive and Negative) Information Sharing

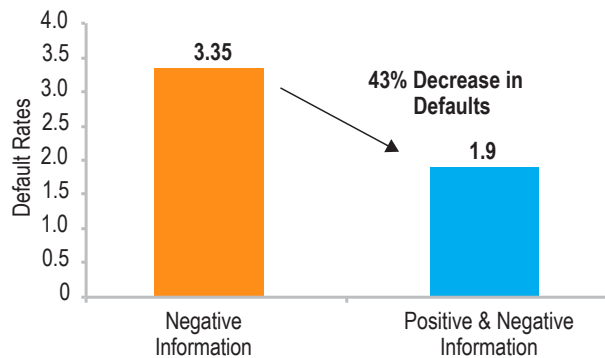
To overcome information asymmetries in credit markets, credit reporting service providers collate personal and credit history information from a variety of sources and develop credit profiles on borrowers that enable lenders to make optimal lending decisions. Credit history information can be divided into two broad categories: negative information and positive information. Negative reporting includes only information pertaining to unfulfilled financial obligations, such as defaults, amounts in arrears, judgment orders on debts, and other adverse or negative information. Information on delinquent debts that are eventually paid off usually remains on file and forms part of the credit history for a defined period of time. Databases with negative-only data are sometimes referred to as "black lists." Negative-only databases were developed initially to help lenders effectively screen and exclude high-risk borrowers that had accumulated significant debt exposure.

Positive credit information contains favorable information on an individual's open and closed credit accounts. Information sources could include: debt ratios, on-time payments, credit limits, account type, loan type, lending institution, detailed reports on the prospective borrower's assets and liabilities, guarantees, debt maturity structure, and pattern of repayments.

Research has shown that comprehensive reporting systems generate more accurate scores than negative-

only systems. An analysis of Chile’s credit reporting system, a negative-only system with some positive data elements, found that credit decisions based on comprehensive information significantly outperformed those based on negative-only information (Turner 2010). Another study in the United States simulated and compared default rates on loans approved using a negative-only credit scoring model with default rates on loans based on a scoring model using both negative and positive information. According to the study, the default rate on loans approved using the negative-only system was 3.35 percent, whereas the default rate on loans approved using scores based on both positive and negative information dropped to 1.9 percent, a 43 percent decrease (Barron and Staten; see Figure 1.2). (The figures show the simulated credit defaults assuming an acceptance rate of 60 percent. The simulations were based on data in one of the largest U.S. credit bureaus.) A similar exercise was conducted using data from Brazil and Argentina, with similar results. That study showed that inclusion of positive information would have produced a 22 percent decrease in the default rate for Argentinean banks and a 45 percent decrease in default rates for Brazilian banks (Powell et al. 2004; see Figure 1.3). Thus, including positive information in scoring models produces better predictions and improves lenders’ ability to separate good from high-risk borrowers. For a bank with a \$100 million loan portfolio, this translates into an average savings of US\$830,000 in Argentina and US\$1.5 million in Brazil.

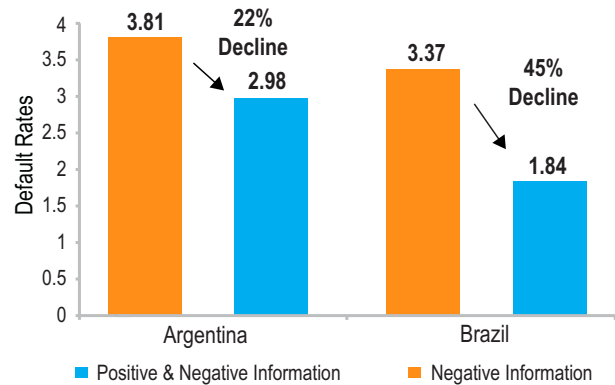
Figure 1.2. Effect on Default Rates of Including Positive Information, United States



Source: IFC, using Barron and Staten (2003) data.

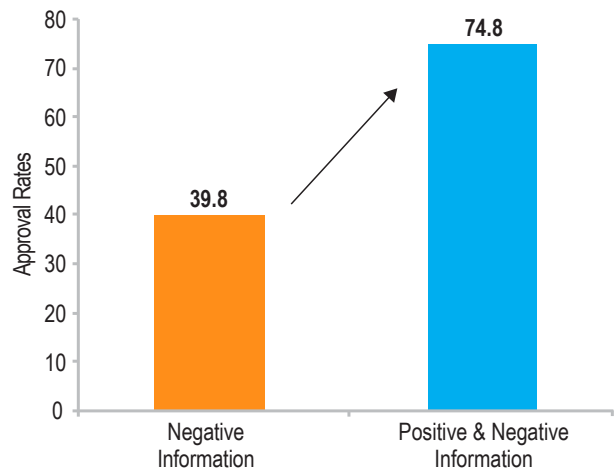
Figure 1.4 shows how including positive information increased approval rates by 88 percent in the simulation using data from the United States.

Figure 1.3. Effects on Default Rates of Including Positive Information, Argentina and Brazil



Source: IFC, using Powell, Mylenko, Miller, and Majnoni (2004) data.

Figure 1.4. Effect on Approvals of Including Positive Information



Source: IFC, using Barron and Staten (2003) data.

To summarize, negative-only databases pose the following problems:

- In a system where positive information is not reported, a borrower could remain excluded from credit access (for up to five years in some countries) based on a single negative event, regardless of the borrower's current payment record or other positive information that reflects favorably on the borrower.
- Furthermore, in negative-only reporting systems, lenders have no credit information on prospective borrowers who have never defaulted, since no information on them is reported. Borrowers could borrow from multiple sources and never default, even if they borrow from one source to repay another. In the long run, this borrowing pattern is unsustainable, as was seen in Hong Kong SAR and Korea (see Box 1.1).
- The biggest disadvantage of a negative-only system is that it does not acknowledge borrowers that pay all their dues and bills on time. Good borrowers should be rewarded for their good repayment behavior by receiving access to better products and services on better terms and conditions.

Consumer credit bureaus and commercial credit reporting companies collect positive credit information where the legal basis exists to do so and where the benefits of such information sharing are generally known and appreciated. Credit registries may collect positive credit information, but the scope of such collection may be limited, as discussed in chapter 2. In some markets, credit bureaus and commercial credit reporting companies may share data with credit registries to support the micro- and macroprudential supervision function, and this will greatly be abetted if these service providers also collect and share positive credit information. Examples include the Czech Republic, Republic of Korea, Mexico, Slovak Republic, Turkey, and the United Kingdom (IBRD 2016). In markets where credit registries do not exist, comprehensive credit information sharing databases (consumer or commercial) can still provide invaluable inputs to financial sector supervisors and regulators in meeting their mandate of ensuring financial stability.

Box 1.1. The Limitations of Negative-Only Reporting

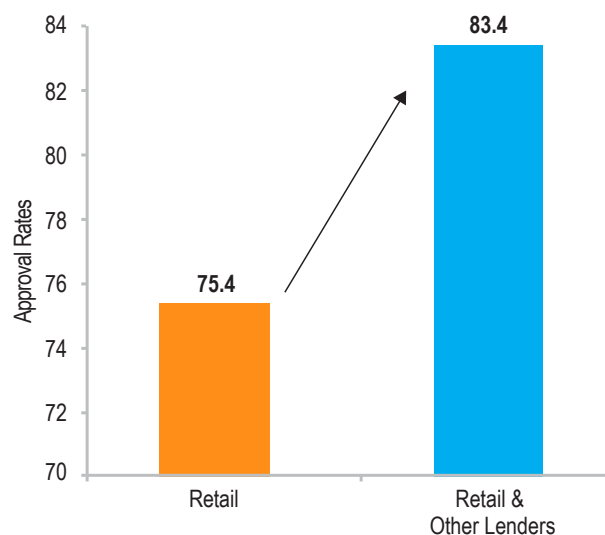
In the late 1990s, Hong Kong SAR, China, and the Republic of Korea experienced a major increase in retail credit defaults as a result of the unfortunate combination of reckless lending and the unavailability of positive information. While both had negative credit information registries, positive information was not being shared, and lenders were unaware of the level of indebtedness of existing and prospective borrowers. As competition in the credit

According to Doing Business 2019, approximately 87 percent of all credit bureaus surveyed collected and distributed both positive and negative information (World Bank 2019), often referred to as “comprehensive reporting.” Over 98 percent of all credit registries collected and distributed both. Regional maps in section 5 of the Appendix show the number of countries around the world that have adopted comprehensive credit reporting in their respective jurisdictions.

1.5. Full-File Information Sharing

Positive and negative information can be collected from a variety of sources. Credit reporting service providers collect information from both financial institutions, such as banks and credit card companies, and from a variety of nonfinancial institutions, such as utility companies and collateral registries, as well as from public records, such as bankruptcy records.

Figure 1.5. Effect of Including Positive Information on Approvals among Retailers and Other Lenders



Source: IFC, using Barron and Staten (2003) data.

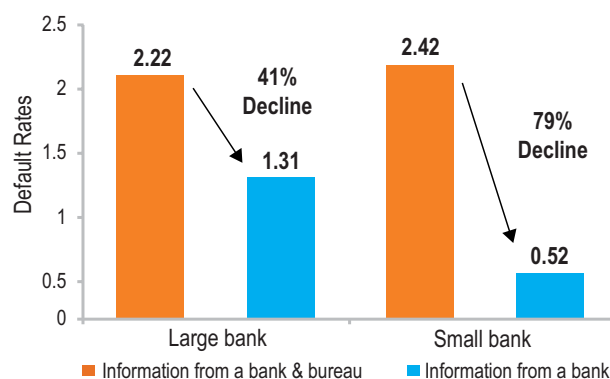
card market increased and banks marketed credit cards more aggressively, many consumers accumulated several credit cards. Borrowers would typically open one credit card account and then open another to pay off the debt accumulated on the first credit card. This borrowing was unsustainable and resulted in a large number of credit card defaults. Following the crises, both countries moved to a system of positive credit reporting.

Simulations using credit reporting data in the United States (Barron and Staten 2003; see Figure 1.5) also found that sharing positive information derived from a broader category of sources allows significant operational improvements by lowering defaults or increasing lending volumes to new categories of borrowers. (The figures show the simulated credit defaults assuming an acceptance rate of 60 percent. The simulations, based on data from one of the largest U.S. credit bureaus, show that a lender with a target approval rate of 60 percent was able to reduce default rates by 38 percent. If the default rate is used as a target, the bank would be able to approve 11 percent more clients before reaching the targeted 3 percent default rate.)

Credit information sharing benefits both small and large institutions. The study using data from Argentina (Powell et al. 2004) found that while small lenders do benefit more than large lenders from sharing information, large banks also benefit from a significant drop in defaults if positive information is used. Although the results may vary from country to country and from lender to lender, both anecdotal and available empirical evidence suggests that information sharing and use of credit scoring allow both large and small banks to reduce default rates and/or increase lending volumes significantly (see Figure 1.6).

In summary, credit reports combining both positive and negative information from both banks and nonbank lenders have the highest predictive power for credit risk assessments. Bureaus or credit registries fragmented by industry that provide only negative information deliver reports with less predictive power, often resulting in inaccurate credit risk assessments (See Figure 1.7).

Figure 1.6. Effect on Default Rates of Increasing Number of Information Sources



Source: IFC, using Barron and Staten (2003) data.

Figure 1.7. Effect of Types and Sources of Information on Predictive Power

Types of Information / Sources of Information	Positive & Negative Information	Negative Information
"Full" (Information Shared by Banks, Retailers, NBFIs)	High Predictiveness (e.g. U.S., U.K., India)	Lower Predictiveness (e.g. Botswana, Ewatini)
"Fragmented" (e.g. Information Shared Among Banks Only or Retail Only)	Lower Predictiveness (e.g. Mexico, Kuwait)	Lowest Predictiveness (e.g. Malaysia, Botswana)

Source: World Bank, Doing Business 2019.

Research by Martinez Peria, Soledad, and Singh (2014), using data on consumer credit bureaus that also collect data on firms, looks at the impact of credit information sharing on firm financing in a sample of 75,000 firms across 63 countries from 2002 to 2013. The results showed that credit information sharing increases access to finance for firms and improves the maturity of credit extended to firms, that is, financing for longer than a year. Such financing may be important for firm expansion and asset acquisition in the medium term. Martinez Peria, Soledad, and Singh show that the greater the depth and scope of information shared, the more beneficial the terms for firms accessing credit. Reform of credit information sharing environments particularly stands to benefit small firms with less experience, a sector generally relatively opaque to lenders.

One of the challenges of building credit information sharing based on traditional lending data is that it can tend to shut out new borrowers if they lack formal credit histories. These "thin file/no file" customers (often low-income groups, women, or small- and medium-sized enterprises) may not have had the opportunity, or the need, to borrow previously, and their lack of credit history can reduce future credit availability and access. CRSPs attempt to reflect a subject's balance sheet, and they often broaden the range of information gathered to include non-loan liabilities, such as utility company payables and income information. These categories too may be missing for low income or informal sector individuals, however. Innovations such as the collection and use of non-credit financial transactions data, social media profiles, payments data, and psychometrics could expand customer coverage and allow the benefits of full-information sharing to flow to a broader population.

Table 1.1. Benefits of Comprehensive and Full-File Information Sharing

Stakeholder	Benefits
Lenders, creditors, alternative data providers	<ul style="list-style-type: none"> • Ability to see the client’s complete range of credit obligations, payments status, and level of indebtedness or over-indebtedness • Ability to price risk appropriately and to provide customized products and services to meet clients’ specific needs • Tools to proactively manage consumer accounts for credit line increases or decreases, payment terms, interest rates, etc. • Ability to proactively manage collections by streamlining the collections process and maximizing collections by expending effort where most needed and where recovery rate is highest
Consumers	<ul style="list-style-type: none"> • Enables consumers to establish “reputational collateral” based on credit histories, thus reducing the need for physical collateral • Rewards consumers with on-time payments, no missed payments, and other good borrowing and repayment behavior; inspires creditors to offer them better terms of credit or higher credit lines • Benefits consumers through reporting of non-traditional data like telephone bills, utility payments, etc., to the credit bureau; consumers with no formal relationships with banks or other creditors can show they meet other payment obligations responsibly and are worthy of credit
Regulators and supervisors	<ul style="list-style-type: none"> • Allows regulators and supervisors to develop appropriate regulatory tools to assist in macro- and microprudential supervision • Provides supervisors with the information necessary to support systemic risk monitoring and prudential supervision

CHAPTER 2.

Credit Reporting Service Providers

The global credit reporting industry can be roughly divided into three homogeneous, but not exclusive, groupings: credit bureaus, credit registries, and commercial credit reporting companies. The database content, clientele, and associated services provided by these service providers can vary significantly from country to country. Consumer credit reporting companies, referred to herein as *credit bureaus*, collect information on individuals, including sensitive personal information such as Social Security Numbers (in the US) and bank account numbers and information. The compiled information is made available on request to customers of the credit bureau for purposes of credit risk assessment, credit scoring, or other similar purposes; consumer bureau customers include banks and other financial institutions that evaluate individuals for credit.

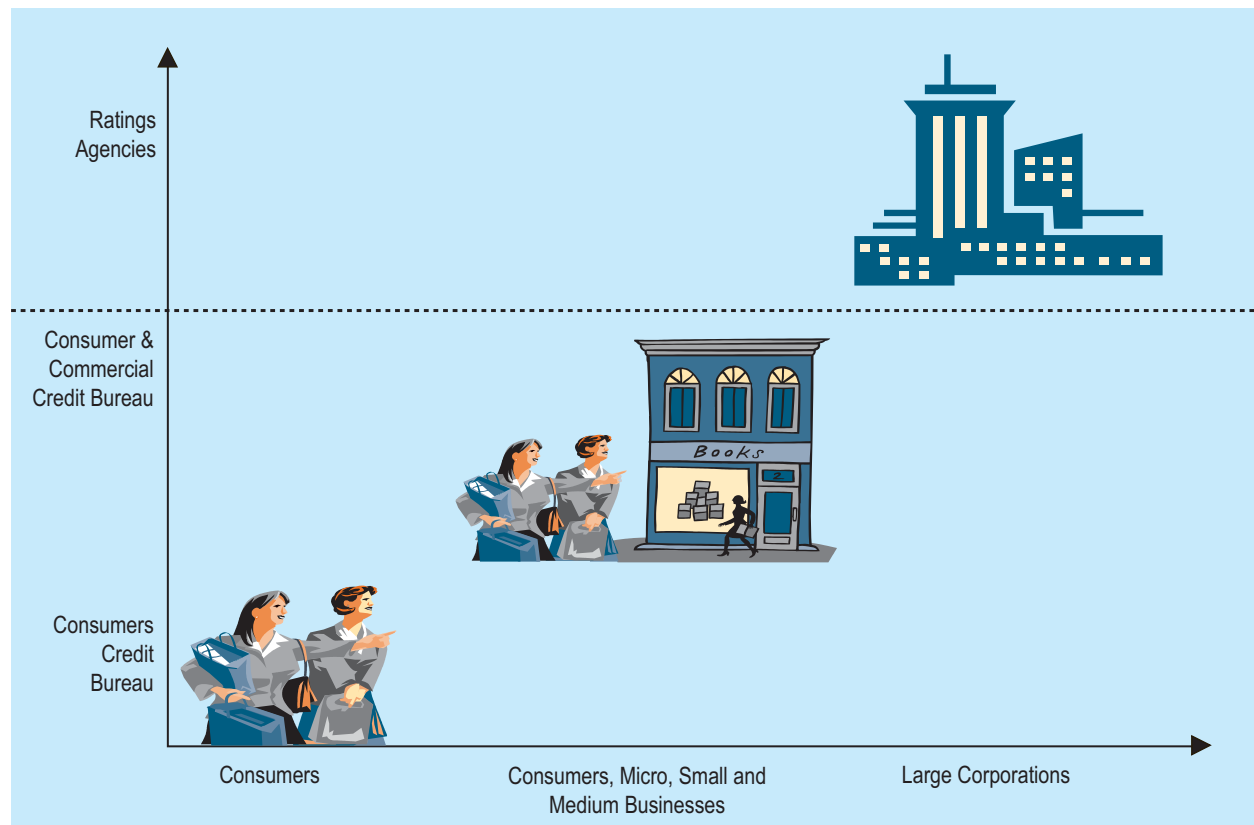
Credit registries generally support the state's role as a supervisor of financial institutions. Loans above a certain amount must, by law, be registered in the national credit registry, and in some cases, credit registries have relatively high thresholds for loans to be included in their databases. Credit registries tend to monitor loans made by regulated financial institutions. With the growth of consumer credit, loan value thresholds have been reduced or abolished, and in some countries (including Argentina, Belgium, France, Italy, Peru, and Spain), the credit registry often offers products and services similar to those of credit bureaus. Credit bureaus tend to cover smaller loans than credit registries, and they often collect information from a wide variety of financial and nonfinancial entities, including

retailers, credit card companies, and microfinance institutions. As a result, data collected by credit bureaus are often more comprehensive and better geared to assessing and monitoring clients' creditworthiness. In contrast, credit registry coverage tends to be limited by the scope of the data providers (regulated lenders only), and credit registries are often geared toward collecting system-wide information for macroprudential and other policy purposes.

Commercial credit reporting companies are credit reporting companies that collect information on businesses, including sole proprietorships, partnerships, and corporations. The compiled information is made available on request to customers of the commercial reporting company for the purposes of credit risk assessment, credit scoring, or other similar purposes, such as the extension of trade credit. Commercial credit reporting company customers include banks and other financial institutions that evaluate businesses for trade credit or insurance for business purposes.

Figure 2.1 shows the different data covered by these entities. The three types of credit reporting service providers have distinct differences in strengths and weaknesses, operating models, and markets served. All three providers can coexist in a given market based on the size of the market, market preferences, level of financial development, and credit culture. Some consumer credit bureaus also provide commercial services (such as CRIF, Creditinfo, Experian); thus, it is possible to have one entity covering both services. No single solution is more appropriate than another for any given market.

Figure 2.1. Data Subjects Covered by Type of CRSP



Source: IFC.

2.1. Functions of Credit Reporting Service Providers

Credit Bureaus

Credit bureaus provide credit information on individual borrowers and MSMEs to a wide range of credit providers. They collect information in a standardized format from a variety of credit providers, including banks, credit card companies, telecommunications and utility companies, retail lenders, and other nonbank financial institutions. They also collect and distribute a wide range of publicly available information (such as court judgments, bankruptcy notices, and telephone directories) and/or facilitate access to third-party databases (such as collateral registries, identification repositories, and telephone directories). Other information may come from nontraditional sources, such as billing data from gas, water, electricity, cable, telephone, internet, and other services, which enables credit bureaus to compile better and more comprehensive credit reports. According to the World Bank Doing Business survey, more than 45

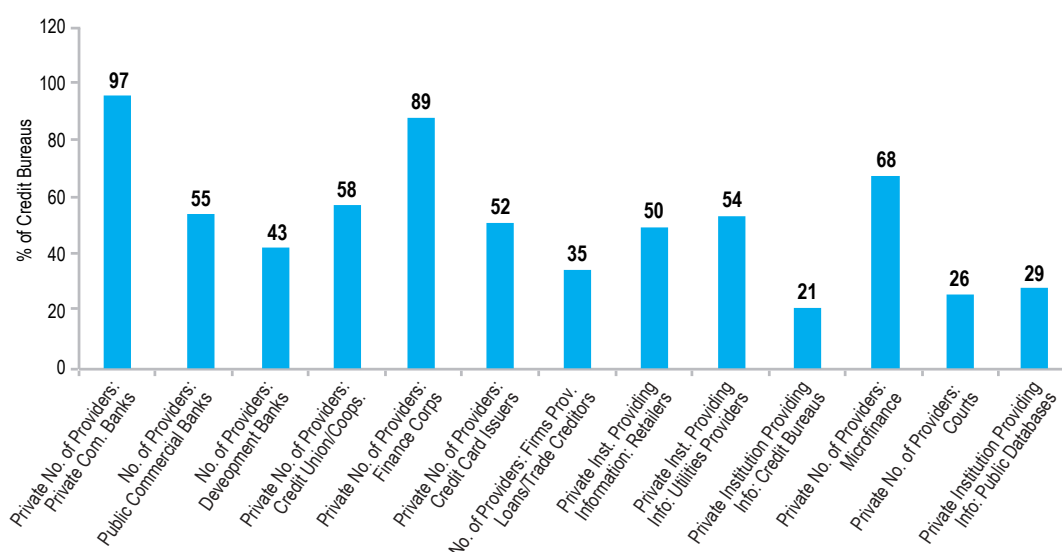
percent of private credit bureaus included information from utility providers, and more than 65 percent included information from microfinance institutions in their databases (World Bank 2019; see Figure 2.2). This broadened definition for data sources benefits unbanked individual borrowers and MSMEs by enabling them to build credit histories without necessarily having had formal access to credit, thus overcoming the trap of being ineligible for credit due to lack of a credit history.

Once data is collected, it is cross-checked to produce a credit report for each individual borrower, which is then sold to lenders. The report constitutes a comprehensive profile of a borrower or potential borrower's personal information and information on his or her credit accounts. The personal information section usually includes the borrower's name, former names, name of guarantor(s) if any, identification number (such as Social Security or other national identification number), date of birth, addresses, employment information, alerts (such as ID theft reported or security freezes), and date of last information update. The credit summary section

typically contains information on all of the borrowers' credit accounts (both open and closed), a record of the standing of the accounts (outstanding amount, past due amounts, and payment behavior history), and inquiries made about the borrower in the recent past. The reports normally also include repayment histories, noting payments over 12 to 36 months (World Bank 2012). Figure 2.3 shows the types of information credit bureaus collect on individuals.

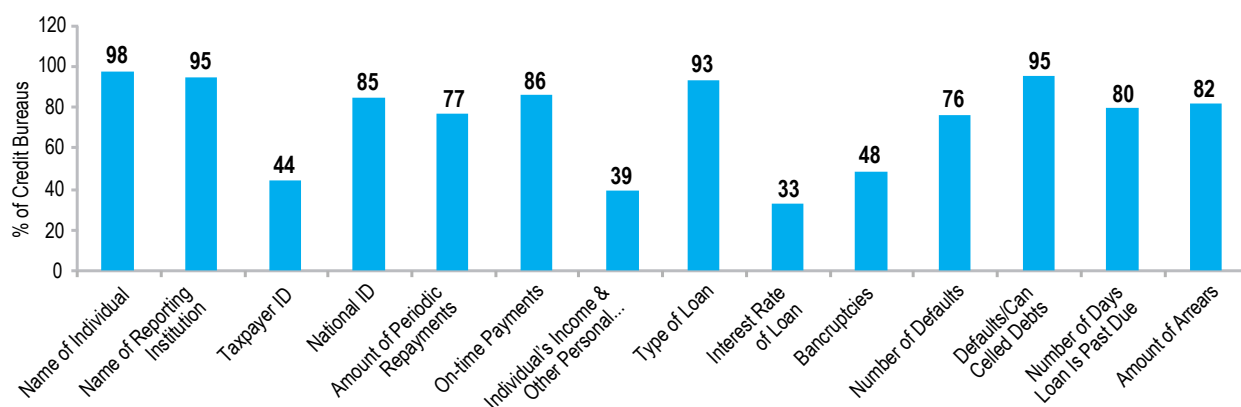
Borrowers' credit histories are often recorded in terms of the number of missed payments, using a format similar to the one in Figure 2.4. The credit report also provides information on collections made on outstanding accounts and any available public records, such as court judgments and bankruptcy rulings. In many countries, credit reports include a credit score, the statistical probability that a borrower will make good on his or her obligation, which is based on a number of characteristics (see section 6.3).

Figure 2.2. Sources of Information for Privately Held Credit Bureaus



Source: IFC calculation, based on Doing Business 2019 data.

Figure 2.3. Information on Individuals Collected by Credit Bureaus



Source: IFC calculation, based on Doing Business 2019 data.

Figure 2.4. Sample History of Payments

History of Payments: Observation Periods		
2018	2017	2016
DNOSAJJMAMFJ	DNOSAJ JMAMFJ	DNOSAJ J
12113242111	111011321 2121	1 1 23145

Source: IFC.

Reports are usually available to lenders electronically, and most modern large creditors have credit information data uploaded directly into their loan processing systems and originating software. Lenders pay the credit bureau for credit reports through a subscription fee, a fee-per-query with significant volume discounts, or a combination of both.

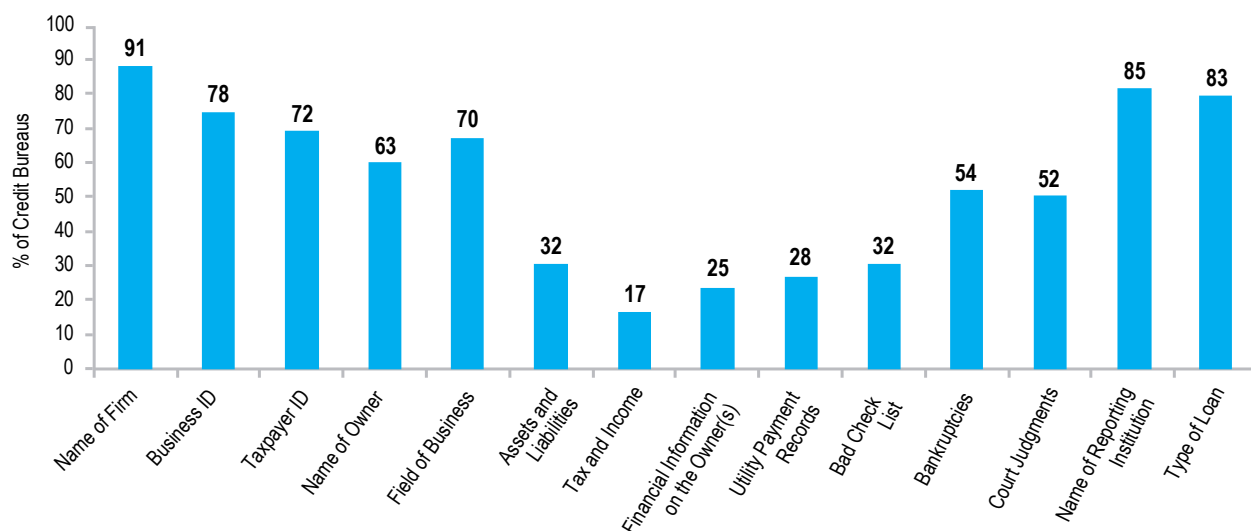
Historically, credit bureaus only collected information on individuals. In recent years, with the expansion of small business lending and advances in information technology, more credit bureaus collate and sell reports on small businesses. In a recent World Bank survey (World Bank 2019), approximately 91 percent of the 126 credit bureaus responding contained at least some information on firms. Approximately 35 percent of reporting credit bureaus also collected information from trade creditors or firms providing supplier credit, which is important in assessing a firm’s creditworthiness. Collecting information on both individuals and firms within the same credit bureau has the benefit of allowing a combined assessment of both a business

and its owner. The credit history of a small business owner is an important predictor of the credit risk of the small business, since small business owners often mix personal and business finances. Many individuals personally guarantee their business loans. In such cases, however, all appropriate laws and regulations on privacy rights must be considered and respected, and the bureau must ensure that borrowers’ personal data is used only for the permissible purposes specified in the legal and regulatory framework and is provided only to users that are legally allowed to access such data.

Credit Registries

Historically, credit registries and credit bureaus served different purposes. Most credit registries started out as internal databases within a country’s central bank and were, and in many cases still are, used as a supervision mechanism to identify systemic risk within the lending portfolios of regulated financial institutions. As such, these databases focused primarily on large credit exposures, typically (according to World Bank Doing Business survey data) with a loan threshold value in excess of US\$5,000, although, in some parts of Europe, higher thresholds apply: for example, €25,000 in France, €1 million in Germany, and €30,000 in Italy. In 2010 Mongolia’s credit registry eliminated the minimum threshold for loans included in its database. As a result, the registry’s coverage doubled after just one year. In Brazil, a circular that went into force in 2011 reduced the minimum threshold for loans reported by the central bank’s credit information system by 80 percent.

Figure 2.5. Firm-Level Information Collected by Credit Bureaus



Source: IFC calculation, based on Doing Business 2019 data.

Credit registries by definition mandate all regulated financial institutions to provide data to the registry (see Figure 2.6).

Doing Business 2019 survey data shows that credit registries actually collect information on individuals and firms, particularly identification information, details on loans outstanding, on-time payments, days past due, defaults, cancelled debts, arrears, and defaults, to name a few of the more common items collected. Registries rely largely on regulated financial institutions, banks, cooperatives and credit unions, and other finance providers for information. Some registries collect information from factoring and leasing companies. The Lithuanian credit registry also collects information from peer to peer lending platforms. Information from issuers of credit cards is typically not captured by registries (as opposed to bureaus, which collect a lot of information on credit card usage). Registries typically do not capture information from firms that provide loans (trade creditors), retailers, utility providers, credit bureaus, or courts.

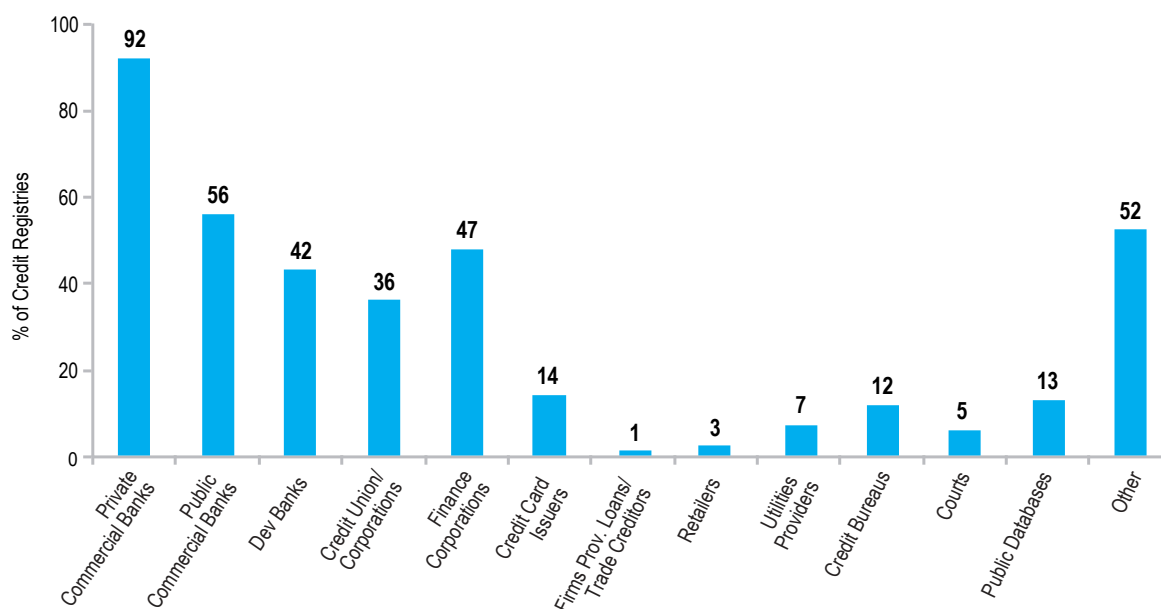
Initially, information in credit registries was used by central banks solely for internal purposes of prudential supervision; over time, credit registry information has been made available to lenders in the form of credit reports on both individual and firms. After collecting and aggregating the information, the credit registry provides a credit report to all reporting regulated financial

institutions showing the current aggregate exposures of regulated entities. Credit registries usually provide their credit reports at low or no cost to the lenders. Of the 87 credit registries that provided information to the World Bank survey on their costs to inspect data, only 14 listed a fee (World Bank 2012).

In some countries credit registries evolved due to an absence of other credit reporting service providers. A handful of credit registries also report that they provide scores on individuals and firms.

Following the financial crisis of 2008, financial sector supervisors generally accepted the need for a macroprudential approach to supervision of systemic financial risks. Central banks and/or other financial supervisors perform a series of analyses and have designed instruments to monitor financial system stability continuously and to take preventive measures if and where appropriate. Data obtained through credit registries (and/or other centralized credit databases operated by financial sector regulators or supervisors) is one major input allowing central banks and other financial sector regulators and supervisors to perform such analyses on a systemic basis. Moreover, credit data from these sources is crucial to calibrating macroprudential policy regulations or measures (such as countercyclical capital buffers or quantitative limits to certain key ratios in lending, such as loan-to-value and loan-to-income).

Figure 2.6. Sources of Information for Credit Registries



Source: IFC calculation, based on Doing Business 2019 data.

Credit data at the financial institution level is an important input for off-site supervision (IBRD 2016).

In fact, some central banks and financial supervisors already resort to credit bureaus and commercial credit bureaus to obtain the data they need to discharge their micro- and/or macroprudential responsibilities. Doing Business 2019 data show that approximately 12% of registries responding collected some information from credit bureaus. Depending on a number of factors, data in these CRSPs may be sought as a complement to the data available in the credit registry (or other credit databases operated by financial authorities); in some cases, it may actually be the main source for such data, for example, when a credit registry does not exist in the corresponding jurisdiction.

Commercial Credit Reporting Companies

The General Principles for Credit Reporting define commercial credit reporting companies as “Entities that collect information on businesses, including sole proprietorships, partnerships and corporations for the purpose of credit risk assessment, credit scoring or for other business purposes such as the extension of trade credit” (World Bank 2011). These entities collect credit data from banks, other regulated financial institutions, nonfinancial lenders, and other sources, generally targeting the medium- and large-sized company lending market; they also provide services to financial institutions to allow granting of loans, leases, and so on.

Commercial credit reporting serves a vital function in the extension of trade credit, which is the largest source of short-term capital for businesses. While direct investment provides the start-up capital for businesses, trade credit provides a significant part of the working capital for those businesses. When a business is extended trade credit by a supplier, that supplier essentially becomes a short-term lender to the business. Businesses may use such short-term loans to make payroll, buy other products and services, or otherwise invest in the business. Looked at this way, trade credit is often a business’s largest uninsured short-term asset.

But granting trade credit can be filled with risks, particularly when dealing with new customers or in uncertain times. Trade credit grantors need accurate, reliable, timely information to make informed decisions on whether to extend trade credit and, if so, how much to extend and for how long. Trade credit and commercial credit information are intertwined. Without commercial credit information, the issues of asymmetric information discussed in chapter 1 would impact the ability of

trade creditors to make objective lending decisions. By gathering information about the creditworthiness of businesses and providing that information to trade credit grantors and other creditors to small- and medium-sized businesses, commercial credit reporting companies perform an essential function, helping lenders to make credit decisions.

Commercial credit reporting companies provide information on companies, including sole proprietorships, partnerships, and corporations, available through public sources, direct investigations, and payment behavior reported by financial institutions, suppliers, and trade creditors. These credit reporting companies go by various names in different jurisdictions; for example, in the United States the term used is *business credit reporting agency*. They typically report on companies smaller in size and earnings than the corporations covered by credit rating agencies.

The information compiled by the commercial credit reporting companies is resold as **business credit reports**. Data comes from banks, suppliers, finance companies, lease registrations, business owners, and public records, such as tax liens, bankruptcies, and court judgments. In addition, commercial credit reporting companies conduct interviews with business owners and industry players, collect all available financial statement information on firms, and gather any publicly available information, for example, from news articles, websites, and so on (Business Information Industry Association (BIIA); Carbajo 2009).

A commercial credit report provides basic identification information on the firm, including address, contact details, business registration numbers, tax IDs, number of credit accounts the business has, how it uses and services its various credit lines, whether it pays its bills on time, what leases it holds, its payment history, how it pays suppliers and collects from customers (days payable and days receivable), the business’s financial performance, industry benchmarks for similar businesses, to name a few. The report may also provide linkages with other related parties, such as company parent or subsidiaries.

Typical elements in a commercial credit report include the firm’s identification details; trade references, including from those that have extended credit to the firm; information from public sources reporting the firm’s credit performance; results from investigations into public record filings, including collections, court actions, suits, liens, and so on; information from the web, the press, and other news sources; interviews with firm owners; industry comparables; financial statements; and more.

The information compiled through these commercial credit reporting companies is typically used for credit risk assessment or credit scoring or for other purposes, such as the extension of trade credit. Broadly speaking, these companies provide commercial credit reports and different scores showing for example, the business's creditworthiness or whether the business will become distressed in the next twelve months.

Commercial credit reporting companies do not collect and report sensitive personal information on individuals. When a lender assesses a business loan application, however, it will likely want to inquire into the personal credit of the underlying business owner/applicant. As noted, particularly for small businesses, personal and business finances tend to be commingled. The personal credit report is a testament to the personal financial behavior of the potential business loan borrower and will indicate how creditworthy and reliable the borrower will be if given a business loan. The lender would need to comply with any consent requirements while inquiring into the personal credit history of a borrower.

Given the benefits of linking personal records with small business records, several consumer credit bureaus have also begun commercial credit reporting. Small businesses are better served within the framework of a credit bureau that also handles consumer records, because the costs of collecting information on a small business, particularly where publicly available information is scarce, can be high relative to loan sizes.

Like consumer credit bureaus, strong competition in commercial credit reporting leads commercial credit reporting companies to differentiate themselves in terms of the sources from which they collect data, the types of information they collect, and the types of products and services they provide. Users of commercial credit reporting products and services include financial and nonfinancial sector lenders, credit insurers, and trade creditors. Large companies may also use these reports to conduct industry- or sector-related analyses and to develop new markets (World Bank 2014).

2.2 Ownership Structures

Owners and shareholders generally provide CRSP seed capital, negotiate and prepare the pre-incorporation agreements, lease or acquire office premises, and contract for the CRSP's initial needs, such as acquiring technological assets and recruiting the personnel necessary to manage day-to-day operations. Owners and shareholders may also be users of the service, for instance, when the CRSP is owned by member banks.

Credit bureaus (consumer and commercial) and credit registries normally serve separate functions. Whereas the former generally focus on making information available to financial and nonfinancial creditors for credit-granting purposes, the latter typically focus on assisting banking supervision while improving the quality and availability of data for supervised financial intermediaries. In some instances, however, bureaus both support banking supervision and make data available to creditors in the market. Credit registries operating under this broad categorization are mostly owned and operated by public sector entities, such as a central bank or other monetary/financial supervisory authority, that is, by the entities directly responsible for prudential supervision and risk monitoring in an economy.

Consumer credit bureaus deal largely with providing financial and nonfinancial creditors with credit history information, but they could in some cases support the overall supervision and risk monitoring function. Depending on its function and the range of stakeholders involved, the ownership structure of a consumer credit bureau can fall into one of many categories:

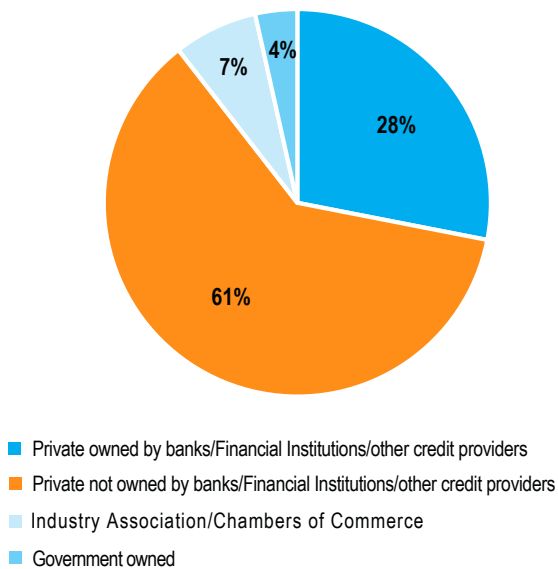
- *Banks and/or other creditors as either majority or minority shareholders.* The Association of Banks in Singapore, for example, owns a share in Singapore's credit bureau. Other countries in which a group of banks owns credit bureaus include Bhutan, Croatia, Poland, Romania, Saudi Arabia, and Serbia.
- *Owned and operated by a separate entity with no creditor ownership.* Individual entrepreneurs or organizations that provide venture capital for the establishment of CRSPs may also become shareholders: examples are DP Information in Singapore, Datacheck in Pakistan, CompuScan in South Africa, and CRB Africa in Kenya. Many CRSPs have technical partners to manage the information technology requirements of the reporting system. It is not uncommon for technical partners to hold an ownership share in the company.
- *An association or chamber of commerce mostly operating on membership fees.*
- *Partially or wholly owned by government entities.* Complete ownership by government entities is rather rare. In some countries, government entities (for example, the central bank in Sri Lanka or the Monetary Authority of Bhutan) or public sector financial institutions (as in India and Thailand) are shareholders in the credit bureau. In Sudan and the United Arab Emirates, the credit bureau is owned by government entities.

According to World Bank Doing Business survey data (2019), of 114 credit bureaus responding, approximately

61 percent were privately held with no ownership by banks, financial institutions, or credit card providers; 28 percent were owned by banks, financial institutions, or credit card providers; 7 percent were held by industry associations or chambers of commerce; and 4 percent were partially or fully owned by governments. (See Figure 2.7.) In a gradual shift over time, more and more bureaus with private ownership, as opposed to ownership by lenders or other entities, have emerged. This is due in part to the growing recognition that the credit reporting business is fairly sophisticated and that meeting market needs requires high-end technology; regular investments in technology, infrastructure, and data security; and continual innovation.

Credit bureaus in which creditors have no ownership—such as the bureau in Australia and New Zealand (formerly Veda Advantage, now Equifax) or Experian and TransUnion in the United States—are viewed as more efficient structures because credit reporting is their core business and because the shareholders’ main objective is to maximize business value by expanding operations and providing new and innovative products and services. Conflicts of interest are minimal because the bureau’s relationships with members and users are driven by commercial interests. Although this is the ideal structure, it is often not feasible

Figure 2.7. Ownership Structures of Credit Bureaus



Source: IFC calculation, based on Doing Business 2019 data.

in countries developing their first credit reporting service because lenders are often reluctant to share information unless they are shareholders (and therefore share control). Often, lenders resist sharing their customer information with a newly established bureau until they are certain that other lenders will do the same. Therefore, an independently owned bureau should obtain commitment from as many lenders and data sources as possible before starting up operations. Another potential challenge for independently owned bureaus is limited capital (with no shareholder banks provide back-up capital injection if necessary).

In several countries, such as Argentina, Croatia, Germany, India, Mexico, Romania, the Russian Federation, and Vietnam, bureaus have included ownership by creditors. This ownership structure has the advantage of allowing a faster startup because the banks’ agreement to become shareholders brings about a strong commitment to the principle of reciprocity in information sharing. Furthermore, the commitment by existing lenders promises long-term financing. Participation by a government authority may also add credibility to the venture. Including a technical partner as a shareholder allows the credit reporting service provider to better align its incentives and to focus on operational efficiency.

Bureaus that include ownership by creditors can, however, face challenges as stakeholder differences can get in the way of maximizing business value. Creditor shareholders may be reluctant to allow new creditors to participate because these newcomers, while unable to contribute significant amounts of information, would benefit greatly from having access to information on existing clients. Furthermore, when creditors own the credit bureau, they are less likely to use the services of any other bureau, thus increasing barriers to entry in the credit reporting market by other credit reporting service providers. If only a few banks are shareholders, but several other banks or nonbank creditors, such as microfinance institutions, are bureau members, it is possible that shareholding banks may influence the pricing policy in a manner that penalizes non-shareholder members. Such unfair practices can be avoided if ownership by individual creditors is limited. In general, shareholders who are also users of the system have an inherent conflict of interest in setting prices between their role as shareholders wishing to maximize company profit and as system users wishing to minimize usage costs.

Partial government ownership in credit bureaus is rare, but it has been seen in some markets, where equity

investment by government helps boost private investor confidence. For instance, Sri Lanka's Credit Information Bureau (CRIB) was established as a public-private partnership in which the central bank originally held a 49 percent equity stake (now reduced to 19 percent), with the rest held by banks and financial institutions (World Bank 2017a). In India, the State Bank of India and the Housing Development Finance Corporation Ltd. (HDFC) were majority shareholders (40 percent each) of the Credit Information Bureau (India) Ltd (CIBIL) when it was established in 2006. At the time, Dun & Bradstreet and TransUnion held the remaining 20 percent (10 percent each). Over the years, other banks joined as shareholders, and State Bank of India and HDFC have exited, leaving TransUnion as the bureau's single major shareholder (currently holding 92 percent). Credit bureau ownership by banks and other creditors has been a growing trend in emerging markets. In IFC's experience, however, as lenders gain more trust in the operations of a credit bureau they tend to divest their shareholdings (as in the Dominican Republic and Hong Kong SAR, China, for example). Table 2.1 summarizes the different ownership structures and the advantages and disadvantages of each.

Commercial credit reporting companies can be publicly traded companies, privately run, or small one-person operations of entities collecting and compiling data on firms.

2.3. Optimal Market Size

The credit bureau business is characterized by network externalities and economies of scale that could classify the business as a natural monopoly. Ongoing debate on the optimal number of CRSPs in a market has not produced consensus thus far. On the one hand, a single credit reporting service provider combining aggregated information across the entire system and including both bank and nonbank credit information would provide lenders with the most complete set of information, including comprehensive inquiry information. On the other hand, the lack of competition eliminates incentives for such providers to improve data quality, incorporate value-added services, and lower prices.

Competitive credit information industries are more common in large markets that can support more than one CRSP. In the United States, for example, consolidation in the financial services industry over the past three or more decades has resulted in three major credit bureaus operating concurrently and competing on the basis

of product and service differentiation. In the United Kingdom, the three major credit bureaus all contain information from the same banks, but they compete on the quality of information and on value-added services. Competitive credit information industries also exist in Italy, India, South Africa, Scandinavia, and the Baltic states.

Commercial credit reporting companies generally operate outside the ambit of formal legislation and regulation as they deal with business information of firms. To the extent these entities match firm-level information with individual owner information (as in the case of sole proprietorships, LLCs, and so on), they would be subject to existing credit reporting or consumer credit protection laws and measures. No consistent body of knowledge appears to surround commercial credit reporting. Providers of commercial credit reporting services emerge organically (as was the case with consumer credit reporting) and reflect market needs in any given jurisdiction. In the absence of legislation, nothing limits the number of providers possible in a given jurisdiction, although market dynamics would eventually determine the optimal number for any market, as is also true for consumer credit reporting. The industry tends to be very competitive and can focus on certain sectors or subsectors, possibly leading to fragmentation of information. The requirements to set up a commercial credit reporting company would ultimately depend on the strength of the owner/ownership structure, the availability of capital, technical and business knowhow, a viable business plan, and a strategy for meeting the business information needs of lenders.

Whereas the number of credit bureaus and commercial credit reporting companies differs based on each country's needs and level of market competitiveness, most countries have only one credit registry. Indeed, bureaus, commercial credit reporting companies, and registries are by no means mutually exclusive, and in several countries they exist side by side. In those instances, registries typically assist the financial supervisors in prudential supervision and risk monitoring and often provide comprehensive reporting to regulated financial institutions. Bureaus and commercial credit reporting companies largely support the credit reporting needs of financial and nonfinancial creditors and, in some instances, provide statistical information to the supervisor or credit registry to assist with prudential supervision (this occurs, for example, in Austria and Italy).

Table 2.1. Comparison of Credit Bureau Ownership Structures

	Commercial, with ownership by creditors	Commercial, no ownership by creditors	Noncommercial, creditor association	Government ownership (partial or full)
Pros	<ul style="list-style-type: none"> • Often the only feasible way to establish a credit bureau and ensure buy-in from lenders • Lender support implies strong commitment, and ensures bureau sustainability • Technical partners enhance the credit bureau’s creditworthiness • Commercial outlook ensures innovation and high-quality service 	<ul style="list-style-type: none"> • No conflicts of interest in management • Commercial outlook ensures innovation and high-quality service • Open for broad market coverage 	<ul style="list-style-type: none"> • Cost support through the association 	<ul style="list-style-type: none"> • Boosts confidence of private sector, creditors, and technical partners
Cons	<ul style="list-style-type: none"> • Conflicts of interest are possible, with existing shareholders resisting the entry of new lenders into the credit bureau or the introduction of new services • Slow decision-making process, as diverging views of large numbers of shareholders must be accommodated • Barriers to entry for new providers as well as new members 	<ul style="list-style-type: none"> • Banks are generally unwilling to share data without taking ownership in a bureau • Lack of capital 	<ul style="list-style-type: none"> • Limited incentives to innovate • Usually lower quality of service than in a for-profit bureau • Slow decision-making process 	<ul style="list-style-type: none"> • Inefficient use of government resources • Government as shareholder creates conflict of interest between supervisory and shareholder functions
Examples	<ul style="list-style-type: none"> • CRIF (Italy) • Creditinfo (Iceland) • SCHUFA (Germany) • Serasa (Brasil) • SIMAH (KSA) 	<ul style="list-style-type: none"> • Equifax (US, Spain) • Experian (US, UK) • TransUnion (US) • Compuscan (South Africa) • Datacheck (Pakistan) 	<ul style="list-style-type: none"> • Taiwan • Bolivia 	<ul style="list-style-type: none"> • Sri Lanka • Thailand • United Arab Emirates

Source: IFC 2018.

Multi-CRSP Environments

As mentioned, the size and level of activity in any given jurisdiction’s credit market will determine the number of credit reporting service providers. Having more service providers ensures that the credit information sharing market remains competitive and that users receive products and services at the best possible prices and, as their needs change, innovative new products and services. Having multiple bureaus or commercial credit reporting companies comes with its own set of challenges, however, including:

- Multiple service providers can lead to market fragmentation of data, with different service providers offering different types of information, thus creating a fragmented picture of the underlying data subject.
- Users may need to inquire with more than one service provider to obtain a particular data subject’s complete credit history, thus incurring higher costs from buying multiple products and services.
- If standardized data dictionaries and formats are not used, users will need to adapt to differences in credit reporting products and services and train their staff

authorized to use the systems to adapt to the market’s multiple service providers.

The Link with Collateral Registries

In addition to having access to credit information on small and medium enterprises, which require collateral for lending, collateral registries—public databases that register the security interests over an asset and/or collateral—can greatly enhance lenders’ ability to make informed lending decisions. One reason lenders prefer fixed to moveable collateral is that existing liens on moveable collateral can be difficult to determine. With a collateral registry, lenders can use it to ascertain whether a security interest (lien or encumbrance) exists over the SME asset and whether a particular piece of collateral has any competing claims against it. The registry enables potential lenders to establish priority rights over collateral against which they extend a credit facility.

While it may appear that bureaus and collateral registries hold the same types of information, the systems have distinct features, serve different functions, and actually provide complementary information. A key legal principle in modern secured transactions law is that a creditor’s security interest over a debtor’s collateral should be publicized to all interested third parties through publication in a collateral registry. Once the creditor has registered a security interest in the collateral registry, the

interest is a matter of public record and is available for anyone to search. Data contained in a credit bureau, on the other hand, is private and can only be accessed with the consent of the potential borrower as applicable.

A second very important distinction is that the registered security interest (data) in the collateral registry has legal standing as a public record under secured transactions law. The record in the collateral registry has legal standing in court, and in the event of a default, the information contained on registry reports from the collateral registry are evidentiary proof of a creditor’s priority rights over that collateral. The collateral registry establishes this legal status by affixing a unique registration or transaction number and date and time stamping the transaction. On the other hand, the records/reports coming from the credit bureau have no legal standing in court.

Further, information contained in the collateral registry is very limited in depth on creditors and debtors. The collateral registry contains only information on debtors with an outstanding loan facility with a credit provider. If the debtor owes no outstanding security interest (loan), the collateral registry should have no record. Credit bureaus, in contrast, track debtors’ credit histories.

Generally, the information collected by collateral registries is limited to information on certain classes of movable property of borrowers, while information collected by CRSPs includes borrowers’ credit histories

Table 2.2. Differences Between the Various Types of CRSPs

Category	Credit Bureaus	Credit Registries	Commercial Credit Reporting Companies
Coverage	Retail, micro, small business	Retail and commercial	Commercial
Sources	Various	Mostly regulated lenders, supplemented with data from credit bureau and commercial credit reporting companies	Various
Products and Services	<ul style="list-style-type: none"> • Credit Reports • Bureau Scores • Alerts • Monitoring • Industry analysis 	Supervision statistics	<ul style="list-style-type: none"> • Commercial credit reports • Scores • Alerts • Monitoring
Regulation	Increasingly regulated	Central Bank laws	No specific legislation
Types of information collected	Sensitive personal information, credit information	Credit portfolio data on individuals and firms	<ul style="list-style-type: none"> • Credit history data of businesses • Financial data • Payment performance data
Average ticket size	All possible loan sizes	Generally, threshold applies	Not related on the loan size
Disclosure of source of information	Yes, to protect individual rights	Not applicable	Depends of the source of data in the given country

and past payment behaviors. Theoretically, information on one borrower (credit history, past payment behavior, mortgage, immovable property, and assets encumbered by security interests) could be collected by, and be available from, one location rather than from both a CRSP and a collateral registry. Accordingly, potential synergies can exist between CRSPs and collateral registries. More mature credit reporting service providers with developed databases and sophisticated technology platforms have the capacity to incorporate information on credit reports from collateral registries; this is possible in the United Kingdom, where credit bureaus can access the Land Registry that records property interests. These providers may also have the potential to develop their own collateral database and perform the function normally performed by collateral registries.

CRSPs can provide access to data in a collateral registry either by establishing and hosting a collateral registry as part of their value-added services or by joining an existing collateral registry database and sharing the technology resources. In developing markets, where technical infrastructure and local capacity are inadequate to support the development of both a credit reporting service provider and a collateral registry, joint solutions are likely to gain acceptance.

Three models can be considered for setting up a joint credit reporting and collateral registry service:

- Where the appropriate governance structure is in place, create a CRSP and collateral registry within the same private-sector institution.
- Create a public-private sector partnership.
- Establish the functions of both a CRSP and a collateral registry under one government agency, such as the central bank.

A version of the first model is being undertaken in Sri Lanka, where the credit bureau, Credit Information Bureau (CRIB), has been mandated by law to create and operate the movable property registry. IFC provides technical assistance to CRIB and the government in developing the appropriate legislative regime, creating the collateral registry, and developing the appropriate business model to support the operation. Currently, the draft amended Secured Transactions and Collateral Registry law is at parliament and likely to be approved sometime in 2018. In the amended law, the specific reference to CRIB has been removed and replaced with a generic description of a service provider. Although, no intention exists to remove collateral registry functions from CRIB at this time, it would be possible to do so in the future should the government find it necessary.

A version of the public-private partnership model can be found in some countries in Latin America (for example, in Colombia and El Salvador) in which the government has delegated public functions, such as the establishment and management of the collateral registry, to private sector institutions (among them, chambers of commerce). An example of combining a CRSP and a collateral registry under one government agency can be found in China, where both are managed under the Credit Reference Center, in turn a part of the People's Bank of China. An example of combining a CRSP and a collateral registry under one government agency can be found in China, where both are managed under the Credit Reference Center, in turn a part of the People's Bank of China.

A joint infrastructure enables more efficient use of scarce technical and human resources and allows sharing of common disaster-recovery facilities and business continuity plans. It also helps to boost lenders' use of the collateral registry. Differences between the two types of services must be taken into account when setting up such joint infrastructure, however. Whereas the data contained in CRSPs are private, individual data, the data held in collateral registries are publicly available. Thus, any joint infrastructure should involve a governance arrangement that ensures the two databases are kept separate even while being hosted in the same infrastructure. Transparent service-level agreements will be needed between the government entity and the CRSP hosting the collateral registry.

In summary, the development of comprehensive financial market infrastructure—particularly secured transactions laws and collateral registries together with credit bureaus—promote financial stability and access to finance by reducing information asymmetry. While they may collect similar data information on borrowers, they serve different functions. Credit bureaus provide creditors with a history of debtors' financial obligations and their repayment histories, allowing lenders to determine debtors' creditworthiness. The collateral registry, via publication in the registry, provides lenders with information on whether debtors have any security interests (liens) registered against their movable collaterals; in addition, through the legal provisions contained in the relevant legal framework, the registry also ranks creditors' competing priority claims in the event of a debtor default. Both systems play important roles in lenders' decision making when pricing the risk of a credit facility.

Table 2.3. Credit Reporting and Collateral Regimes: Linkages and Synergies

<p>STR and Credit Bureaus: similarities</p> <ul style="list-style-type: none"> • Similar tombstone data <ul style="list-style-type: none"> • Name, address, contact details • Same creditors, debtors • Same financial transactions • Both institutions are considered as vital pillars of the financial infrastructure <ul style="list-style-type: none"> • Both have ability to provide valuable statistical data for policy makers • Trusted third party • Technology platform 	<p>STR and Credit Bureaus: differences</p> <p>Credit Bureau Purpose and Function</p> <ul style="list-style-type: none"> • Governed by principles of secrecy (legislation; licensing/oversight; codes of conduct; membership agreements) • Providing data in an informational way <ul style="list-style-type: none"> • No warranty on accuracy of match or information provided • Positive and negative information and public information • Multiple products and services • Business Model – private = commercially oriented • Publicly or privately owned or mixture • May be more than one in any jurisdiction <p>Collateral Registry Purpose and Function</p> <ul style="list-style-type: none"> • Govern by principles of publicity • STR search criteria is a legal test providing evidentiary proof • Result from search can be utilized to enforce priority • Can be paper or electronic via internet • Mission critical application: registration tied to disbursement of money • Business Model: government service; not for profit • Government owned
<p>Potential Synergies</p> <ul style="list-style-type: none"> • Advanced credit bureaus have potential to include information from collateral registries and to provide this information as a service to their clients. • Credit Bureaus have potential to develop their own collateral database and perform functions performed by collateral registries. • Credit bureaus could be more than a source of credit reports; they could provide clients with two functions in the sphere of STR: <ul style="list-style-type: none"> • Inquiry: allows lender to ascertain the nature of an asset offered as collateral (if encumbered or not) prior to acceptance of the assets • Registration of interest: allows a lender to register a security interest in the asset 	
<p>Benefits</p> <ul style="list-style-type: none"> • The arrangement can be useful in emerging markets where the technical infrastructure or local capacity may be inadequate to support the development of both a credit bureau and collateral registry. • Emerging markets are exploring the possibility of a credit bureau and registry cohabiting within a single private sector institution, a single public/private institution, or a single government agency. 	
<p>Challenges</p> <ul style="list-style-type: none"> • Credit Bureaus are governed by data privacy and protection rules; collateral registries operate on the premise of publicity. • Challenges can be resolved under a governance model providing a suitable and transparent service-level agreement between the Government and private sector bureau. • Respective data elements can be maintained in separate partitions within the same shared infrastructure and benefit from same disaster recovery facilities and business continuity plans. 	



CHAPTER 3.

The Evolution and Growth of Credit Reporting Systems

3.1. The Evolution of Credit Reporting Systems

The first credit bureau may be traced back to London in the early 1800s. The real evolution of credit information systems, however, started in the 1950s, and since then modern credit reporting has evolved rapidly, fueled by improvements in technology and the expansion of credit. This process has made access to credit almost ubiquitous in developed markets by allowing banks to move from the traditional, subjective approach to granting credit to more automated lending processes assisted by inputs from quantitative models. As a result, lenders can now deliver financial services at significantly reduced costs and expand credit to broader segments of the economy, thus further democratizing credit services. In particular, the introduction of credit scoring in United States in the 1950s—coupled with the automation of workflow and credit underwriting—played a key role in the rapid rise of consumer lending.

Latin America has some of the oldest credit bureaus in the world, but it was not until the 1990s, that privately operated credit bureaus started to take off in most other emerging markets. Between 1990 and 2018, the number of credit bureaus in the world almost doubled. In Asia, many markets turned toward private credit reporting after the financial crisis in the late 1990s. From the early 1990s to the late 2000s, a significant number of credit bureaus emerged in Eastern Europe. Since the inception of the Global Credit Bureau Program (later renamed Global Credit Reporting Program and now known as Credit Information Solution), IFC and the World Bank have supported the development of credit bureaus in Central Asia, South Asia, East and Southeast Asia, Latin

America and the Caribbean, the Middle East and North Africa, and Sub-Saharan Africa. The Middle East and North Africa and Sub-Saharan African regions have seen the most growth in development of credit reporting systems in the last decade. As a result, credit reporting service providers now operate in Botswana, China, Egypt, Ghana, India, Kenya, the Kyrgyz Republic, Mongolia, Morocco, Nepal, Pakistan, the Philippines, Sri Lanka, Tajikistan, the UEMOA region, Uzbekistan, and islands in the Pacific, to name a few locations.

More recently and significantly, the UEMOA region (consisting of eight francophone countries under one common Central Bank, the Banque Centrale des Etats de l’Afrique de l’Ouest (BCEAO), has licensed a regional credit bureau provider to serve all eight countries in what is truly a first in regional credit information sharing. (See section 7.7 for more information.) Several countries in the Caribbean have established credit bureaus in the last five to six years (including Jamaica, Guyana), while others have passed legislation to allow credit reporting to develop (The Bahamas, OECS) In South Asia, bureaus have been established in most South Asian countries in the last ten years (Bhutan, ongoing reform in Myanmar).

The intensifying motivation to develop credit registries is the increasing recognition that sufficient underlying data is necessary to support prudential supervision and systemic risk monitoring by financial systems supervisors and regulators. The earliest record of a credit registry dates back to 1934, when the German credit registry was established; in 2018, 122 countries reported having a credit registry. Coverage across regions is uneven: OECD countries lead with 64.44 percent of adults covered; followed by Europe and Central Asia with

51.32 percent of adults covered; Latin America and the Caribbean have 44.09 percent coverage ; and East Asia and the Pacific have 33.60 percent. Countries in South Asia have 18.52 percent of adult coverage followed by the Middle East and North Africa with 18.11 percent of adults covered, while coverage in Sub-Saharan Africa remains low at 7.02 percent (World Bank 2019).

The World Bank Group has worked in partnership with several governments to improve existing credit registries or establish public-private partnerships. Some of the WBG's work with credit registries took place in Afghanistan, Algeria, China, Ethiopia, the Lao People's Democratic Republic, and Maldives for public credit registries; and Indonesia, the Philippines, and Uzbekistan for joint public-private partnerships. Many reform-minded countries support development of credit reporting services along with broader reforms for greater access to finance and promotion of responsible lending practices. Map 1 in the appendices shows the location of Credit Bureaus and Credit Registries around the world.

Commercial credit reporting essentially evolved as merchants found they lacked sufficient information to provide credit to borrowers. The international leader in commercial credit reporting, and one of the oldest commercial credit reporting companies, Dun & Bradstreet, traces its roots back to the Mercantile Exchange established in New York City in 1841. Formerly, the company delivered its reference books to subscribers under lock and key. Today, it holds information on 265 million businesses worldwide. Several consumer credit reporting companies, such as Equifax, Experian, Creditinfo, and CRIF, also provide business information services on small businesses. In some countries, such as the United Kingdom, Equifax and Experian also hold information on medium and large enterprises. The market for commercial credit reporting is fragmented, with several smaller players sometimes providing industry-specific business information (reporting for the construction sector, for example). The development of commercial credit reporting largely depends on the demands of such

services on one hand and the existence of publicly available information on the other.

The credit reporting industry is a complex industry that has evolved over time in response to the very specific needs of different actors in different jurisdictions. Given the number of stakeholders involved in different aspects of credit information sharing and the industry's reliance on fundamental information sharing technologies, the rapid changes in the financial sector imply more changes for the credit information sharing sector going forward. The sector as a whole is being transformed by the new technologies, processes, systems, players, and information sources that have mushroomed in the last decade or so. While these changes are still fairly recent and continuing to develop, leading credit reporting service providers are proactively taking measures to respond by adapting, incorporating new technologies into their existing platforms, partnering with new players, and creating new products and services. The future of credit reporting depends on the industry's ongoing response to these and future changes ahead. Change notwithstanding, the business of credit information sharing is fundamentally anchored in the basic principles set out in *General Principles for Credit Reporting*,⁴ which continue to hold, even as the types of providers, data sources, or technologies shift.

3.2. Factors Affecting the Growth of Credit Reporting Systems

According to Doing Business 2019 "Getting Credit" indicator (World Bank 2018), 173 of 201 countries surveyed had either a credit bureau or a credit registry at the end of 2018. The credit reporting industry has experienced unprecedented growth since 2000, especially in emerging markets (see Figures 3.1 and 3.3). This growth was driven by several factors, discussed here.

4. In 2008, the World Bank Group, in collaboration with the Bank for International Settlements, launched the Credit Reporting Standards Setting Task Force to develop guidelines and universal standards for credit reporting systems. The 26 individuals on the task force represented public credit registries, industry regulators, private industry associations, developmental financial institutions, and data protection specialists. The task force analyzed issues affecting the creation and overall functioning of domestic credit reporting systems, the potential for growth in cross-border data flows, and their continuous development through reforms. It defined guiding principles for use in promoting best practice in any credit information sharing environment, taking into account the balance between the financial services industry's need to access data and the rights of the individuals/businesses to whom that data pertains. See Appendix 3 for more information.

High Growth of Retail Credit in Emerging Markets

Between 1985 and 1995, unfavorable macroeconomic environments and structural restrictions in credit markets in emerging economies constrained credit growth. During this period, the private credit-to-GDP ratio for the emerging markets increased from 35 to 45 percent (World Bank World Development Indicators, July 2012; the data was based on domestic credit to private sector as a percent of GDP). Financial liberalization and improved macroeconomic stability saw steadily rising private credit to GDP ratios from about 46 percent in 1996 to 104 percent in 2016, barring two years following the 2008 financial crisis (World Bank Data 2018). When looking at private credit to GDP by the financial sector, including nonbank lenders, this percent went up from about 57 percent to 148 percent over the same period. With the rapid increase in credit provision, as well as entrance of new types of lenders in the retail credit market, the need for credit information and streamlined lending processes grew, leading to the establishment of credit reporting services and greater demand for these types of reforms.

Broad Reforms Stemming from the Financial Crisis

The 2008 financial crisis provided major impetus for broad reform efforts at the national level as authorities in developed and emerging markets realized the need for strengthening and improving financial infrastructure, including credit reporting systems. The introduction and rollout of the Basel III accords, which raised the capital provisioning requirements for banks, also underlined the need for more stringent risk assessment and management frameworks; this in turn motivated an interest in developing or reforming credit registries to collect credit data to support both micro- and macroprudential supervision and regulation.

The Rise of Digital Access to Credit

The past ten years or so have seen a gradual increase in digital forms of access to credit. Some limits typically affecting traditional access to credit, as well as microfinance, are the necessity of a proximity to lenders, outdated processes for risk assessment (including subjective valuations), and time to disburse. The most prevalent new models link telcos and banks in offering credit and use mobile handsets and mobile behavior

data to make credit decisions. Consensus has not been reached, however, on whether the benefits of digital access to credit outweigh the risks: namely, whether uncontrolled or unchecked lending can be prevented; whether digital access creates separate databases and lending pockets that do not communicate; whether the credit offered goes beyond short-term, high-cost loans, akin to payday loans, favoring expediency over other factors; and whether consumers are adequately protected, both in terms of their data and its security and in terms of predatory lending practices generally (Francis, Blumenstock, and Robinson 2017). For credit reporting systems, these new forms of credit offerings represent different modes of collecting data from existing and potentially new sources of information.

Developments in Information Technology

The credit reporting industry is data driven. Recent improvements in database management software; decreasing costs for hardware and for storing and processing data; and the ability of several markets to join and utilize a hub-and-spoke model have reduced start-up costs for credit reporting services. In recent years, credit reporting service providers have been looking at innovations such as blockchain technology and its potential application to credit reporting and the possibility of leveraging the availability of cloud computing services. In addition to huge advances in information technology, computing power, data mining, and data analytics, these new developments are being spurred on by an increasing appetite for consumer credit and the perceived or actual inability of traditional operators to meet this demand, as well as by an emphasis on providing customized and tailored products to meet customer needs while creating a seamless user experience.

Going Forward: New Data, Lenders and Technologies with Potential to Impact Credit Reporting⁵

New Data

Credit data can be broadly classified as structured or unstructured. Structured data is grouped and easily readable and usable for making analyses. This typically represents about 20 percent of all available data. Unstructured data—the rest of the data available—has always existed, but only recently have methods for

5. Disruptive Technologies in the Credit Information Sharing Industry : Developments and Implications: World Bank 2019.

analyzing such data become available. Unstructured data is rapidly being exploited to better understand trends and patterns in consumer behavior and experiences and to identify methods for developing products and services that better address consumer needs and provide users with a good experience (Hurwitz et al. 2017).

Big data includes both structured and unstructured data and requires cost-effective and innovative forms of information processing to produce actionable insights to support decision making and automation (Gartner Research). Big data could come from social media feeds, online lending platforms, B2B platforms, mobile payment companies, social media sites (Facebook, Twitter, LinkedIn, Instagram, Yelp!, and so on), transactional data (for example, from Alibaba, Amazon, and other online sites), and psychometric data, to name a few. Advances in artificial intelligence (AI) or machine learning, which use computational power and programming techniques to unlock trends and patterns in big data, further the potential for using these new data sources. New technologies have made it easier, faster, and more cost effective to mine vast quantities of data and to extract meaning from them while minimizing the risks associated with human intervention. These developments hold tremendous potential for credit information sharing.

A key development in the last decade or more has been the emergence of unconventional players in the financial markets, broadly clumped together as *fintechs* (defined as businesses aimed at providing financial services by making use of software and modern technology). These businesses compete with traditional credit providers, such as banks, by making credit available on more favorable terms or by using proprietary data or big data sources to develop alternative credit scoring tools for consumers outside the formal financial system. Lenddo/EFL for instance is a fintech company that leverages social media data (big data) and combines it with other pieces of information, including credit bureau data if available, to develop credit scores for potential borrowers. Another alternative credit scoring company, Tala, uses mobile data to verify the identity of potential borrowers as well as to build credit scores and provide loans to borrowers not served by traditional financial institutions (Adams 2016). If fintech companies grow and continue to play a significant role in credit markets, they could become potential data sources routinely included in the overall credit reporting system.

Over the last two decades, traditional and nontraditional players have tackled the problem of “scoring the

unscorables” by looking at nontraditional data such as utilities and telco or by using application scorecards. Another more recent credit scoring tool relies on the use of psychometrics, which involves administering a series of personality and behavior tests to generate credit scores rather than relying on credit history alone. (See Box 3.1.)

All of these nonconventional scoring tools allow creditors to reach the millions of people who currently lie outside formal financial markets.

In addition to new data types, new creditors, and new tools, new payment technologies, including mobile payments (e-wallets) and cryptocurrencies, are emerging and disrupting the traditional modes of payment in the financial sector. While cash and cards still dominate the payments landscape, mobile payment technology is gaining greater acceptance, especially among younger demographic groups and for certain types of transactions (P2P). Traditionally, payment accounts were identified by a series of numbers embossed on a card or stored in a firm’s database. Today, the payments industry has been rapidly shifted from its infrastructure of cards and terminals to one dominated by phones. The next stage of this development will see phone-to-phone dominance. Payments are now made at the point of sale, both online and between individuals, using an app.

Today’s payment industry is quickly becoming dominated by organizations such as PayPal, Venmo, Square, and Stripe, through which payments can be made between people (P2P) or between people and businesses (P2B) or even between businesses (B2B). Eventually, everyone will be able to make and accept payments when (and where) they like. The new industry standard, EMV (named for Europay, MasterCard, and Visa, the three companies that originally created it), will make each account the foundation for codes that change with each transaction. Eventually, the power of code will overtake the usefulness of plastic cards. Payment credentials will become virtual. The transition made possible with advanced codes will impact the way blockchain, augmented reality (AR), the internet of things (IoT), and biometrics impact the payments process. This in turn will impact the way consumers view the payments process as well as how governments regulate the industry (The Financial Brand).

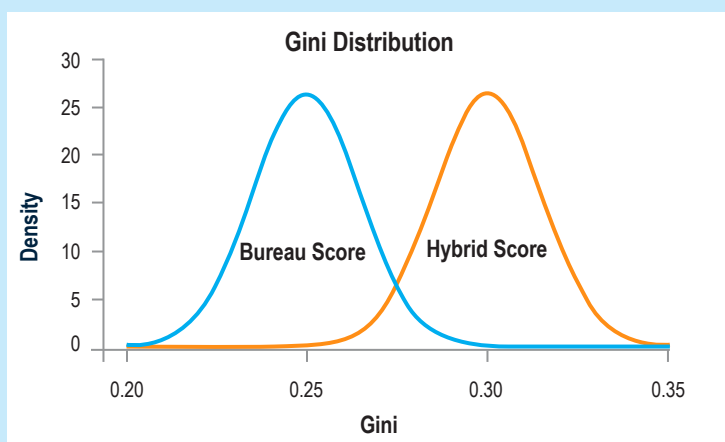
Mobile payments and data generated by mobile devices are new and critical sources of alternative data and hold revolutionary potential for increasing financial inclusion. Creditvidya, an alternative credit scoring provider, uses advanced analytics and machine learning to process a range of data pulled from users’ phones, including

Box 3.1. EFL Psychometrics and Creditinfo Psychometrics (Coremetrix)

Entrepreneurial Finance Lab (EFL) and Coremetrix collect psychometric data in several ways, including using tests administered by digital means (SMS), web-based applications, or phone interviews. These tests help assess potential borrowers' willingness to pay their obligations. The tests assess not only how the applicants answer questions but how they respond physically, for example, by measuring how long the applicant takes to answer a question.

Under the EFL model, alternative credit scores are generated based on psychometric test results and combined with other data, including traditional bureau data, if available. The resulting score is then used to support financial institutions in increasing operational efficiency and loan volume, cutting NPLs, and so on. Judging from results from working with a commercial lender in Kenya, EFL can increase acceptance rates by 20 percent when combined with the lender's own internal behavioral score.

While cooperating with a credit bureau in South Africa, Coremetrix proved that psychometric scores were as accurate as standard credit bureau scores. Moreover, combining standard credit bureau scores and psychometric scores resulted into a 20 percent uplift in overall credit bureau score performance. (The figure below indicates the Gini index of a standard credit bureau score and hybrid-standard and psychometric score combined.)



Another Coremetrix implementation proved very successful in tackling the "thin file" challenge a short-term lending company in India faced in consumer financing. After implementing the psychometric score, with an outstanding accuracy of GINI 0.45, borrowers were able to use credit to acquire commodities necessary to daily life, such as refrigerators, ovens, and air conditioners, something they had previously been unable to do, thus significantly improving their quality of life.

The psychometric score is increasingly seen as a way to gather information on and create a digital trail for potential borrowers who are not banked and do not have formal credit histories. FICO, the leading producer of independent credit scores, is exploring partnerships with EFL to leverage psychometric scoring as an additional layer of data and combine it with traditional credit data and bill payment data.

Source: EFL and CreditInfo.

telephone usage data but also messaging content, browser data, and GPS locational data. The lack of added value from mobile payments as compared to plastic cards (and cash) has led to the very modest acceptance of digital payments to date. But with open banking and application program interfaces (APIs) providing the capability to enhance the customer experience with rewards, instant alerts, and other features, acceptance of mobile payments could be on the verge of significant growth. Mobile payment systems have been quite successfully implemented in some markets (such as Kenya and the Philippines), and they promise a considerable trove of information that could and should become of a complete credit reporting system.

Cryptocurrencies like bitcoin have also emerged as a medium of exchange in place of legal tender. The utility and risk of these new payment forms is still being studied, but if cryptocurrencies do prevail and are not rendered ineffective by government regulation, these pseudo-payment forms could potentially become another alternative data source for credit reporting systems.

It's key to understand also that not all data is equal or relevant for the purpose of assessing creditworthiness. The value of different data points, whether structured or unstructured should be carefully evaluated and weighted accordingly when being used for assessing credit or building credit scoring models, for instance. Even with

the proliferation of new data points, alternative and traditional lenders are using alternative data in conjunction with traditional credit history data to strengthen their underwriting functions, as well as for other purposes such as portfolio monitoring and fraud detection.

There are several challenges involved in the use of alternative data for credit reporting that must be taken into account. Some of these challenges include: collecting and aggregating data from multiple, fragmented sources, quality and veracity of data, legal and regulatory uncertainty on use of data, predictiveness of data, opaqueness of scoring methodologies, potential for discrimination in scoring models using alternative data, to name a few. For instance, a primary advantage of online data is that it is publicly available or obtainable through simple user authentication and permission, making it relatively easy and inexpensive to collect. However, online data remains somewhat scarce in emerging markets and is skewed towards the young and educated. By contrast, mobile data is more widely available and easier to match to loan applicants since telephone numbers are unique to individual subscribers. However, given that potential borrowers' call detail records are owned by Mobile Network Operators (MNOs), mobile data collection and utilization entails large up-front costs due to privacy concerns, fragmented markets, and the potential for MNOs to compete as lenders themselves.

On psychometrics, one potential downside of EFL-type models is that data is actively captured and thus incurs higher marginal costs than other data sources. Furthermore, the ability of psychometrics to measure risk is highly dependent on the quality of the questions asked, which may require adjustment across different countries. For example, citizens of different countries and regions may have personality patterns and psychological characteristics that differ based on divergent cultures, languages, and values. Therefore, a challenge with psychometric scorecards is that they either have to adapt to local contexts or develop questions that are impartial and universally applicable.

While there are some obvious advantages for the use of Big Data and how information from various sources (including social media sites) can be used for credit information sharing, some potential for unintended consequences exist. Businesses and consumers without substantial social media presence may pay higher interest rates or be excluded as they could become more information-ally opaque compare to the more active potential borrowers. As the importance of social media

data increases, its use may evolve endogenously, and people who think their profiles could have a negative impact on their credit scores may abandon the use of social media. Or they may post strategically in an effort to manipulate lending decisions by mimicking high credit score individuals (Berg et al. 2018). A report produced by the International Committee for Credit Reporting (ICCR) on the use of big data and alternative data in credit reporting, along with recommendations for countries on how to leverage all this new data, discusses these risks and mitigation measures (ICCR 2018).

An integral part of a credit information sharing system is the ability to uniquely and credibly identify and validate a borrower's identity. One of the biggest value propositions of a strong credit reporting service provider is its ability to provide accurate match and merge capabilities using available information and based on sophisticated algorithms. Biometrics has been gaining popularity of late and is finding applications in the credit reporting space. For instance, in Uganda, the credit bureau had developed a financial ID card based on biometrics, with the support of the regulator, to identify borrowers in the system and enhance the credit bureau's effectiveness. Development of biometrics is, however, costly, time consuming and requires more effort from a larger number of stakeholders than does a traditional credit bureau. Moreover, biometric information is not critical to the development of a credit reporting system, although a strong biometric ID platform could definitely enhance the effectiveness of these systems.

Blockchain and distributed ledger technologies (entities that host information on multiple servers simultaneously, eliminating the need for centralized information storage and the intermediaries that control them) could potentially disrupt the way information is shared and could introduce a greater level of automation into several processes. Blockchain remains at a proof-of-concept stage, but one of its key applications for credit reporting could be in developing digital identities and identity verification systems as an alternative to expensive biometrics systems. Some credit reporting service providers as well as fintechs are experimenting with the use of these technologies, but its uptake will require meeting several challenges. Some of these relate to affordability, aligning incentives, cost sharing mechanisms, simplification and standardization, security, and legal and regulatory uncertainty, to name a few. Given the extent of these challenges, it is too early to provide guidance on adapting blockchain to the credit reporting environment.

Along with the explosion of fintech companies has come greater recognition by banks and other incumbent lenders of the need to do things differently, by innovating and improving existing operational processes as margins are squeezed, dealing with different processes as commodities to be monetized and outsourced, or even partnering with fintech companies. Several credit bureaus are leveraging the new types of data and technologies to generate efficiencies in existing processes, develop new products and services, and address the risks associated with increasing digitization. Some new entrants are partnering with traditional credit reporting service providers or with other new entrants. FICO, for example, the world leader in credit scoring technologies, has partnered with EFL Global to integrate alternative data into its scoring platforms. EFL Global has recently partnered with Lenddo to provide a combined platform that will leverage different sources of alternative data to develop credit scoring and identity verification products and services (PrWeb 2017).

Regtech and Suptech

Since the financial crash of 2008, financial services have faced increasing regulation. As the compliance burden on financial institutions has increased, compliance teams have ballooned: CitiBank has a compliance staff of 30,000. While experts struggled, innovation found its way in. Fintech has exploded over the last few years and now threatens to close the gap with traditional banking. Lending money in unchartered territories is risky, and the strong chance of exploitation means that close and evolving regulation of the sector is a necessity. Regulation technology, also known as regtech, translates complex regulations into API code. It streamlines burdensome compliance processes to help minimize both risk and human resources requirements, and it meets an urgent need. Start-up fintech providers simply don't have the means to hire an army of compliance officers: With new regulatory technology, they don't need to.

Suptech or supervisory technology is disrupting the way supervisors are collecting, analyzing and monitoring data to support their supervisory functions. Suptech can potentially support the automation of supervisory tools to assist in risk data aggregation and analysis for supervision and in modeling, stress testing, and forecasting. For instance, such tools may help in aggregating data across different financial institutions globally while preserving the confidentiality and security of the underlying information, perhaps by using blockchain technology and cryptographic tools. Machine learning and AI could be applied to reading and analyzing

the large amounts of structured and unstructured data relevant to the overall risk supervision function, creating new models for improving modeling, forecasting, and stress testing in the financial sector (IIF 2016). Bank of Italy is experimenting with the use of Suptech using Machine Learning techniques to aggregate data from different sources (the Central Credit Register, balance sheet data) to build loan default forecasting models for microprudential supervision.

3.3. Competition in the Credit Reporting Industry

Heavy competition in the consumer and commercial credit reporting services industry is driving providers to develop creative solutions, products, and services to meet consumer expectations. Success in the credit reporting business is thus driven by constant investment and innovation. Existing credit reporting service providers (particularly in the consumer and commercial credit reporting areas) actively look for additional and alternative ways of identifying, segmenting, and scoring borrower populations to assess their creditworthiness. This competition has been further fueled by new players and other entrepreneurial efforts to apply new technologies and use big data to enhance the credit reporting segment.

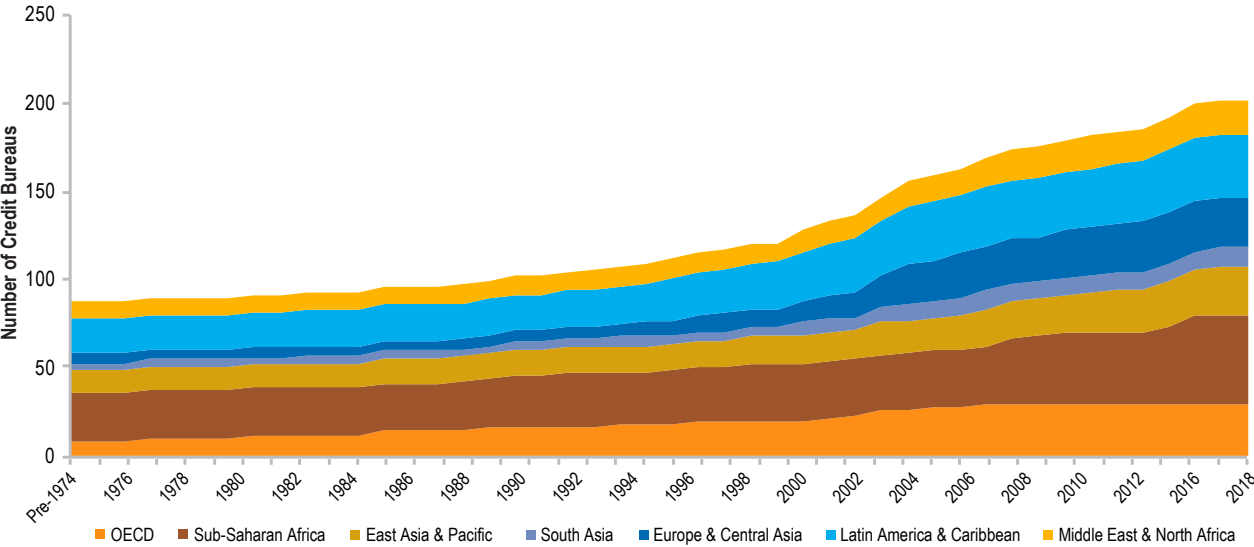
Changes and Growth in the Credit Reporting Segment

Rapid growth and development are taking place in credit reporting systems. According to Doing Business 2019, of 201 countries surveyed, 122 reported having one or more credit bureaus. Figure 3.1 illustrates growth in credit bureaus from 1974 to 2018.

In terms of coverage, Europe and Central Asia lead with 51.32 percent coverage of adults, followed by Latin America and the Caribbean at 44.09 percent (see Figure 3.2). Since 2012, credit bureaus in East Asia and the Pacific, South Asia, and the Middle East and North Africa have made significant leaps in coverage, with increases ranging from 5 to 15 percentage points. Although Sub-Saharan Africa had the least-developed credit information infrastructure, with only 23 of 49 countries reporting credit bureaus, the region has made significant strides in recent years.

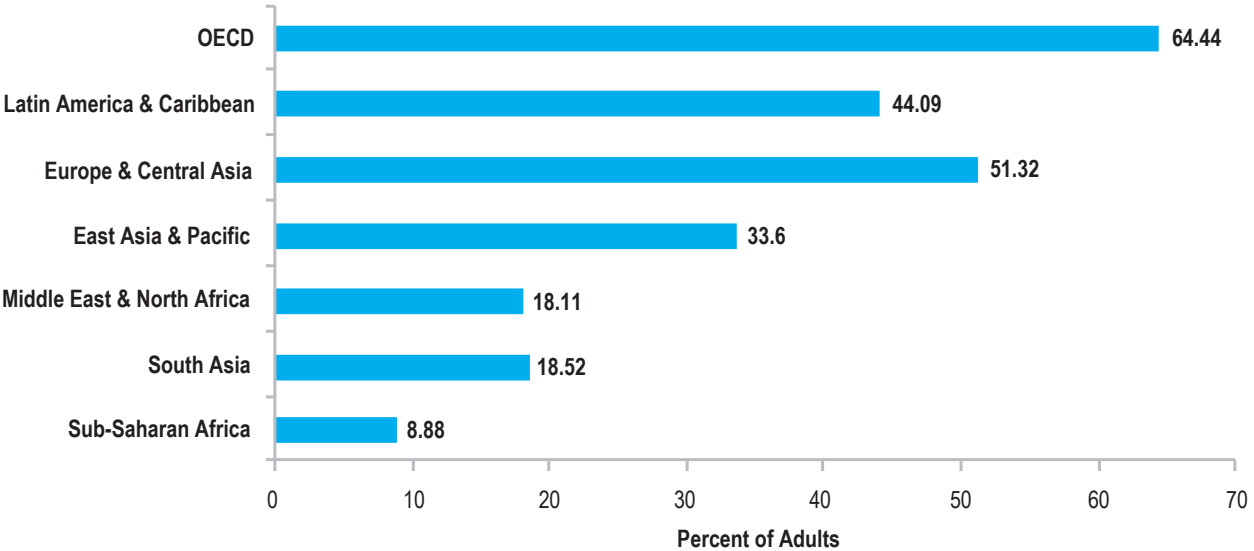
The same Doing Business 2019 survey found encouraging trends for the Middle East and North Africa, where 11 of 20 countries had credit bureau coverage. The East Asia and Pacific region also experienced somewhat positive changes, with 16 of 25

Figure 3.1. Growth of Consumer Credit Bureaus



Source: IFC calculations, based on Doing Business Indicators (database) 2004–2018.

Figure 3.2. Credit Bureau Coverage by Region 2017



Source: Doing Business 2019.

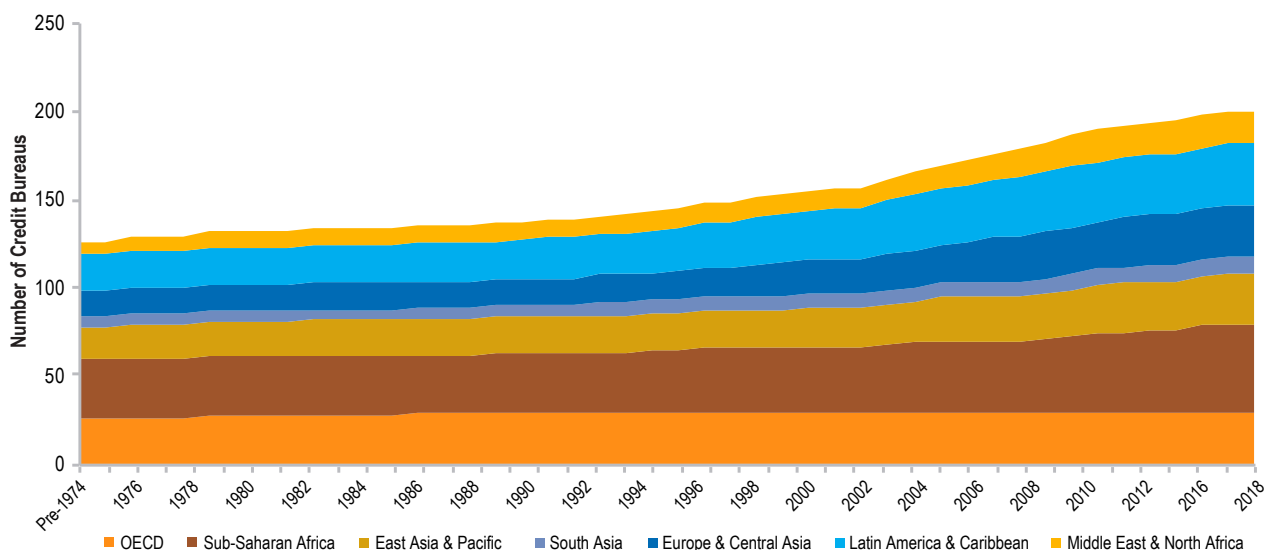
countries surveyed having credit bureaus. The situation was less promising in South Asia region, where only 4 of 8 countries had any credit bureau coverage.

Again, according to Doing Business 2019, of the 201 countries, 122 reported having a credit registry. Figure 3.3 illustrates the growth in credit registries from pre-1964 to 2018.

Europe and Central Asia led all developing regions, with 26.0percent coverage, while South Asia lagged behind at 4.8 percent coverage (World Bank 2019; see Figure 3.4).

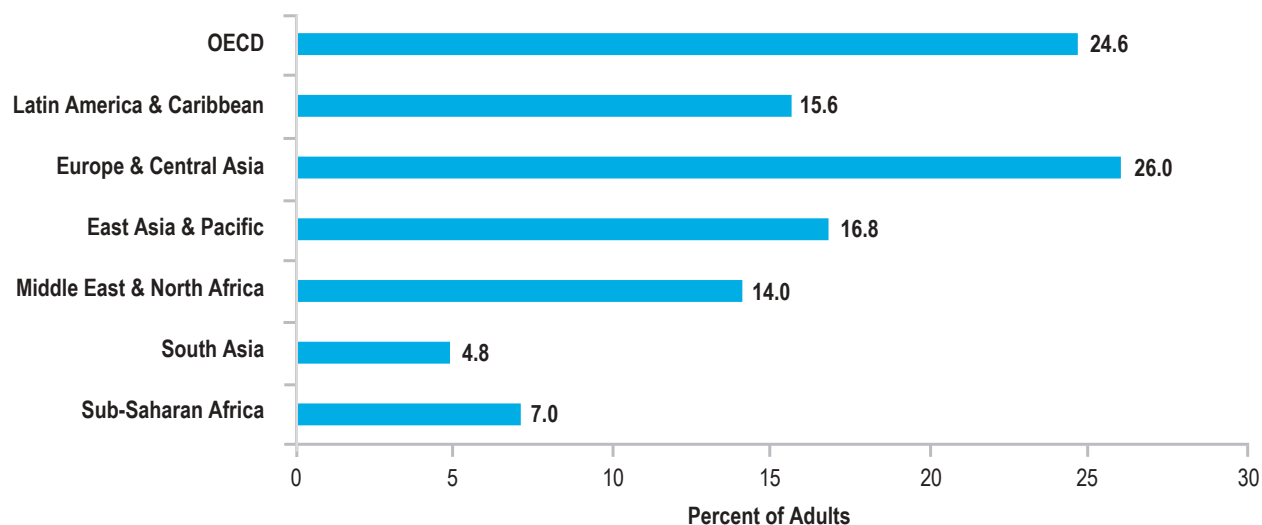
Coverage ratios may be low for a number of reasons. First, the bureau may have been recently established and may not yet have sufficiently populated its database with information from the regulated and formal financial

Figure 3.3. Growth of Credit Registries



Source: IFC calculations, based on Doing Business survey data for 2004–2016.

Figure 3.4. Credit Registry Coverage by Region, 2018



Source: Doing Business 2019.

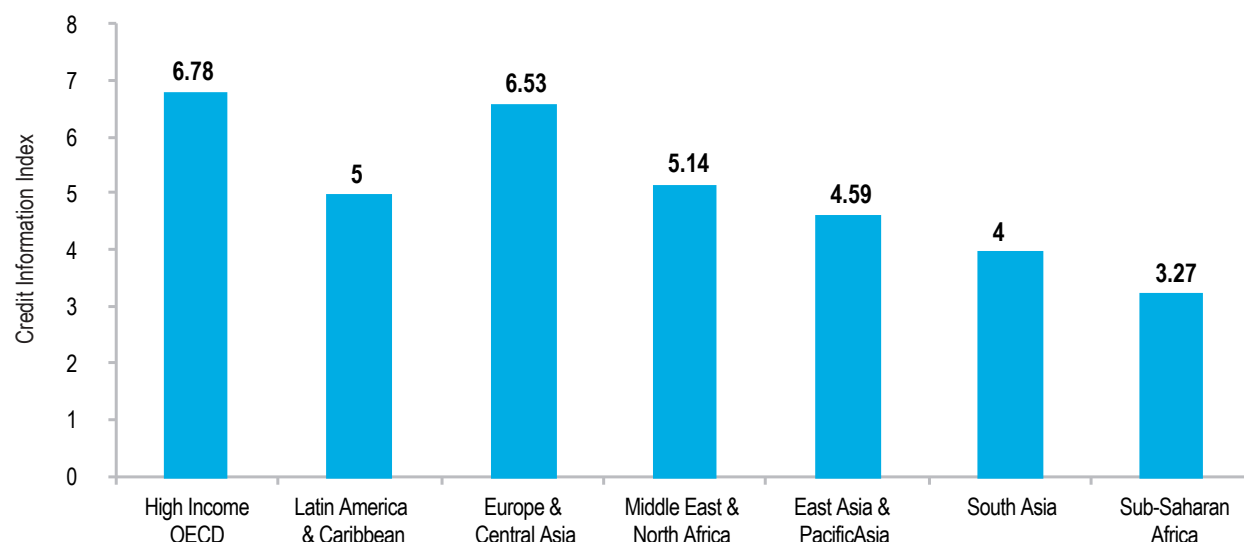
sector, such as the banks. A second possible factor is that only a small portion of the total population uses credit or credit from formal lenders. As credit growth continues, the scope of credit reporting coverage can be expected to expand as well. As it relates to credit registries, which have different collection goals than do bureaus, the focus is generally on collecting information on loans above a certain threshold value as determined by the specific financial sector supervisor. Since these loans, including corporate or commercial loans, typically represent only a certain segment of

the population, the registries' population coverage is naturally lower than that of the bureaus.

Europe and Central Asia led among developing regions on Doing Business's CII, followed by Latin America and Caribbean and then the Middle East and North Africa. South Asia, East Asia and the Pacific, and Sub-Saharan Africa ranked lower on the CII than did the other regions.

The development of credit reporting services in many developing markets often, but not always, involves

Figure 3.5. Credit Information Index



Source: Doing Business 2019.

partnerships with the major and well-established international CRSPs. As a result, several major players dominate the credit information industry globally, namely Experian, TransUnion, and Equifax. While these bureaus were initially concentrated on the OECD countries, all of them have actively expanded into emerging markets.

Since the early 2000s, several new CRSPs with international operations have emerged as players; these include CRIF, an Italian firm present in Europe, North America, Latin America and the Caribbean, the Middle East, Africa, and Asia; Creditinfo, an Icelandic credit information and decision solutions provider with operations in Europe, Central Asia, the Middle East, the Caribbean, Sub-Saharan Africa, and, more recently, expanding into Asia; CompuScan, Credit Reference Bureau Africa Ltd. (CRB Africa), and Xpert Decision Systems (XDS), all operating in three or more African countries; and Dun & Bradstreet South Asia Middle East, Ltd (D&B SAME), which operates in the Asia Pacific region, the Middle East, and Sub-Saharan Africa. The entry of new international CRSPs is a welcome development as more competition is likely to result in better product offerings and lower prices for members of the credit information sharing system.

Although a sound commercial rationale usually exists for emerging market countries to seek partnerships with experienced international providers, the value of locally developed solution providers should not be overlooked. In many emerging markets, in Barbados and Kenya, for example, the origins of credit information sharing can be found in small businesses providing a localized service, often with little or no support from policy makers or the central bank. Creditinfo, CompuScan, XDS, and CRB Africa all started out as small businesses in markets that the larger international credit reporting companies had declined to serve, for a variety of reasons, and have ended up as international players in their own right. Regardless of their origins, credit reporting service providers and, more generally, credit reporting systems should strive to adopt the globally endorsed credit reporting practices captured in the World Bank's General Principles for Credit Reporting.

Increased Emphasis on Different Borrower Segments

As reported in the second edition of this Guide, a concerted effort has been made in recent years to collect and share information on microfinance⁶ borrowers.

6. Microfinance is broadly defined as the provision of financial services to low-income clients who otherwise would lack access to banking and related services. It serves as an important mechanism for expanding access to finance to low-income clients who are self-employed, household-based entrepreneurs. Their diverse microenterprises include small retail shops, street vending, artisanal manufacture, and service provision. In rural areas, microentrepreneurs often engage in income-generating activities, such as food processing and trade, and some are farmers. These clients usually have informal or no business records, no collateral, and no access to formal credit markets.

Expanding access to finance for low-income households and MSMEs is on the development agenda of most emerging market governments. The microfinance market initially grew rapidly based on strong asset quality and low delinquency rates. For a period starting in the late 2000s, however, the industry suffered setbacks as portfolios deteriorated globally and portfolios-at-risk values increased due to inadequate risk management systems and controls, internal organizational weaknesses, and excessive growth in narrow geographies, combined with unhealthy lending practices affecting borrower repayment incentives and behaviors. These factors resulted in over-indebtedness, as witnessed in several markets, including Bosnia and Herzegovina, Cambodia, Egypt, India, Morocco, and Pakistan (Lyman et al. 2011).

Credit reporting was seen as an important instrument in tackling the microfinance market, and several countries have been active in setting up credit reporting systems that cover microfinance markets. While credit reporting alone cannot create credit discipline in a market or compensate for inadequate underwriting standards, it can improve microlenders' abilities to originate loans and manage credit risk, and it creates a powerful incentive for repayment among borrowers. As credit reporting traditionally dealt with the mainstream lending sectors, the move to microfinance credit reporting has entailed developing specific file formats to collect and digitize MFI information, treating individual subjects in a group separately, updating data on a more frequent basis (for example, weekly) to match microloan repayment cycles, and creating specific products and services to meet the needs of the microfinance market. For instance, in some cases, instead of a full credit report, the bureau can provide an instant credit score using SMS message or apps such as MyCreditinfo, Finpass, and others. (For more on these developments, see section 7.5.)

Rapid technological advances have implications for the microfinance segment as MFIs can now provide mobile money and branchless banking solutions. MFIs, like most other financial service providers, are now expanding beyond providing credit only and are looking at providing a broader spectrum of services to their clients.

SME Credit Reporting

As discussed earlier, access to finance for SMEs continues to be a challenge and has been getting increasing attention from regulators and policymakers at the global, regional, and national levels. Some of the key fintech inventions veer toward meeting the financial needs of SMEs, a segment formerly neglected by the banking sector due

to the high costs to serve it and the need for highly customized products and services. These include online lending opportunities (Lendico, Kabbage), electronic payments facilities, and crowdfunding and peer-to-peer financing. (For more on these developments, see section 7.6.)

More Nontraditional Data Sources

Over the last 10 years, credit reporting service providers, particularly consumer credit reporting service providers, have increasingly been collecting information from nontraditional data sources, including payments on utility bills, telcos, mobile data, and others.

Moving from Voluntary to Mandatory Sharing and Inquiry

A developing trend in many jurisdictions is mandating that regulated entities share data and use credit bureau services. According to the World Bank's Doing Business 2019, 52 percent of respondents said that the law required mandatory reporting to the credit bureau at least by banks, and 39 percent said financial institutions (including banks) were required to consult with a bureau. Along with mandating participation, the regulatory body must also be empowered to enforce participation and monitor compliance.

In March 2013, Reserve Bank of India (RBI) constituted a committee to strengthen the infrastructure for sharing credit information. Based on the committee's recommendations, a number of policy instructions were issued. An important outcome was that formats for reporting corporate, consumer, and MFI data by all credit institutions were standardized, and the process for data submission by credit institutions to credit information companies was streamlined. Effective April 15, 2015, the RBI also stipulated that all credit institutions, including NBFIs and cooperative banks, are required to be members of all CRSPs and to submit data—including historical data—to them. Prior to this notification, every credit lender was required to be a member of at least one CRSP. As such, a CRSP could turn only to its members for credit information. If the borrower had a current or past exposure with a nonmember credit institution, the CRSP could not get the entire credit history of the client. To boost credit coverage, industry bodies have suggested the addition of periodic utility bill payments—electricity, telecom, and so on—and periodic insurance premium payments into information bureau records. The goal is to increase the bureaus' coverage and to boost low-ticket borrowers by clarifying their credit eligibility. Formal financial

institutions, in turn, could rely on alternative payment data for prospective borrowers who do not have past or present credit lines with formal financial institutions.

Greater Emphasis on Consumer Education, Building Awareness, and Outreach

As credit reporting markets evolve and mature, and with increasing concerns about the security and privacy of personal consumer information, credit reporting supervisors and other regulators are increasingly interested in ensuring consumers' adequate sensitization to these concerns. The objective is to raise general awareness regarding credit reporting systems, their objectives and benefits to consumers, and consumer rights and CRSP responsibilities. Awareness campaigns are also rolled out to strengthen understanding of credit reporting among other stakeholders, including system users. Section 7.1 explores these issues through developments in the Kyrgyz Republic and Tajikistan, including how different jurisdictions have worked to enhance general awareness of credit reporting systems.

Credit reporting service providers are also invested in building awareness and reaching out to consumers for their financial education. Creditinfo, for example, launched an international educational initiative in 2016 called "Credit Bureau Day," a one-day event held every year during which all companies and individuals can access their own credit reports for free. In 2017 almost 20 countries joined the initiative, half of which were from Africa. During the event, consumers visit credit bureaus, access their credit histories, and check their credit reports free of charge.

Adoption of New Technologies and Forging New Partnerships

Several credit reporting service providers are moving towards cloud-based information hosting as a means to further reduce infrastructure costs as well as to increase the availability of real-time, updated, accurate, and actionable data for their customers. For instance, Dun & Bradstreet announced that it would partner with Microsoft to leverage the power of cloud computing and enhance the level of services it provides to its customers (Dun & Bradstreet 2017).

Cloud Computing

In recent years, credit reporting service providers looking to improve performance and reduce costs have considered leveraging cloud computing services. Cloud

computing allows companies to avoid or minimize up-front IT infrastructure costs. Many credit reporting service providers have already embraced this technology (where legislation permits), allowing users to benefit from this technology without the need for deep knowledge about or expertise with each one of them. Credit2B is a transformational cloud-based patent-pending platform that combines third-party credit information with a network of thousands of leading credit professionals and credit grantors that have a common interest in accessing better credit information about their trading partners. It allows businesses to quickly obtain business and credit information with over 25 million businesses in the United States and Canada, including large, small, and privately owned businesses (Credit2B.com).

Electronic Payment Transactions

Banks and a variety of other PSPs have developed electronic payment services both to address the limitations of cash as a payment instrument and to provide new opportunities for increased speed, safety, convenience, and other relevant features in a rapidly changing world (World Economic Forum 2016). They can be classified as (i) instruments based on electronic funds transfer (EFT), (ii) instruments based on payment cards, and (iii) instruments based on e-money. (The three types of e-money are e-cash, network money, and access products.) Transactions may be made person to person, person to business, business to business, person to government, business to government, or government to government.

Electronic payments provide access to financial resources. Consumers using cash or checks may be limited in the amount of funds available for some transactions. With cash, consumers are limited to their funds on hand, and merchants may be reluctant to accept checks for bigger transactions because of the risk of nonpayment. Electronic payments address both of these issues: They provide consumers with access to all available funds or lines of credit for a given transaction, and they give merchants peace of mind about payment guarantees. Besides providing consumers tools that facilitate greater access to financial services, electronic payments transactions create structured data trails, that provide objective information on cash flows as well as subjective behavioral information to types of products and services used, when, how frequently, etc.

Artificial Intelligence

Advances in AI or machine learning use computational power and programming techniques to make it easier,

faster, and more cost effective to mine and unfold the meaning of vast quantities of data while minimizing the risks associated with human intervention. These options hold tremendous potential for sharing credit information.

Besides adopting new technologies, traditional providers of credit reporting services seek out new alliances and partnerships with nontraditional players in credit information sharing. They also seek increase cross-border sharing of credit data, and jurisdictions are reviewing existing legislative and regulatory environments to accommodate new trends, innovation, and compliance requirements.

3.4. Moving Forward: Expected Trends

As we move to a world with ever greater digitization and information availability, the safety and security of this information is paramount. Credit reporting service providers are generally touted as having in place the strongest security systems possible to protect the information in their databases. Recent high-profile security breaches of these databases, however, have called the security of these systems in question. (Equifax recently had a breach affecting the nonfinancial records of 145 million consumers in the United States.) As a result, we will likely see a move toward more stringent policies for data security and safety.

For policymakers and regulators, the absence of adequate legal and regulatory frameworks poses a great challenge. Currently, alternative credit scoring systems are treated as protected trade secrets, raising concerns about privacy and underscoring the lack of transparency in how data is being collected and used. Furthermore, even where existing laws offer some protections against discriminatory credit scoring, current regimes are likely

insufficient to address the unique concerns raised by alternative scoring tools, which usually do not offer clear, if any, comparable standardized pricing policies. Lastly, there is a concern that alternative scoring tools will be used to identify vulnerable individuals susceptible to predatory loans.

More generally, the implications of big data and fintech on discrimination among customers by the credit providers (or credit reporting service providers) might merit greater emphasis. The use of algorithms may make monitoring discriminatory practices trickier as most of these machine learning models are “black boxes,” and thus understanding the way they are reaching decisions/predictions is not clear (Wall, 2018). Credit scores for consumers from a specific geographical location, race or gender may be lower, without available explanations from the users of the ML algorithms (Petrasic et al., 2017).

Nevertheless, there is also some evidence suggesting discriminatory biases are less serious for the fintech lenders compared to traditional mortgage lenders in the US (Bartlett et al. 2017). In any event, a balanced discussion of the potential for discriminatory lending using alternative credit scoring systems is necessary.

The financial world is in a state of constant change, and it remains to be seen how regulators around the world will choose to regulate these potentially disruptive innovations. Some new models for credit reporting will succeed, while others will die out. The industry will continue to be influenced by new developments, however, and more mergers, acquisitions, strategic partnerships, and changing models and structures are likely to emerge in the coming years.



CHAPTER 4.

Legal and Regulatory Framework

As recognition grows that credit reporting systems are vital to strengthening financial infrastructure, access to finance, and financial system stability, more and more countries are increasing their efforts to create the ideal credit reporting regulatory environment: one that enables and promotes the development of secure, efficient, and reliable credit reporting systems while fostering competition in the credit market and protecting the rights of consumers with respect to their personal information. The overall legal and regulatory framework for credit reporting should be clear, predictable, nondiscriminatory, proportionate, and supportive of data subject and consumer rights (World Bank 2011).

The legal framework for credit reporting differs from country to country and may include a combination of credit reporting laws, banking laws, data protection laws, consumer credit protection laws, fair credit granting and consumer credit regulations, and personal and corporate privacy and secrecy provisions. Two broad approaches to regulating credit reporting can be identified: (i) broad data protection laws, and (ii) specific credit reporting laws. The European Union with the recent GDPR (General Data Protection Regulation) in eurozone and several countries regulate credit reporting activities under broad data protection laws that cover not only

credit reporting activities but also other relationships and transactions involving data management and exchange; examples in emerging markets include Argentina, Chile, Colombia, Moldova, and Uruguay. Changes have been taking place in the EU, however, with the development of specific sectoral legislation covering creditworthiness assessments: for instance, the Mortgage Credit Directive and the Consumer Credit Directive.

In some countries, specific consumer credit reporting laws have been enacted. Most of these laws have been developed over the past two decades and are modeled after the Fair Credit Reporting Act (1971) in the United States.⁷ Other countries have adopted credit reporting regulations, usually issued by the ministries of finance or central banks based on powers bestowed on them through banking legislation.⁸ Whichever approach is followed, the legal framework should support the key concepts in credit reporting, reflect the full scope of credit reporting functions and operations, and accommodate evolving trends. In essence, the legal and regulatory framework should:

- Establish the rules for a fair, competitive, and efficient market for providing credit reporting services.
- Establish the rights and obligations of the CRSPs, data providers, users, and data subjects. (See Table 4.1.)

7. Specific credit reporting laws can be found worldwide; for example, Ley de Bueros de Credito in Ecuador; Credit Reporting Bill in Guyana; Credit Information Companies Regulation in India; Ley de Sociedades de Informacion Crediticia in Mexico; Law on Credit History Bureaus in Moldova; Credit Information Bureau of Sri Lanka, Act No. 18 of 1990; and Credit Bureau Act in Sweden.

8. Some examples include the recently passed Decree on Credit Information Activities in Vietnam, regulations on a credit risk center in Spain (Circular 3/1995 of Bank of Spain), regulations on a credit risk center in Italy (Circolare N 139, 1991 de la Centrale dei Rischi, Bank of Italy), regulations on credit reporting and scoring companies issued by the Central Bank of Egypt, and regulations CN/27/G/2007 and CN/28/G/2007 on credit information issued by Morocco's Bank Al-Maghrib.

- Provide clear guidelines on the kinds of data that can be collected and shared (permissible purposes).
- Provide guidance on data security obligations, data retention periods, and other compliance matters.
- Establish consumer rights and provide a framework for consumer concerns with credit reporting data.
- Establish rules for compliance and actions in the event of noncompliance.
- Establish the role of the regulator/overseer and provide a clear description of powers.

In countries where they exist, the legal and regulatory framework for credit reporting generally focuses on the following areas:

- Entry and exit requirements for CRSPs
- Data collection, retention, disclosure
- Data security
- Rules regarding access, including confidentiality and permissible purposes
- Governance of CRSPs
- Consumer rights (privacy, accuracy, and redress mechanisms)
- Oversight and enforcement

Table 4.1. Rights and Obligations of CRSPs, Data Providers, Users, and Data Subjects

<p>CRSPs' rights and obligations</p>	<ul style="list-style-type: none"> • Record, maintain, collate, synthesize, and/or process information properly and accurately • Protect information against loss and damage • Protect information against unauthorized access, uses, modification, or disclosure • Retain information for the relevant periods • Grant data subjects access to their own credit reports • Provide consumers information on dispute resolution mechanisms • Ensure timely correction of incorrect data • Enforce subscriber agreements • Maintain a help desk
<p>Data providers' rights and obligations</p>	<ul style="list-style-type: none"> • Obtain and store consent from data subjects when collecting data (as applicable) • Inform data subjects of purpose and use of data collection • Protect information against loss and damage • Protect information against unauthorized access, uses, modification, or disclosure • Retain information for the relevant periods • Correct erroneous data in an expedient manner • Ensure restricted access to credit information and continuous training for employees handling credit information data
<p>Users' rights and obligations</p>	<ul style="list-style-type: none"> • Comply with reciprocity principles • Restrict inquiries to those allowed by law • Maintain records and be able to demonstrate queries were requested for permissible purposes • Use information only for permissible purpose • Disclose information obtained from a CRSP only to authorized parties • Keep information obtained from CRSPs confidential • Appoint a CRSP relationship manager • Dispose of confidential information in appropriate manner
<p>Data subjects' rights and obligations</p>	<ul style="list-style-type: none"> • Provide accurate information • Access own credit reports and monitor information • Dispute inaccurate information

4.1. Licensing or Registration of CRSPs

Several jurisdictions are adopting a scheme of entry and exit requirements, mainly for consumer credit bureaus, to mitigate risks associated with sharing sensitive consumer data, upholding consumer rights, competition within the financial industry, and business sustainability. The most common approach is to follow a licensing process that can be used to place restrictions on who can collect financial and other personal information on consumers for the purposes of generating credit reports. Licensing is also a method of governing the operations of CRSPs by stipulating observance of minimum levels of business standards. The licensing process is usually an evaluation of the proposed operator's business, financial, and technological capacity to provide a secure and efficient credit reporting service and the operator's ability to observe obligations respecting privacy laws and consumer rights. Where licensing is a requirement, it is important that the provisions in the licensing laws be clear and precise with regard to what abilities an operator must show: Proportionate licensing requirements are very important; over-the-top requirements, such as unreasonable capital requirements, should be avoided. Licensing regulations also include provisions for securing sensitive borrower information, in the unlikely event that a service provider goes out of business, exits the market, or has its license revoked. In such instances, provisions may be made for the transfer of data to the regulator until an alternative provider is identified.

In many countries, credit reporting service providers are required to register with the regulator. Since the process of registration is usually mandatory and entails filing information pertaining to the CRSP's business, financial, and technological capacity, it is substantially similar to a licensing process.⁹ Even when CRSPs face no licensing or registration requirements, their operations are usually subject to some oversight by a horizontal supervisor, such as a data protection supervisor, especially with regard to data collection, security of data, data privacy, and consumer rights. These provisions may be contained in a country's banking laws, company laws, or other laws touching on consumer protection.

4.2. Data Collection, Retention, Disclosure, and Security

Defining Data Scope

Generally, the scope of data that can be collected and distributed by a credit reporting system is defined by the legal and regulatory framework. In some countries, the scope is wide, whereas in others the legal framework is set up to permit reporting only negative information and prohibits collecting and sharing positive credit information.

CRSPs that collect a wide range of information can generate more comprehensive credit reports. They are more reliable and more efficient than CRSPs operating on limited data. A database with negative-only information includes highly exposed borrowers that have defaulted in the past, but it excludes those borrowers from access to finance for long periods following the defaults, regardless of the borrowers' current financial performance and other favorable information. Ideally, the legal framework should allow comprehensive reporting based on a liberal interpretation of the information that can be collected and used to generate credit reports. As such, defaults and other negative credit events can be analyzed in totality with positive information on a borrower, resulting in better risk evaluations.

Access to public information is also relevant for credit reporting purposes because information available through public records can enhance the quality of the data that credit reporting service providers can collect. For instance, public records like identification databases, civil status records, and court proceedings enable better identification of borrowers and provide more holistic pictures of their credit history. No worldwide standard exists covering access to public information, and jurisprudence varies from region to region. Some countries have adopted laws on information access that classify data and establish different levels of accessibility on a need-to-know basis (This is the case in Guatemala, Ecuador, and Nicaragua and in EU Directive 2003/98/EC on the re-use of public sector information). Ideally, the legal framework should provide credit reporting service providers with access to relevant public information.

9. For example, the National Credit Regulator in South Africa is tasked with the registration of credit providers, credit bureaus, and debt counselors. Registration of credit bureaus entails filing supporting documents about the operator's business information and structure, including human resources, financial statements, operational resources (procedures to safeguard databases), and procedures for handling consumer complaints.

The last provision is particularly important as it allows CRSPs to obtain other *relevant* information from nontraditional data sources, such as organs of the state and courts, entities involved in fraud and corruption investigations, educational institutions, and debt collectors.

Data Sources

The regulatory framework for consumer credit reporting should not unreasonably restrict the data sources. All data *relevant* for an analysis of creditworthiness, including data in public records, should be collected, while the collection of *irrelevant* data may be prohibited. Accordingly, in some countries CRSPs are prohibited from collecting information about a consumer's race, medical status or history, religion, or other information deemed irrelevant for analyzing creditworthiness (for example, South Africa). In other countries, notably the United States, a broader range of information—including employment and other information in public records—may be collected by credit reporting services. Ideally, regulations prescribing permitted data sources would include the following:

- Banks operating in the same country
- Mortgage finance companies
- Finance leasing companies
- Microfinance institutions
- Insurance companies
- Institutions that offer trade credit to MSMEs
- Asset management companies
- Suppliers of goods and providers of services on a post-paid or installment payment basis (telecommunications and utility providers, retailers, and health providers)
- Other reporting services (CRSPs and collateral registries)
- Identification databases and other private or public records

Box 4.1. Quality of Data

Public records information has always been dogged by suspect quality. Until recently, credit bureaus in the United States reported judgment and tax lien data, but pressure to reform internal databases due to increasing consumer complaints on data accuracy and difficulties in addressing them has led the major consumer bureaus to cease reporting these items. Judgment data is not reported unless all necessary identifying details on the consumer are available, and judgment data are updated frequently (every 90 days). New changes are forthcoming as bureaus will not

- Other sources of relevant information provided the express consent of the data subject is obtained and confidentiality of the information is maintained

The recent explosion of data, especially the advent of big data and machine learning, has led to the emergence of fintech companies and other disruptions in the financial service provision industry. While the jury is still out on whether these new data sources and technologies actually fill a gap in the market, and if so, if they are acting responsibly, these new entrants deal with credit provision and accumulate data on underlying borrowers; they thus represent potential data sources for the overall credit reporting system. Provided these new entrants collect relevant data and meet all the criteria set out by the first General Principle, these data should be made part of the overall credit information sharing system to help prevent fragmentation of information sharing. In such an event, these new data sources and data providers (and, potentially, users) would be subject to the General Principles for credit reporting relating to the collection, handling, treatment, and security of data, data sharing networks, and technologies. Further, the obligations with respect to sensitive handling of this information would also stand.

From a regulatory standpoint, regulators around the world continue to evaluate the best approach to regulating fintech and the use of big data. The objective is to balance the market as a whole with innovations that truly serve the market and measures that proactively protect consumers and their information. One reason why the use of big data and fintech innovations has exploded is that these markets are completely or partly unregulated and/or differently regulated, which may encourage the entry of new businesses. But this lack of regulatory clarity also poses issues in terms of a level playing field between the new entrants and established,

be allowed to report medical debt collection information that is less than six months old (reflecting the time it takes to satisfy these obligations), and providers of data to the bureaus will be required to provide full name, address, birth date, and Social Security Number in their reports. These changes reflect the poor quality of data and associated problems that have led to unfair penalties on consumers by the credit reporting system. These changes were negotiated between the attorneys general of 31 states and the consumer credit bureaus.

Source: Cowley 2016.

typically more regulated, financial players. It remains to be seen what path regulators around the world will take and how this will affect big data and fintech.

Depending on the jurisdiction, regulators may require explicit or implicit individual borrower consent to provide data to a CRSP and to access a credit report prepared by a CRSP. In many countries, including Australia, Cape Verde, Jordan, Kazakhstan, Mexico, Panama, Peru, Thailand, Tunisia, the UEMOA states in West Africa, and the European Union, laws require explicit borrower consent for a data provider to provide information to the CRSP. In the interest of maintaining operational efficiency, the legal framework should place the onus of obtaining and maintaining a record of borrower consent for data submission on data providers. In the event of a dispute, the data provider must be able to demonstrate that it had obtained borrower consent in accordance with the law. In some countries, including the United States, consumer consent is not expressly required to report information to CRSPs. The reported information may not be used for simply any purpose, however; for specific purposes/uses the data subject's express consent is required (see section 4.2.3).

Consent is a legal right (based on right to access, right to information, and so on) that could be required to enable the data subject to control the flow and use of his or her personal information. If data providers do not have consent to share their customers' information with CRSPs, CRSPs may be required to secure consent directly from the data subjects. Alternatively, an agreement among lenders and the CRSP to collect consent and share information would suffice.

The ability to collect and analyze a wide scope of information from a wide range of data sources does not necessarily permit CRSPs to use or disclose the

information in any manner. In most jurisdictions with legal regulation over credit reporting services, strict obligations come into to play if the collected information is being used to evaluate consumers for credit. The basic principle that safeguards consumer rights is the principle of “permissible purposes.”

Data Disclosure and Permissible Purposes

To safeguard consumer privacy, some legal frameworks set up a finite list of permissible purposes for which collected information may be used. Permissible purposes change from country to country, but most countries include “assessing an application for credit.” The list of permissible purposes can require separate express consent in some instances, for example, when considering a candidate for employment. (Disclosing information for employment purposes in South Africa and the United States, for example, requires a separate express consent from customers.) Some countries go in the opposite direction, expressly prohibiting credit reference checks for employment purposes (as in Australia and Chile for example). Generally, the more value-added services the CRSP wishes to provide, the more extensive the permissible purposes must be and the more consent for disclosure will come into play. Accordingly, the regulation listing permissible purposes should, in addition to listing specific purposes, make provision for other purposes as well—*provided* the consent of the consumer is obtained prior to issuing the credit report. Ideally, a basic regulation setting out the list of permissible purposes would include the following:

- Assessing an application for credit, insurance, or a mortgage, including guarantors
- Reviewing existing credit facilities
- Developing a credit scoring system

Box 4.2. Issues Affecting Consent Regulation¹⁰

While the basic purpose of consent is to enable consumers to control their data and protect their privacy, implementation of consent can be extremely difficult and frustrating. In jurisdictions where information sharing is not the norm, this may require revising application forms to obtain consumers' consent in writing, which can be expensive and may require changes at a corporate level. Also, consent cannot be implemented retroactively, which means that only data collected after a certain time (that is, after consent is collected) can be shared with the credit reporting services provider. Collecting consent on already established accounts can prove challenging, particularly if consumers are not fully aware of the benefits of credit information sharing. As an example, Guyana

passed the Credit Reporting Act in 2010, which went into effect in 2011. A credit bureau was licensed and operational from 2013; however, as lenders had to collect consent prior to sharing information with the credit bureau, the bureau struggled to gather information. In 2015 an amendment to the law was passed that mandated lenders to share information with the credit bureau, allowing it to finally populate its database and collate information to provide meaningful reports and services, thus fulfilling its purpose as a credit reporting service provider. Bank of Guyana, the bureau supervisor, determined that consumer rights could be upheld if consent was required prior to inquiring with the credit bureau or accessing the bureau to pull borrower information.

10. See Credit Reporting (Amendment) Bill 2015. Available at <http://parliament.gov.gy/chamber-business/bill-status/credit-reporting-amendment-bill-2015/>.

- Acceptance of guarantees
- Application for services (for example, when applying for a mobile phone service contract in the United States, a credit check of the applicant may be conducted by the telecommunications company)
- Verifying personal credentials
- Payment history in respect of continuing credit services with retailers
- An investigation into fraud, corruption, or theft
- Considering a candidate for employment (in some countries this is permitted with the express consent of the subject)
- Tenancy contracts (in some countries the lessor is permitted to conduct a credit check of the lessee applicant)

Consent and permissible purposes are often regarded as means to protect the interests of consumers. If applied incorrectly, however, they can hinder the development of credit reporting services. In the EU, under both the old and the new General Data Protection Directive, the consent requirement related to collection of positive information. Negative information could be shared, since it was in the better interest of society and the lending community to proactively manage risks related to poor borrower performance. Further, it is unlikely that unscrupulous borrowers would willingly consent to share their information if it reflected badly on their repayment behavior. That being said, as the importance of credit reporting evolves over time in a society and the use of credit bureaus and related products and services become an integral part of the credit culture, a borrower's reluctance to consent to share information with a credit bureau or the lender's inquiry with a credit bureau will eventually lead to the borrower's application for credit being turned down. As lenders rely more and more on the use of credit information services, the use of credit reports and other credit bureau products and services become an integral part of the lending culture, and lenders will require credit reports on all applications for credit without exceptions.

The concepts of consent and permissible purposes are applicable largely to consumer credit reporting. In the case of credit registries, financial market supervisors, most typically the Central Bank or other monetary supervisor, require all regulated lenders to share data with the registry and provide aggregated information back to the regulated lenders. The basis for collecting and sharing such information is mostly found in a banking law or specific central bank act. In the case of commercial credit reporting, the information pertains to

an entity and therefore the question of consumer privacy and protection does not arise. Of course, if the bureau links information on the firm with the personal credit histories of the firm's owners, it would need to comply with any existing legislation relating to the collection and use of such personal credit history information.

Retention Periods

Legislation typically stipulates a specific length of time for which information can be stored and disclosed. Although historical information enables lenders to assess a borrower's credit quality over time, the legislation should specify a cut-off date for information disclosure, after which the information is no longer distributed to users, so as to give borrowers a fresh start. Different data elements may have different retention periods. For instance, payment history information is usually maintained for a minimum of five years. Public records relating to bankruptcy are usually retained for seven years or until discharged. In some countries with negative-only reporting systems, once a bad debt is paid off, all negative data related to it is deleted from databases, either because it is mandated by law or simply because it is common practice in the market. Such practices are detrimental to creditors' ability to make informed credit granting decisions, however. Rather than erasing information on defaults once loans have been repaid, this information should be stored with the rest of the borrower's file for an assigned period of time. According to a Doing Business 2019, of 113 credit bureaus providing information, 67 distributed historical information going back five years or less, while 43 distributed data going back five or more years. For credit registries, of 99 providing information, 60 distributed information going back five years or less, while 30 distributed information going back more than five years (World Bank 2019).

From the perspective of building credit scores and other value-added products and services, historical data that is two to three years old is important. A bureau database that has two to three years of historical data has sufficient depth of data to begin building scorecards for its users based on general characteristics observed across borrower segments over time. Chapter 6 on value-added products and services provides more information on how scores are developed.

Credit registries tend to provide aggregated information back to users, and in jurisdictions where they do, retention periods are less important. Nonetheless, retention periods

are established to ensure that the information is not held longer than necessary, which might make it susceptible to misuse or abuse. Further system limitations on memory and storage demand that information be destroyed after a length of time to allow new information to be collected, processed, and stored.

In the case of commercial credit reporting companies, in the absence of specific legislation around retention periods of information, general business and IT limitations dictate how long data is distributed or preserved. As an example, one of the major bureaus in the United States retains trade, bank, government, and leasing data for three years; more negative data, including collections, judgements, and liens for over six years; and bankruptcy data for over nine years (Business Loans 2015).

Data Security

In addition to limiting the sources of data and the purposes for which data may be collected and used, the legal framework may impose standards to be observed to ensure the accuracy, confidentiality, and security of the database information used to generate credit reports. Some common threats to data security include hacking, improper use by CRSPs or their employees, and tampering. All CRSPs (consumer, credit registries, and commercial) should generally be required to establish measures to validate the information they collect; restrict database access to authorized personnel who have been screened and educated about confidentiality policies; and provide security against theft, corruption, and loss of information. Since consumer protection is the motive for such requirements, responsibility for accuracy and security is no longer a prerogative of credit reporting services and data providers: It is a legal obligation.

Frequently, the laws governing the operations of CRSPs require that credit reporting service providers take active steps to ensure the protection of data against loss, corruption, misuse, or theft. Active steps include making provisions for IT security, limiting access to authorized personnel, educating staff and technical contractors, and putting in place staff disciplinary rules regarding information misuse and other breaches of security. The level and detail of security arrangements necessary for each credit reporting service is not usually specified by the regulator. This legal requirement is usually drafted as a general obligation for the operator to take reasonable steps and institute processes to cope with the logical, physical, and organizational aspects of data security.

4.3. Governance and Risk Management

Effective governance refers to the CRSP's ability to successfully manage operational, legal, and reputational risks. Governance pertains to the relationships among the CRSP's management, its investors, its shareholders, and its other stakeholders. Governance arrangements address the prevention and mitigation of real or perceived conflicts of interest among stakeholders.

CRSPs are usually created as entities with separate legal status, and as such they are subject to the applicable corporate laws and business practices of their countries. In most countries today, corporate governance mechanisms and controls for corporations are mandatory (OECD 2015; U.S. Congress, Sarbanes Oxley Act of 2002). External and internal governance controls are designed to reduce the inefficiencies that may arise from conflicting interests among shareholders, management, data providers, users, and other stakeholders. Internal governance mechanisms are designed to monitor management's behavior to ensure that it remains in line with the business's and investors' goals; external governance mechanisms deal with accountability and oversight through independent audits and supervision by a public authority.

Maintaining effective governance and risk management involves putting in place policies and mechanisms that make provision for:

- The accountability of managers, supervisors, or board members
- Independent audit and review processes
- Rules relating to the fair and equal access to information by the users, including the prohibition of enforcing exclusivity contracts with different service providers
- Disclosure of the process for collecting information, the allowable uses of information, and redress mechanisms available to data subjects (consumers)

The third General Principle of the *OECD Principles of Corporate Governance* describes the ideal governance arrangements for credit reporting services and data providers. The governance arrangements of CRSPs and data providers should ensure accountability, transparency, and effectiveness in managing the risks associated with the business and fair access to the information by users (OECD 2004). The legal and regulatory framework can require that credit reporting service providers establish independent boards to perform periodic reporting and internal audit functions. In the wake of the latest data breach involving Equifax,

the existing governance structure and decision-making priorities of credit reporting firms have come under scrutiny. The Consumer Financial Protection Bureau (CFPB) is working with the U.S. Congress to tighten the reins on credit reporting firms, including enhanced regulation defining how bureaus handle data and react to data breaches.

4.4. Consumer Rights

Consumer rights within the context of credit reporting services refer to privacy of the data-subject's information and of the accuracy of products and services developed using this data. No definitive approach exists to protecting data-subject rights within credit reporting systems. Relevant legislation in the United States, for example, is sector-specific and focuses quite narrowly on the flow and use of data within credit reporting systems, whereas European Union directives establish a broader range of consumer protections that go beyond the credit reporting systems. The key objective, regardless of the approach taken, is to establish consumer confidence and trust in the credit reporting systems.

Privacy

The **right to privacy** refers to the concept that personal information is protected from public scrutiny. Consumer privacy considerations are closely linked to the purposes of disclosure. The regulatory framework surrounding credit reporting typically sets out specific conditions for data disclosure, but collecting information is not *per se* prohibited. (In the United States, for example, credit bureaus do not need permission to collect information.) What is usually prohibited is disclosing personal information without consent. Disclosure of private

information occurs both when data providers send customer information to the CRSP and when the CRSP issues a report.

Bank secrecy or contractual confidentiality provisions are often cited as impediments to the development of a comprehensive credit reporting system. Generally, privacy laws restrict disclosure of customer accounts and transactions information without the customer's consent. In the banking industry, however, obtaining consent to collect personal information usually provides for sharing such information with third parties for specific purposes. Banks, for example, may share information with the banking industry supervisor or with other financial institutions as long as they are regulated by the same supervisory authority. Credit registries generally operate under a mandate provided through a Banking Act or Central Bank Act, which allow them to collect information from banks and other regulated entities without requiring consumer consent.

Banks and other data providers generally collect consumer consent to share personal and credit information of individuals with a credit bureau. A typical bank consent appears in its privacy policy, for example, a copy of which is usually signed by the customer at account opening or when he or she applies for credit. Privacy policies outline how the bank or creditor manages its customers' personal information, and it describes in general terms the sorts of personal information held and for what purposes. Customers should know up front the purposes for which their information is collected and the uses to which the information may be put. In countries with developed credit reporting systems, the consent given to banks by their customers usually includes consent to share customers' information with credit reporting

Box 4.3. Equifax Data Breach: September 2017

The evolving threat of ever more sophisticated cybercrime requires increased investment in security on the part of credit reporting service providers. The 2017 Equifax breach compromised the personal information of approximately 145 million consumers in the United States and demonstrates some of the new questions arising from such events. Upon discovering the criminal intrusion into its systems, the company worked to determine how many consumers had been affected, a forensic process requiring several months. The number of people affected made it difficult for the company to respond to the unusually high number of consumer queries once the breach was made public. Government inquiries were launched (and are ongoing) into the nature of the intrusion, what the credit bureau did and did not do

in response, and how governance and management contributed to the breach. The incident demonstrated the need to prioritize not only data security, but also governance arrangements for ensuring that companies address such situations effectively. While the outcomes are still unclear, the incident brought greater emphasis to the need for tighter data security policies and practices, accompanied by stringent standards for independent and certified IT audits and governance plans with protocols for addressing breaches. The breach also brought into focus the need for further dialogue on how and when companies should disclose breaches to governments and the public and for new types of digital identifiers in light of the limitations of traditional government-issued identification numbers.

service providers.¹¹ The second part of disclosure, issuing the report, is usually regulated. CRSPs may issue credit reports for specific and permissible purposes only as listed in the enabling regulations.

The issue of consent and disclosure do not relate to commercial credit reporting information as long as it relates strictly to information on a commercial entity.

Data Accuracy and Redress Mechanism

Data accuracy is critical to the subject of consumer rights because inaccuracies in data can lead to negative consequences for the consumer. Errors in credit decisions may result from incorrect or inadequate information supplied to the CRSP, assignment of information to the wrong consumer file (for instance where there are similarities of names and addresses), or the CRSP providing the wrong file to the requesting creditor.

To protect consumers, laws governing credit reporting may require capturing specific minimum information inputs in each consumer file. Both the CRSP and the data providers and sources must comply with this requirement. For instance, a legal requirement may state that a consumer's information submitted to a CRSP contain identifying information, such as the full name(s) of the consumer, date of birth (where available), identification number or passport number (where available), address and contact information (where available), and details regarding current employment status (where available). In addition, the rule should allow the CRSP to use other methods of identification and matching when traditional methods are unavailable.

Strict standards for data accuracy enforced by excessive penalties for filing erroneous reports based on incorrect information can impede the free flow of information and affect the efficiency of the reporting system. (This occurred in Thailand, for example, when the restrictive Credit Information Business Act, B.E. 2545 (2002), was passed in 2002.) Ideally, regulation should place responsibility without imposing strict liability. Legal provision should require that service providers, data providers, and other data sources take all reasonable steps to ensure that the information collected and reported is accurate, up-to-date, relevant, and valid. When the CRSP identifies incorrect information, it should notify

the data provider, who is responsible for correcting the information. Only in the event of knowledge of an error and subsequent failure to take corrective measures should liability for noncompliance arise, against either the CRSP or the data provider, depending on the source of the error determined.

Consumers also have a role to play in ensuring their information is correctly reported. Regulations usually grant consumers the right to access their own credit reports and the ability to challenge incorrect or incomplete information in their files. Modern credit reporting systems provide consumers with the right to access their credit reports free of charge periodically (for example, once per year) or in specific circumstances (such as when the consumer becomes the victim of fraud). The U.S. Fair Credit Reporting Act, for example, requires that credit reporting companies provide consumers with free copies of their credit reports at the consumer's request once every 12 months. In addition, if a consumer notifies a credit reporting services provider about an error in the file, the service provider must send the dispute back to the creditor/data provider. The creditor/data provider must investigate the dispute and report back to the service provider, which must then correct its records and notify the consumer of the dispute's outcome.

If borrowers disagree with the final decision regarding a claim of data error or omission, they should be entitled to obtain resolution through a judicial or extrajudicial process, such as an alternative dispute resolution mechanism. Depending on the jurisdiction, this process might be conducted through the data protection agency, as in most European Union member countries, or a consumer protection body or a unit within the central bank or other oversight body. Credit reporting systems that establish rules with clear guidelines on how to ensure data accuracy are more efficient and gain users' and consumers' trust.

In addition to providing data subjects with the right to access, challenge, and correct information in their files, credit reporting laws may require transparency of credit decisions. Transparency means that data subjects should be notified of adverse credit decisions taken against them based on a credit report. This rule is closely tied to "permissible purposes," as it places an obligation on the

11. Usually a privacy policy requires informing customers of the bank's intention to collect personal information and about the purposes for and circumstances under which the information can be disclosed to third parties. Signing the privacy form usually amounts to consent to share information with credit bureaus: It typically states, "We may collect and share your information with third parties to offer you other products and services for marketing purposes or to assess credit applications."

credit report user to notify the data subject. Accordingly, the rule usually provides that any person using a credit report to deny an application for credit, insurance, or employment or taking other adverse action against a data subject must notify the data subject of the decision and inform him or her of the CRSP supplying the report. Knowing the basis of an adverse action will motivate data subjects to check their credit reports for factual inaccuracies and take measures to correct them or to improve their credit profiles, depending on the situation.

4.5. Oversight and Enforcement

The objective of oversight by a regulatory authority is to ensure that the market for credit reporting is fair, nondiscriminatory, and supported by secure, efficient, reliable, transparent systems adaptive to emerging trends. The role of the oversight authority can cover functions such as licensing, registration, consumer advocacy, antitrust measures, and efficiency control. Usually authorities performing the oversight function are central banks, financial supervisory bodies, data protection authorities, ministries of finance and commerce, or consumer protection authorities.

Oversight is important in managing the interaction between financial institutions that must share information with each other. Competitive practices among banks can undermine the transparency required for effective credit reporting. Fair participation in credit reporting services can be undermined when large financial institutions use their size or power to exclude smaller institutions from participation. Accordingly, the oversight function involves more than just creating regulatory policies, especially in the initial phases. Setting up credit reporting services (such as credit bureaus, in particular) often requires government to help overcome the regulated financial institutions' resistance to sharing information. In particular, sharing positive information encounters the most resistance, as lenders are wary of sharing information on their good clients with other lenders, fearing that their clients could be poached by competitors. Once the initial set up and legal framework is completed, and barring any unscrupulous practices, credit reporting service providers can generally function with minimum oversight.

Regulatory Framework

Central banks, financial supervisors, and other relevant authorities might, in the initial phases of developing a credit reporting system, consult the *General Principles for Credit Reporting* as the broad framework for

drafting specific operational regulations (World Bank 2011). The involvement of all stakeholders at the initial phases of creating the regulatory framework promotes transparency and facilitates better compliance with the eventual standards. Stakeholders should seek consensus on several key considerations to be addressed in regulations, including:

- Licensing or registration processes that ensure service providers have the financial and technological capacity and relevant business know-how to provide an efficient credit reporting service
- Ensuring that service providers adhere to minimum levels of maintaining data accuracy (minimum information inputs should be clearly defined, and other permissible methods of validating information should be allowed/prescribed)
- Data sources (the industry stakeholders should strive to agree on the scope of data sources)
- Ensuring service providers adhere to minimum levels of maintaining data security
- Ensuring service providers adhere to consumer privacy safeguards (instances when consent is required, rules on disclosure, and “permissible purposes” should be clearly defined in the rules)
- Prescribing a process for consumer rights' safeguards (the redress mechanisms and process to be followed in the event of a complaint must be clearly set out in the rules)
- Prescribing permissible purposes
- Power of the authority to supervise the service provider, including reporting and independent audit requirements, on-site and off-site supervision
- Power of the authority to handle escalated or unresolved consumer complaints
- Power of the authority to conduct compliance inspections for the service provider, data providers, and users
- Power of authority to take appropriate action in the event of noncompliance (including reviewing and conducting hearings and issuing penalties and fines)
- Power of the authority to conduct audit checks
- Responsibilities to provide consumer education and outreach.

Many jurisdictions do not prescribe specific measurable requirements for some of the obligations of CRSPs. For instance, for data accuracy and data security, laws might be framed to be enabling, that is to require service providers to “take reasonable steps” to verify the accuracy of any consumer information reported to it or to “have in place policies and procedures” that deal with

data privacy and security. Accordingly, the oversight authority ensures that provisions for safety and security have been made, but it does not police exactly “how” this obligation is performed. The level of specificity required in operational rules varies among countries. (Examples of authorities with clearly defined roles in credit reporting industries include, in Mexico, Banxico, La Comisión Nacional Bancaria y de Valores (CNBC), Condusef, and Secretaría de Hacienda y Crédito Público (SHCP), and in South Africa, the National Credit Regulator.) Ideally, oversight should aim to maintain a balance between consumer privacy and protection and an efficient, secure, innovative credit reporting system based on the free flow of information.

Enforcement

Supervision is exercised over CRSPs, traditional data providers, and users (as determined under the permissible purposes of credit reports). The regulatory framework should provide appropriate enforcement procedures that encourage compliance by all parties but that are not so stringent as to discourage the operation of credit reporting services. Accordingly, the regulatory framework could make provision for issuing notices of noncompliance in the event of alleged noncompliance with safeguard obligations. Under this process, service providers are given the opportunity to remedy violations without adverse action by the authority. Penalties and damages should be imposed in the event of willful or negligent noncompliance with regulations (for instance, inaction despite notices) and in respect to noncompliance with consumer rights provisions.

Some provisions in credit reporting laws deal with specific matters as opposed to “processes,” and as such they are not usually enforced through the “notice” system. For instance, in the event of a violation of the provisions relating to permissible purposes, if a report is disclosed for a nonpermitted purpose, a violation has *per se* occurred and the notice process would be useless. Accordingly, the oversight powers should contain a mix of enforcement provisions that follow a compliance notice process and enforcement provisions for outright violations. Finally, while the industry may be regulated by an authority with powers to review complaints, issue specific compliance measures, and impose penalties, recourse to the traditional court system should not be excluded.

4.6. Alternative Dispute Resolution Mechanisms

Advantages of Investing in a Financial Dispute Resolution (FDR) System

Every stakeholder in the credit reporting system would benefit from a reliable and accessible multilayered dispute resolution system. Consumers gain an affordable, fast channel for redressing errors and clarifying misinterpretations in addition to the option of going to court. Reports from the World Bank and European Commission (Harley and Said 2017) identified that one key way to increase consumer confidence in the financial industry is to provide accessible user-friendly arrangements to resolve disputes. Credit providers will also benefit because early resolution prevents escalation and preserves business reputational capital. Unscrupulous competitors who act unfairly will be held to account. Access to credit for individuals and businesses, sustained by efficient resolution of disputes, are key features of a dynamic investment climate.

Common Dispute Types in the Credit Reporting Context

Experience shows that complaints from consumers in the credit environment are of two types: (1) redress of factual inaccuracies, and (2) redress about legal status and liability. Credit report errors may affect the creditworthiness of a consumer. Trade line errors can either hurt or help a consumer’s credit score. Consumers have the right to ask for redress of their credit information and eventually seek compensation if they have suffered prejudice. Identifying the type of dispute at stake will influence the choice of the appropriate dispute resolution mechanism.

- **Factual inaccuracies.** Disputes over factual inaccuracies could arise from errors in *data entry*. This happens when a credit file inaccurately depicts the terms and status of a customer’s account, such as the date an account was closed, the credit limit for the account, payment status of the debt, the amount owed, and so on. Furnishers can input accurate consumer information incorrectly or make typographical mistakes (transposing two digits in Social Security Number, misspelling names, transposing first and middle names, and so on). Consumers (when applying for a loan) may provide inaccurate data to furnishers, and the credit bureau could pass along the inaccuracy to the consumer’s file. Factual inaccuracies could also

be caused by *process errors*. Credit bureau process errors are possible: for instance, when a bureau failed to prevent the reappearance in a consumer's credit report of inaccurate data removed following a consumer dispute investigation. Credit provider software system or process limitations may lead problems like data lost when a loan is transferred from one owner or servicer to another with different record-keeping systems. Another example is the loss of payment records when trade lines are reported by multiple furnishers over time.

- **Legal Status and Liability.** Disputes regarding legal status and liability can first result from *mixed files*. This happens when accounts or records are included in a credit file that do not belong to the consumer. The opposite is also true: Accounts or records might be omitted, leading to a mixed file. A closed account might not have been entered in the file, for example. Credit bureaus matching algorithms can also lead to a consumer trade line being kept separate from the rest of the consumer's file. This may potentially affect the consumer's credit rating. Family members with similar identity information, such as fathers and sons with common names (Jr., Sr., and so on) can also experience commingling of files, especially if they reside at the same address and distinguishing information is not provided. A common example occurs when a consumer changes names after getting married or divorced. Until the bureau can link the individual before

and after the name change, that individual's information might reside in two different files. Another example could be an account mistakenly included in or excluded from the settlement of debts in the event of a bankruptcy. This may lead to late payment contested by a consumer because he never received a statement. Another source of dispute is related to the *proof of transactions*. The burden of proof about payments made is on the consumer. Time lags between consumer transactions and the reporting of them to credit bureaus can be problematic, if for instance, the consumer urgently needs to obtain a loan. This situation may occur with public records, including delays in obtaining written court decisions. Finally, consumers may contest their legal liability based on an alleged *fraud or identity theft*. These events can significantly compromise a consumer's credit history. Fraudsters may create new credit, utilities, or health care accounts in the consumer's name, for example, and then let them go unpaid. As these accounts go delinquent and are pushed to collections, the fraud victim's credit rating can plummet. Fraudsters may also take over existing consumer accounts, often disguising the account theft by changing the billing address of the applicant with the lending institution or making purchases over the internet. Additionally, fraudsters can create synthetic identities using an innocent consumer's Social Security Number or other identifiers such as last name and birthdate.

Table 4.2. Frequently Used Dispute Resolution Procedures

Mediation and Conciliation	Arbitration	Online Dispute Resolution (ODR)
<p>Mediation is a confidential, flexible dispute resolution process in which a neutral third person, the mediator, acts as a facilitator to help the disputing parties reach a negotiated agreement. Conciliation is similar process to mediation, except the neutral party provides nonbinding recommendations to settle the dispute. Parties are free to reject recommendations; nonetheless, recommendations are usually helpful to the parties and influence settlement discussions. Both procedures aim to provide a dynamic that leads to productive communication and facilitates a mutually satisfactory solution. The mediator/conciliator is not acting as a judge or counsel and has no power to impose a decision on the parties. If a settlement is achieved, the resulting agreement is contractually binding on the parties and can be recognized and enforceable as a judgment if so requested at court by one or more parties.</p>	<p>Arbitration is a confidential process in which the parties agree that a neutral third party, the arbitrator, will render a legally based decision after the disputants have had the opportunity to present the merits of their respective cases. Arbitration produces a decision (award) that is binding upon the parties as if made by a state court judge. The award is final and not subject to appeal. Because arbitration is a departure from the public judicial system, the parties must clearly choose it and understand its implications: that is, they will not be able to resort to domestic courts but must resolve their dispute by arbitration only. Accordingly, the consumer's free and enlightened consent is essential before proceeding to arbitration.</p>	<p>Online dispute resolution (ODR), is a "mechanism for resolving disputes through the use of electronic communications and other information and communication technology." An ODR process requires a system for generating, sending, receiving, storing, exchanging, or otherwise processing communications. Such a system is referred to as an "ODR platform." Dispute is managed through stages, including negotiation, mediation, and arbitration.</p>

Common Dispute Resolution Mechanisms

Parties dealing with *factual* and *legal* disputes in the credit reporting industry can opt for various dispute resolution mechanisms, each having distinct characteristics. The choice depends on finding the best fit between the procedure and the type of dispute experienced by the credit bureau and the consumer. The key question to ask is “What is the most appropriate and efficient procedure in the context?” Additional factors to consider include the attitudes of the parties involved, the cost of each procedure, time efficiency, control over the process and results, and the future relationship wanted between the parties. Table 4.2 summarizes the most frequently used dispute resolution procedures: mediation and conciliation, arbitration, and online dispute resolution. For more information on these procedures, see the World Bank publications *ADR Guidelines* (2011) and *Mediation Essentials* (2016). Per World Bank Doing Business 2017, almost all the economies surveyed (184) recognize arbitration in one way or another as a mechanism for dispute resolution. Most economies (173) also recognize voluntary mediation or conciliation.

Appropriate Procedures for Factual Disputes

Data collected and distributed must be free of errors, truthful, complete, and up-to-date. Disputes on *factual* inaccuracies can be adequately managed through mediation, which opens a productive communication channel between parties to identify data or process errors. Conciliators’ recommendations may be useful if disputing parties cannot identify the source of the errors or sort out a mutually acceptable solution to redress factual inaccuracies and provide compensation. Arbitration may be useful as a procedure of last resort or if a systemic problem created the errors and the bureau is unwilling to change its deficient data processing. It can also be useful when one party is not willing to negotiate in good faith. One advantage of an arbitral award is that it is final and binding on a recalcitrant industry player.

Appropriate Procedures for Legal Disputes

When the issue of a dispute is a contestation of *legal* status or legal liability, arbitration may be the most appropriate procedure to determine any question of law and avoid litigation in court. For instance, consider an identity theft alleged by a consumer that is contested by the credit bureau. This situation may raise complex legal and factual questions. Mediation, or conciliation, can be appropriate as a first-level procedure for exchanging views and thus leading to admission of facts and limiting

the debate in arbitration to core legal issues. Mediation and conciliation may also be the most appropriate and efficient procedures if parties are interested in finding a tailor-made solution to fulfill their own interests (business reputation, quickly obtaining a loan and so on) instead of just having their legal rights recognized. A multilayered approach using procedures in sequential levels—for instance, mediation then conciliation and finally arbitration—could be efficient in terms of case management.

Enforcement of Mediation Settlements and Arbitral Awards

No matter which out-of-court dispute resolution mechanism is selected, it is important to assess the legal framework governing enforcement of the final outcome (settlement or an award), in the absence of voluntary compliance. With respect to arbitration, countries with modern arbitration laws have adopted enforcement procedures that limit the possibility of setting aside an arbitral award (defined in *Black’s Law Dictionary* as a final judgment or decision by an arbitrator). Such laws stipulate that enforcement may be refused by courts only on the basis of procedural deficiencies (such as fraud, evidence of partiality of the arbitrators, proven misconduct of the arbitrators, or arbitrators exceeding their powers) and not on the basis of arbitrators’ inaccurate application of the law. Arbitration awards obtained in one country are enforceable internationally. As of 2017, some 153 countries have signed on to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (New York Convention), which sets out the legal framework by which arbitral awards made in one member country are recognized and enforceable in another.

With respect to mediation or conciliation, some countries have adopted laws on enforcement of settlements reached through out-of-court mediation or conciliation, but many countries have not. (A mediation is a settlement agreement in which the parties bind themselves to a solution and its enforcement; World Bank 2017b.) Countries that have adopted such legal frameworks accord mediation settlements finality similar to that of arbitral awards, allowing them to be set aside only after serious procedural deficiencies or if the settlement is contrary to public policy. In countries without this legal framework, settlements have the same status as contracts; in the case of noncompliance, the issue must be litigated in court. Some alternative dispute resolution centers offering both arbitration and mediation services

have adopted rules to convert mediation settlements into arbitral consent orders to accord them the same enforceability as arbitral awards.

Credit Reporting Disputes Resolution Schemes

To provide a reliable and productive credit reporting environment, every jurisdiction should have a multilayered system in place that allows consumers to seek affordable and efficient recourse to enforce their rights in a timely manner. In most systems, customers are encouraged to first address their problem through the internal mechanism of the financial institution. In the event the complaint is not resolved to the consumer's satisfaction, the option should be available to appeal the decision out of court through an independent ombudsman or/and an ADR service independent of the service provider. Consumers should also have the right to bring the dispute to the courts unless they freely agreed to use arbitration. In addition to domestic legal courts, three schemes of financial dispute resolution are available: (1) internal complaint handling and redress services offered by the financial providers (banks, retailers, and so on) and credit bureaus; (2) appeal to an ombudsman's office or supervisory authority; and (3) appeal to an independent alternative dispute resolution (ADR) service provider.

(1) Internal Complaints Handling and Redress Service

World Bank reports on good practices for financial consumer protection (2012) and setting principles on credit reporting (2011a, 2015), as well as others such as the G20 High Level Principles on Financial Consumer Protection, encourage financial institutions and CRSPs to have efficient complaint handling services through which inaccuracies can be reported promptly and fairly. According to Principle 9 of the G20 FCP principles, minimum regulatory requirements regarding internal procedures for handling complaints and the dissemination of related information should exist and be similar across regulated entities offering similar services. This comes with many benefits. Robust internal complaints' procedures improve customer relationships and increase trust in the credit system. In addition, internal complaint handling is cost efficient for the credit institution (as compared with an independent ADR or domestic court dispute resolution system, which have associated administrative fees and may require retaining counsel), and it is normally free for the customers. Despite its usefulness, some consumers might question the fairness of decisions made by internal complaint services, however, because of perceived partiality and conflicts of interest.

Box 4.6: ADR Case Management by the South African Credit Ombud

In South Africa, the Credit Ombud's goal is to enforce fairness in credit and credit bureau matters. The Credit Ombud's mission is to effectively resolve disputes between members of the credit industry and credit receivers (consumers and businesses) with regard to credit and credit information matters; to act as an educator of the public in matters pertaining to the credit industry; and to act at all times honestly, independently, and fairly, balancing the rights of all parties.

The complaints process at the Ombud office starts most often with a telephone call to its call center, where experienced call center agents assist consumers in logging complaints over the phone and with the least possible red tape. The call center received a total of 32,095 calls in 2016, an increase of 32.3 percent as compared to 2015. The other point of entry is a new SMS line established in 2015 with a short number, allowing consumers to send a simple SMS. The Credit Ombud's call center agents then call the consumers, paying for the call, to discuss how their office can assist them. This benefits consumers without airtime who cannot afford to spend a long time on their cellphones. The office

received 4,866 SMSs in 2016 that were then dealt with by the call center agents.

When assisting a consumer via email or telephone without logging a complaint, the agents record the interaction as a general inquiry. In many instances, for example, agents advise consumers on how to obtain a credit report and how to follow the credit bureau dispute process. This discussion is not logged as a complaint, but as a general inquiry. In 2016, agents logged a total of 14,343 complaints and general inquiries, an increase of 16.5 percent compared to the previous year.

Agents opened 4,123 disputes, 8.8 percent less than the previous year. In the same period, they closed 4,422 disputes, 12.8 percent less than in 2015. As in previous years, the complaints related to statements of account matters, incomplete or outdated credit bureau information, and emolument attachment order complaints. The agents found in favor of consumers in 69.42 percent of the cases, which meant that their investigations revealed something incorrect in the credit agreement or credit bureau listing.

Dispute resolution policy and procedures. CRSPs should have written policies in place for the proper handling and resolution of any customer complaints. A written policy will hold the CRSP liable for the announced policy and make it subject to monitoring by a supervising authority. The policy should have six basic characteristics.

- *Availability of contact points to submit a complaint.* A range of channels to file a complaint (toll-free telephone number, e-mails, SMS text messages, online platforms, and so on) should exist and be accessible during business hours, without undue waiting times. Acknowledgment of receipt of the complaint should be sent in writing or in a durable medium that the consumer can store. The consumer should also be informed about the maximum period within which the CRSP will give a final response and by what means.
- *Clear information on the dispute procedure.* The policy should state in plain language the main steps of customers' dispute resolution procedure, provide firm and reasonable timelines, and guarantee fairness in handling the customer dispute. It should also explain in plain language the consumer's rights in the process.
- *Mandatory training and independence.* The staff and agents who handle consumer complaints should be appropriately trained. Complaint handling functions should be independent from business units (marketing, sales, and so on, if applicable) to ensure fair and unbiased case management.
- *Clear information on the right to appeal to an independent ombudsman and/or ADR service provider.* The policy should inform consumers of their right to appeal and should state the coordination with any ombudsman, and/or (ADR) service available in the jurisdiction. It should also make clear that access to courts always remains an option.
- *Guarantee affordability and promptness of procedure.* The policy should consider the user's perspective and limitations, so the procedure does not lead to an unreasonable cost, delay, or burdens on consumers.
- *Mandatory record keeping and accountability.* The obligation to keep written records of all complaints and the availability of aggregate statistics should be part of the dispute resolution policy. Credit bureaus should be required to use analysis of complaints to continuously improve their policies and processes with the objective of reducing the risk of inaccuracies and of providing better protection for consumers' rights. Complaint resolution procedures should be included in the credit institutions' *code of conduct* and monitored

by the supervisory authority. An effective complaint handling and redress mechanism combined with effective complaints reporting and monitoring provide early warning signals to regulators and supervisors on market deficiencies, bad practices, or emerging risks.

(2) Appeal to a Credit Ombudsman

Credit Ombudsmen have been established in many different countries and sectors. Four key issues should be addressed when developing the appropriate and efficient ombudsman scheme: (i) committing to respect fundamental principles, (ii) choosing a governance structure, (iii) choosing financial sectors covered, and (iv) choosing funding methods.

Ombudsman schemes in credit reporting industries aim to provide a quicker, cheaper, less formal way of resolving disputes than the courts. Public confidence requires that—like a judge—the ombudsman should be, and be seen to be, independent and impartial. An ombudsman can act as a mediator or as an adjudicator, depending on the circumstances. When mediating, the ombudsman facilitates discussions between parties to help them find a fair agreement. When adjudication is needed, case decisions can be made by an ombudsman or by a decision panel comprising an independent chair and an equal number of industry representatives and consumer representatives. Unlike the courts in many countries, the ombudsman does not rely on the parties to bring forward all the necessary evidence and arguments. The ombudsman actively investigates the case and uses his or her specialist knowledge of financial services. This means that the consumer is not placed at a disadvantage by the financial business's greater resources and technical knowledge. And neither the consumer nor the business needs to employ a lawyer to put the arguments for them (though they are not prevented from doing so). In deciding whether to uphold the consumer's complaint, the ombudsman will consider the law, any industry code, and good industry practice. But the decision/recommendation will be based on equity: what the ombudsman considers to be fair in the circumstances of the case. The ombudsman will give reasons for the decision/recommendation. The ombudsman should have the power to issue a recommendation with a reasonable expectation the CRSP will follow it, with any failure to conform being published by the ombudsman. The decision can be binding or not, depending on the ombudsman's powers. The decision may be binding on both the consumer and the CRSP or sometimes

binding only on the CRSP. If binding, some oversight by courts might be required to comply with Article 6 of the European Convention on Human Rights and with Article 10 of the United Nations Universal Declaration of Human Rights. But that does not mean binding decisions require a full appeal to the courts on the merits of the case. It is enough that the court can require the ombudsman to reconsider the case if it concludes that the ombudsman failed to follow a fair procedure.

Another service offered by ombudsmen to consumers and credit institutions is handling preventive enquiries. An independent explanation from the credit ombudsman can often sort things out quickly. By handling enquiries effectively, ombudsmen can prevent many of them from turning into full-blown complaints and can play a role in consumer financial education. In some western European countries, financial ombudsmen find that only about a quarter of inquiries turn into full cases. Advice from the ombudsman can also be useful for credit reporting institutions uncertain of what fair redress would be under particular circumstances.

(3) Appeal to an ADR Service Provider

ADR service providers exist in almost every country worldwide. Some ADR centers specialize in credit reporting disputes. Article 9 of the *G20 High Level Principles on Financial Consumer Protection* provides that recourse to an independent redress process should be made available to address complaints not efficiently resolved via the financial services providers and authorized agents' internal dispute resolution mechanisms.

ADR service providers' goal is to provide a quicker, cheaper, less formal resolution than can be obtained from the courts. They offer a variety of dispute resolution methods as a continuum, each procedure having its own advantages and disadvantages, allowing the parties to choose what best suits their specific circumstances. These methods of dispute resolution include negotiation, mediation, conciliation, dispute review boards, arbitration, and so on. Independent ADR service providers have the advantage of flexibility in tailoring processes to the parties' needs, sometimes leading to mixed-mode procedures such as "med-arb" or "arb-med," for instance. Specialized ADR service providers can also play a preventive role in monitoring trends, identifying systemic issues and market misconduct, and reporting issues to regulators. Appendix 5 shows a few

scenarios of specialized ADR service providers dealing in credit disputes.

Perspectives for Fragile and Conflict-Affected Countries

Access to credit is particularly challenging in countries with weak rule of law, as is access to reliable dispute resolution mechanisms. In this context, public institutions, such as the administrative or judicial system, may be in structuration and unable to provide viable solutions for credit consumers in a dispute with credit providers/bureaus. To restore confidence in credit reporting systems, every CRSP should ideally put in place a complaint-handling service, just as in developed countries.

Maintaining good customer relationships and increasing trust in the credit industry does not necessarily require a complex and costly dispute resolution scheme. A simple and accessible channel for correcting factual inaccuracies is the necessary first step in creating an environment favorable to responsible financial inclusion. The entire financial sector, as well as the consumers, will benefit from truthful, complete, and up-to-date data. Industry-specific ombudsmen (credit, banking, insurance, and so on) were originally created for that purpose based on the economic interest of industry stakeholders and cost-benefit advantages. This first step could eventually lead to centralized ombudsmen covering all financial sectors, including CRSPs, as is now the trend in high-income countries. Another approach is for industry stakeholders to create a collective dispute resolution fund and subsidize a specific mediation/arbitration program for credit disputes administered by local ADR centers.

In many countries, ADR centers are affiliated with, and sometimes hosted by, a local chamber of commerce, which also has an interest in building a trustworthy credit reporting environment. In such programs, consumers may bring the dispute to an independent ADR center to benefit from the services of a chartered mediator/arbitrator in settling the dispute. Service would ideally be free of charge for consumers since honorariums would be paid by the collective industry funds, not the specific credit reporting service provider in dispute, to ensure the minimal arms' length distance necessary to preserve impartiality. This initial step could eventually lead to the creation of a specialized ADR center dealing exclusively with credit disputes.

4.7. Cross-Border Data Flows

As consumers and businesses migrate from one jurisdiction to another with increasing frequency, financial markets are becoming regionalized and globalized and demand for credit reporting on data subjects outside their home markets is increasing. The fifth General Principle states that “Cross border credit data transfers should be facilitated, where appropriate, provided that adequate requirements are in place.”

Cross-border data flow is a useful tool through which a data subject’s credit can be monitored from multiple markets. With cross-border data flow models, data on borrowers applying for credit in a country where they have no credit history, but who have credit histories in their country of origin, can be assessed easily, since the information is available to potential creditors in both countries. In principle, this credit reporting model would work well in the regional context, where several countries are in close proximity and where citizens can move freely from country to country through the region, but potential challenges arise with respect to credit reporting services subject to a multiplicity of regulatory laws, consumer protection frameworks, and institutional structures.

Cross-border credit data flows occur to a limited extent in the European Union, where the markets are largely integrated and persons, businesses, and goods and services move extensively and freely across borders. In the Union Economique et Monétaire Ouest Africaine (UEMOA) region, covering eight francophone countries, however, for the first time ever, one regional credit reporting legislation allows seamless flow of information across eight countries. (See section 7.7 for more details.)

If the preconditions for cross-border data flows exist, the legal and regulatory framework for credit reporting should allow such credit information sharing across borders, provided adequate measures are in place to safeguard the privacy and information of data subjects and to provide simplified dispute resolution processes for borrowers. Generally, credit information sharing between different jurisdictions occurs only when each of the jurisdictions provides the same degree of safety, security, and protection for the underlying information. Section 7.9 talks about the Eurozone Anacredit project, a cross-border credit information sharing scheme that allows the ECB, national central banks, and other monetary supervisors to collect and individual bank-

level loans to enterprises (above €25,000) across euro and some non-euro countries. The regulators recognized the need for a cross-border sharing platform, realizing that firms’ exposure to credit across borders could not be captured adequately through any single national credit register alone. Regional visibility of firms’ credit exposures enables regulators to identify industries or sectors with high exposure or vulnerabilities; in other instances, it allows the ECB to define monetary policies that address regional financial access needs (ECB 2015).

Standards governing the exchange of commercial credit reporting have been developed over decades in response to technological developments and market requirements to assess commercial trade credit, bank loans, and trade finance. All standards that apply to consumer credit bureaus do not necessarily apply to commercial credit reporting companies, particularly when those relating to consent, protection of privacy, and permissible purpose as commercial credit reporting companies deal with information related to firms and not individuals. The only exception would be when commercial credit reporting companies link companies to the underlying individuals that own, run, operate, or sit on the boards of these companies. In these instances, all due regard must be given to ensuring that the personal information of these underlying individuals is protected.

The general sentiment from industry associations is that commercial credit reporting is a space that is self-regulated for the most part and does not need further legislation and regulation. The main arguments for this line of thinking is that commercial credit reporting companies (as opposed to consumer credit reporting) serve different markets, do not deal with personal information, use different types and sources of information, and have different clients and different purposes. Given the competitiveness of the commercial credit reporting space, these companies constantly strive to offer the most up-to-date and innovative products to meet customer needs. These entities should nonetheless comply with relevant company incorporation laws and any other laws pertaining to operating a business in the given jurisdiction. As it relates to the collection, collation, and treatment of data for making credit decisions, the General Principles of Credit Reporting surrounding data, data security and efficiency, governance, and cross-border data flows could all apply to the commercial credit reporting space.



CHAPTER 5.

Developing Credit Reporting Systems in Emerging Markets

Developing a credit bureau, commercial credit reporting company, or credit registry is a time- and resource-intensive project involving the commitment of many stakeholders such as government, monetary and supervisory authorities, regulators, credit reporting service providers, data providers, users, and consumers. This chapter, drawing on *General Principles for Credit Reporting* together with WBG experience and expertise in setting up credit reporting systems (consumer, commercial, and credit registries) in client countries, outlines key practical aspects of that process, including:

- Assessing market conditions
- Designing an ad hoc national or regional credit reporting strategy
- Changing perceptions and building awareness
- Guaranteeing adequate data availability
- Ensuring financial sustainability
- Creating an appropriate business model
- Identifying appropriate technology needs
- Considering operational and practical issues
- Establishing an appropriate legal and regulatory framework (discussed in chapter 4)

These activities can be carried out simultaneously or in sequence depending on the availability, capacity, and needs of the stakeholders involved. The following sections provide additional guidance on each activity's objectives, who should be engaged in it, and how it can be carried out. Generally speaking, the activities listed above apply across the different types of credit reporting service providers, but the specifics of each intervention varies depending on the objective and primary purpose

of the credit reporting service provider (that is, whether it is a consumer credit bureau, commercial credit reporting company, or a credit registry).

5.1. Assessing Market Conditions

A market assessment can help determine whether a CRSP will be financially sustainable in a particular market and, if so, in what form. Different stakeholders can play a role in assessing market conditions. Development institutions like the WBG can work with government authorities or creditor associations to undertake an assessment. The components of this in-depth analysis may include the following aspects, which are discussed further below:

- Market analysis
- Stakeholder analysis
- Technical scoping study
- Legal and regulatory environment assessment
- Specifying staffing requirements and identifying available skills in the labor force.

Market Analysis

A credit reporting service provider is fundamentally a business, and therefore a natural starting point for developing such a provider is to undertake relevant market analyses that can support the creation of a viable business plan for the entity. The market analysis should undertake projections of demand and costs that will enable the credit reporting service to price its products and services accordingly. Pricing is one of the key factors in sustainability, and crucial investment decisions such as software acquisitions and disaster recovery plans

should be aligned with the pricing strategy to avoid potential losses. A typical market analysis should focus on the following:

- Population size (reflecting current and future credit active individuals), which indicates potential customer base for lenders
- Size of existing retail and SME credit market and potential for growth
- Level of sophistication of the credit market in terms of products and services
- Size of the existing credit reporting service(s) in terms of borrowers/firms covered
- Capacity and scope of information in the bureau or registry
- Potential demand for credit information
- Existing and potential data sources and public information sources, and now potentially, the availability of new data sources, including data from fintech providers, big data, and alternative data from telecommunication companies
- Possibility that the demand for credit information is satisfied by the existing providers
- Presence of other CRSPs and a credit registry
- Credit market trends
- Legislative or regulatory limitations.

Stakeholder Analysis

Assessing the credit reporting service's potential stakeholders (such as lenders, nontraditional data providers, existing credit reporting service providers, authorities, and policy makers) and their commitment to the project involves asking the following:

- Is there a broad consensus among lenders on the usefulness of credit information sharing?
- Who are the potential members or users of the proposed credit reporting service?
- Are lenders willing to share positive and negative information?
- Do lenders have the technological capacity to share the information?
- Are the regulatory authorities supportive?
- What is the potential business model for the credit reporting service?

In markets where a service provider already exists, the following should be explored:

- Does full file and comprehensive information sharing exist?
- Does the service provider meet the needs of the market?
- Does the service provider follow best practice in terms of the safety and soundness of the system?

- Does the market need additional types of products and services?
- Do provisions exist for upholding consumer rights?
- Are products and services competitively priced?
- Could the credit information sharing market be more efficient, effective, and responsible to market needs?

In the case of credit registries, the focus of the stakeholder analysis is more on understanding what technological capabilities and data collection practices regulated entities have to share information with the credit registry. As supervisors rely on several different databases (for e.g. Balance Sheet Database) that often fall under different authorities to support their micro and macro prudential functions, the analysis should also look at how different authorities can collaborate to share information in a systematic fashion.

Technical Scoping Study

The objective of a technical scoping study is to assess the technical capacity and lenders' readiness to participate in the credit reporting service. This study involves sending detailed questionnaires on the nature and formats of available information to all potential participants (lenders) and following up with meetings to discuss the survey results. The study broadly focuses on the following issues and specific questions depend on whether the analysis is being performed for bureaus (consumer/commercial) or registries:

- Types of retail and MSME credit products offered
- Level and growth rates of retail and MSME credit, by product
- Current and expected number of credits issued, to inform projections about the potential volume of inquiries
- Availability of electronically stored historical information
- Whether borrower consent to disclose information to a credit reporting service is being collected
- Availability of unique ID numbers for individuals and MSMEs or other identification methods
- Level of sophistication of lenders' internal information management systems
- Technology and infrastructure constraints facing lenders and potential necessary upgrades
- Level of awareness among lenders on issues related to credit reporting
- Level of technical and communication infrastructure in the country, whether it will be able to support the needs of the proposed credit reporting service, and what upgrades may be necessary that will require significant investment

Comprehensive analysis of technical capacity is essential to determine whether a technical partner is necessary, to develop technical specifications for the proposed credit reporting service, and to help lenders make changes needed in their technology platforms to enable them to join the credit reporting service. Technology requirements and the qualities that make for a strong technical partner are further discussed in section 5.6.

Legal and Regulatory Environment Assessment

The legal and regulatory environment component entails consultations with regulators and qualified legal experts to assess the country's legal landscape. (For more on this topic, see chapter 4.) The main questions to be addressed include the following:

- Is information sharing permitted or limited under existing legislation?
- What is the existing legislation relevant to information sharing and the proposed credit reporting service?
- Who are the oversight and enforcement authorities relevant to information sharing and credit reporting services?
- Is an operating license or registration required to establish a credit reporting service?
- What are the implications of the legal framework for the service provider's operations?
- If the regulatory environment is not enabling or limiting, what regulatory reforms must take place to achieve an environment conducive to information sharing and credit reporting?
- What new rules or regulations are being proposed?
- How organized are consumer groups, and how supportive are they likely to be of information-sharing plans?

The proposed operator should ascertain (as part of its market assessment) that it is allowed to legally operate before finalizing any aspects of its operations. If the market assessment reveals that the legal and regulatory environment is not enabling, further efforts to engage legislators and oversight authorities should be made promptly, as the process of introducing amendments or creating new laws can take several years. Depending on the complexity of a country's rule-making processes, government authorities and regulators who support development of a credit reporting system may work to make the necessary regulatory changes simultaneously with the project's design or set-up phase.

Specifying Staffing Requirements and Identifying Available Skills in the Labor Force

A credit reporting service relies on information technology skills, which may be in short supply depending on the market. In this part of the assessment, the aim is to match the skills required for the operations with the skills available in the market and to estimate what skills training will be needed. Section 5.7.1 discusses the organizational structure and staffing requirements of a newly established CRSP.

5.2. Changing Perceptions and Building Awareness

Why It Is Important to Change Perceptions and Build Awareness

A critical step in developing a credit reporting framework in any market, is to change perceptions and build awareness on credit reporting within the sector and community.

- Lenders may be averse to information sharing due to bank secrecy rules or stiff competition in the credit markets. Lenders are generally resistant to sharing positive information on their clients for fear that competitors will steal their good customers. In the age of fintech, online lending, and a whole alternative lending universe, the importance of credit information sharing may not be well understood or an integral part of the business models of these new types of lenders.
- Authorities may be unfamiliar or uncomfortable with sharing financial information and, for a variety of reasons, some political, they may resist information sharing efforts.
- Consumers may not understand the importance of providing their information to credit reporting service providers in markets where the credit culture is relatively nascent, and cash is still largely used. In markets where credit is more prevalent, borrowers may be hesitant to share their personal information out of privacy concerns. Increasingly today, with the advent of fintech providers, consumers may be providing their information unwittingly, without understanding that by signing on to an alternative lender's services their information may be collected, analyzed, and used to make decisions about them.

While credit bureaus have access to a broad range of data and provide a wide range of services to assist lenders in making lending decisions, in the absence

of any legislation requiring mandatory participation, the business model is usually based on voluntary contribution of information by data providers (typically involving a reciprocity arrangement). In some jurisdictions, usually in the formative stages of the credit reporting environment, some potential data providers, most commonly larger institutions fearing loss of market share, may resist sharing information. In these circumstances, the authority of the central bank, through its ability to encourage participation in a data-sharing environment, can have a profound catalytic effect on establishing good practices.

An organized structure for credit reporting and information sharing helps protect lenders and borrowers alike, but the technology is now available for many players to create their own credit scores from a range of data. Where no formal reporting framework exists, the market will be left to its own devices. This can be a good thing, but it may also lead to lack of transparency, increased proprietary use (by telcos for example), and lack of consumer protection.

Different Types of Messages

The drive to set up a credit reporting system can originate from any of several stakeholders in a given market. Awareness-raising activities should deliver different, targeted messages to different stakeholders. Each stakeholder will, at some stage, require support from various government bodies, supervisory and regulatory bodies, policy makers, and law makers. Awareness raising targeted at government officials, policy makers, and regulators should address the following issues:

- The importance of input from government officials, policy makers, and regulators in creating a safe and efficient credit reporting infrastructure
- The role of government and the need for government leadership in developing a legal and regulatory framework conducive to credit information sharing
- The importance of information sharing for financial stability and expansion of credit (different products, more borrowers, different choice of providers)
- Improved oversight of the financial sector
- Role of government in encouraging data providers to participate in and use the credit reporting service providers
- Role of authorities in overseeing activities of credit reporting service providers and ensuring compliance
- Role of authorities in enabling credit reporting service providers' access to public records

- Role of authorities in ensuring consumer privacy rights are upheld

For an audience of financial and nonbank creditors and other data providers, awareness-raising efforts should focus on explaining what they will gain from being part of a credit reporting system. Efforts should be made to educate these participants about their rights, roles, and responsibilities in the credit reporting system. Specifically, awareness raising should:

- Address concerns about sharing information and the fear of losing market share due to such information sharing
- Highlight and explain the role of the relevant credit reporting service provider
- Explain the different measures available to prevent competitor institutions from poaching customers
- Emphasize the need for cooperation among a country's banking, financial, and nonbank institutions for the credit reporting service to succeed
- Emphasize the need for comprehensive information sharing to prevent fragmentation
- Assure lenders of the confidentiality of all information provided and discuss the obligations of lenders to treat confidential information appropriately
- Explain the importance of sharing positive information
- Encourage broad participation by bank and nonbank lenders in the credit reporting service
- Encourage timely and accurate data submission and emphasize the importance of compliance
- Emphasize the benefit of improved risk evaluation throughout the account lifecycle
- Emphasize improved transparency in risk management
- Promote the introduction of updated credit control policies and procedures taking into account the information in the credit reporting service provider's database
- Highlight the need to educate staff about credit reporting and provide continuous training opportunities to staff
- Address how an adequate legal and regulatory environment provides for an efficient and smooth credit reporting environment
- Emphasize the need for accurate data submission and timely correction of erroneous data

At different stages in the development of a credit reporting system, the key stakeholder driving the process may want to organize outreach targeting the public. Government authorities, supervisors, and regulators may want to explain their roles and overall support for developing a credit reporting system. Credit reporting service providers

or data providers may want to establish links with consumers and explain how consumer data is handled and treated to allay any fears surrounding data privacy and security. Such awareness raising efforts should:

- Explain the role of a credit reporting service provider and the benefits it offers for consumers or SMEs in terms of expanded access to credit
 - Explain role of registries in supporting the prudential supervision function of the regulator
 - Discuss the types and nature of information that will be collected and the purposes for which such information will be used
 - Discuss the obligation of CRSPs to respect the privacy of personal information and their duty to treat all such information as confidential
 - Discuss the redress mechanisms that will be available to consumers to access their data and to challenge and correct erroneous information on CRSP databases
 - Emphasize the importance of borrower consent to enable data sharing as related to the legal and regulatory framework
 - Emphasize the role of the borrower in providing the most accurate information

In addition to educating the public about credit reporting, campaigns should educate the public on using credit responsibly and reducing the risk of over-indebtedness.

Different Tools and Strategies Available

A critical element in building a credit reporting system is the focus on building awareness among lenders and their clients, the public, government officials, policy makers, regulators, and other potential participants in the credit reporting system. Market and stakeholder analysis (discussed in section 5.1) provides the key stakeholders driving the reform process with insights into the issues to be addressed through awareness raising. Below are descriptions of some of the tools useful for changing perceptions and building awareness of the benefits of information sharing.

Roundtables and Conferences

Consensus and buy-in of stakeholders is achieved through building awareness of the benefits of information sharing. For instance, in 2012, IFC facilitated the first regional conference on credit reporting for countries of the UEMOA to lay the groundwork for developing a regional credit reporting system, and in 2017, a second conference was organized to inform regional stakeholders of the establishment of the credit bureau and of how the different

stakeholders could play an important role in ensuring its success. Similar consultations were instrumental in promoting the establishment of credit bureaus in Egypt, Kenya, Morocco, Russia, Tajikistan, Vietnam, and several other countries. The Panamanian Credit Association (APC) regularly holds seminars to educate SMEs and consumers on how to interpret their credit reports and how it impacts their ability to get credit.

A range of stakeholders can be involved in consultations, conferences, and roundtables, including:

- Supervisory and regulatory bodies, such as the central bank and other financial supervisory authorities
- Other government bodies, for example, ministries of finance or commerce
- Policy makers, law makers, attorneys general, members of parliament
- Credit reporting service providers (existing and/or potential)
- Lenders, including banking and nonbanking financial institutions, microfinance institutions, leasing companies, insurance providers, and other creditors, such as utilities and retailers
- Other potential data providers (public data sources, fintechs, online lenders, P2P lenders)
- Consumer representative organizations and the public

These events can be organized by the key stakeholder driving the development of the credit reporting system, like a central bank or a banking association, depending on the country context. Development partners like IFC are also regularly involved in arranging and facilitating such events.

Media

Media coverage of conferences and roundtables, as well as articles on the role of credit information, with experts' opinions and reflections on the local debate, can be useful in promoting awareness of credit reporting systems. Such efforts have significantly increased public awareness of the need to build a credit history and to submit one's credit records to a credit bureau. Initially, media coverage can be facilitated by the key stakeholder driving development of the credit reporting system, such as a central bank or a banking association. Once the system is developed, credit reporting service providers may choose to provide press releases or attract media coverage to promote the concept of credit reporting and to ensure greater buy-in by data providers, users, and consumers.

Internet

Once it becomes operational, a CRSP's website should be user friendly and contain information for consumers where applicable explaining aspects of consumer credit and credit reporting. The site must inform consumers on how to access their credit reports and explain the channels available to challenge and rectify inaccuracies identified in their credit reports. Credit reporting service providers can take advantage of the new advances in social networking, such as Twitter and Facebook, to promote awareness.

Partners

Partners of credit reporting service providers can provide key media channels for educating the market or promoting credit bureau services. Partner websites, conferences, roundtables, and social media can provide education and promotion opportunities.

Communications Strategies

The stakeholder leading the reform usually develops a consistent communications strategy for implementing outreach and raising awareness. A detailed communications strategy will identify the following:

- Different target audiences
- Baseline assessment methods to understand the level of understanding on the basics of credit, managing finances, and credit reporting
- Different messages developed and customized to address different audiences
- The communications channels most likely to have the greatest impact (TV, radio stations, internet, newspapers, fliers, social media, and so on)
- Resources needed to implement communication strategies
- Timelines for rolling out outreach and awareness raising activities

The communications and outreach activities must occur over time. Initial phases of awareness raising may focus on obtaining buy-in from financial system supervisors and regulators and from creditors. As the project evolves, more outreach and awareness may be conducted to sensitize alternative data providers, their respective regulators, and other relevant authorities about the initiative. When legislation is drafted, sensitization must be undertaken with authorities and lenders regarding the law's contents and key implications. When the legislation is passed and a credit reporting service provider is identified or is being established, outreach

can focus on sensitizing consumers about what the credit reporting system aims to achieve and how it will enable greater access to responsible finance for all consumers.

5.3. Ensuring Adequate Data Availability

Data refers to all the information a CRSP collects, processes, and uses to generate reports and value-added services. The different types of data providers for CRSPs were defined and discussed in section 2.1. The market analysis discussed in section 5.1 provides the CRSP with a sense of the challenges it will face in collecting data to populate its database. To ensure adequate data availability, the CRSP should pay attention to the characteristics of data and data collection described in the following sections.

Data Quality

Data quality is the most important and challenging element in successful credit reporting. CRSPs must take steps to ensure that the data they use is accurate, complete, and up-to-date (World Bank 2011, Principle 1). To ensure high-quality credit reporting, data should be:

- Accurate (correct, up-to-date, having a strong validation process for identification of data subjects and other information)
- Sufficient, relevant, and collected on a systematic basis from all reliable, appropriate, and available sources
- Timely (updated on a continuous basis and available to users promptly)
- Retained safely for a sufficient amount of time

The role of ensuring data quality and of constantly working to improve data quality falls in various degrees on data providers, credit reporting service providers, and data subjects.

According to the General Principles, accurate data is free from error, truthful, complete, and up-to-date. Inaccuracies in data can result in adverse events, such as inadvertent refusal of a credit application from a good consumer or extension of credit to a bad borrower. Credit reporting service providers rely largely on data providers for accurate data content. Responsibility for the input of information, and therefore the accuracy of information supplied, should remain with the data provider. The CRSP, however, is responsible for validating the data before uploading it onto its database. The service provider's data-capturing system should not allow any alteration of the records supplied by the lender. Although a service provider may accept or reject a file supplied by

Box 5.1. Errors in Consumers' Credit Files

An increasingly prevalent issue in the United States is the number of consumer credit files that contain errors. Marginal errors occur in the files of approximately one in five consumers, falsely implying the consumer is riskier than is true and potentially resulting in offers of credit products at higher rates or on more stringent terms. Ensuring data accuracy falls on the data providers as well as the credit bureaus; however, incentives to ensure accurate data are low in an environment that emphasizes volumes and speed of

processing over accuracy. The three big bureaus in the United States contain information on 200 million data subjects, with at least 2.6 billion pieces of information, 1 billion of which is updated monthly. Clearly, when dealing with such large volumes of data, errors will occur. Regulators are increasingly calling for greater penalties on bureaus or data providers to ensure that they take all steps necessary to ensure data accuracy.

Source: Klein 2017..

the lender, it should not make changes to the file, thus limiting the service provider's liability in the event of information errors.

A credit reporting service provider should have a method for consolidating data into uniform formats. If information is incomplete, the provider should have a method for matching and merging separate pieces of data to construct a complete file on a data subject. Ideally, the credit reporting service provider and the data providers should agree on minimum data inputs and on methods of storing data-subject information in a format that allows the credit reporting service provider to easily extract the information and upload it to its own system to further match and merge with other data.

A challenge to data accuracy and validation is the lack of uniform identification schemes. Issuing national unique identity numbers is usually the prerogative of the government. Under the World Bank's ID4D program, several countries are looking into developing digital identification systems.¹² Adopting a national identification system at the initial phases of establishing a credit reporting system would be ideal, but it is not always realistic. Therefore, in jurisdictions without national identification numbers, or where use of such numbers is prohibited by law, CRSPs may have to develop their own systems to identify data subjects using matching algorithms traditionally combining name, address, and date of birth. In New Zealand, for example, CRSPs use sophisticated matching solutions because legislation prevents recording unique identifiers or specific unique IDs do not exist. In Australia, under existing legislation, the only national unique identifiers available—tax filing and Medicare numbers—can be used for tax and medical purposes only and thus are unavailable for use in credit reporting systems.

The ability to use algorithms to match information is significantly restricted in emerging markets, however, where crucial information, such as names, addresses, and dates of birth, are often unreliable. In some markets, regulators have looked into developing biometric systems to overcome the challenges of proper identification. For instance, in Uganda, the credit bureau developed a specific biometric-enabled card for financial sector clients to assist in the development of the credit bureau database.

Data Sufficiency

As discussed in section 1.3, several studies have shown that inclusion of information from nonbank lenders into a credit scoring model generates scores with a higher predictive power, whereas credit reporting fragmented by industry has less predictive power. Credit reporting service providers should collect both negative and positive data to provide lenders with the most comprehensive picture of their portfolios. Broadly speaking, all data relevant for an analysis of creditworthiness, including data in public records and private nonfinancial sources, should be collected to the extent that it is legally permissible. With the advent of new types of lending methodologies, platforms, and lenders, the data aggregated by these new credit providers could potentially be included in the broader credit information sharing space and should be seriously considered to provide a complete picture of borrowers across the market and potentially from a systemic risk management perspective.

Minimum data inputs should be consistent with the guideline on "sufficient data" stipulated in *General Principles on Credit Reporting*. In practice, the minimum possible amount might be vital to a credit score by keeping accounts active and reported to the credit agencies. Most credit bureaus in the United States report

12. Available at: <http://id4d.worldbank.org/>.

anything that lenders send them: No amount is too small for a credit report. In some cases, the credit bureaus have an effective minimum of \$0.

In many countries, the collection of irrelevant data is explicitly prohibited. Irrelevant data includes information about a consumer's race, medical status or history, religion, or other information deemed immaterial for purposes of analyzing creditworthiness. This presents an interesting issue when considering the range of new (alternative data providers) and the new data types that are being used to evaluate creditworthiness and make credit decisions. Currently there is no consensus on how these data providers and data types should be regulated as regulators across the globe are taking varied approaches from waiting and watching to developing specific regulation on entities using and processing these new data types.

Ideally, a CRSP would choose to collect data from as many different sources as possible, but in reality, legal and regulatory frameworks surrounding credit reporting may not support this. Until recently, for example, positive credit reporting was prohibited by law in Australia. In 2016 a law was passed to introduce positive credit reporting in the country, but it is still not common practice to share positive information; in response, a mandate may require positive information sharing within a certain timeframe if lenders are not forthcoming with this data. New Zealand passed a law enabling positive credit information sharing (that is, comprehensive credit information sharing) in 2012, and it is beginning to see the benefits of positive credit information sharing. In other instances, nontraditional providers of data, such as utilities and telecommunications companies, may fall under a different regulatory purview than traditional data providers like banks and financial institutions (as, for example, in India). The respective legal and regulatory frameworks may not permit data sharing with credit reporting service providers.

Some public records, such as identity registries for individuals and businesses, might not be available to the public or access may be restricted. CRSPs should seek to negotiate special agreements with public records agencies to ensure the smooth and systematic flow of information crucial for validating the identity of the data subject. In some cases, this may involve defining a cost-recovery scheme to alleviate the financial burden on the public agency. Depending on the legal and regulatory environment facilitating access, CRSPs may also enter into agreements with private data sources to collect information. To ensure that all CRSPs in the market have

access to a wide range of data sources, it is recommended that data providers and other data sources do not enter into exclusive contracts with any specific CRSP.

In addition, the technology platform of the service provider must be designed to receive information in different formats. In some markets, small banks and nonbanking financial institutions may be unable to provide information electronically.

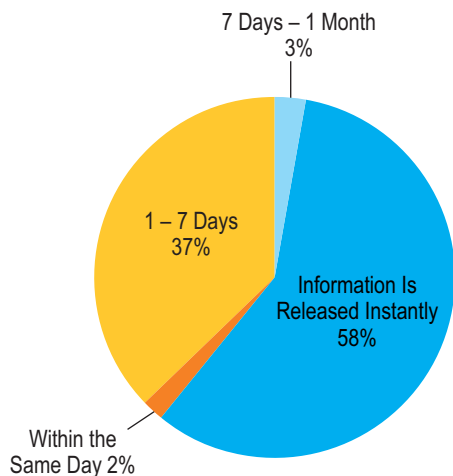
Data Timeliness

Data should be made available to creditors in a timely manner because they are making critical credit-granting decisions based on the information received from credit reporting service providers. Timeliness requires data providers and other data sources to update their databases frequently: within a specified number of days after the occurrence of a specified relevant event or at end of each billing cycle. Updated data must be provided to the CRSP on a systematic basis. This will usually take the form of a predefined schedule as determined by agreement between the CRSP and data providers. Updated data should be incorporated into credit reports and made accessible to users as soon as practical.

The 2018 Doing Business survey showed that approximately 30 percent of credit bureaus (in a survey of 103 credit bureaus) reported that data requests were met instantaneously. The majority of credit bureaus met all demands within seven days of receiving a request (see Figure 5.1). (See also World Bank 2004, "Getting Credit" indicator.) The key indicators for the timeliness of service include the following:

- *Time between obtaining the query and issuing the report:* In many countries, the process is automated. Depending on the search capacity of the software, it may take just a few seconds. In many developing countries where the reports are not provided online, the process may take hours or, in some cases, days. Minimizing the delivery time is an important objective for the CRSP.
- *Time to assimilate information and update records:* This refers to the time between receiving information or updates from the data providers and its integration into the CRSP's database. Validating and merging information received from lenders may take anywhere from one day to one month (World Bank 2018a, "Getting Credit" indicator), depending on the quality of information supplied by lenders, the reliability of identifiers, or the merging algorithm. This parameter is critical to ensure that the data available to lenders is up to date.

Figure 5.1. Average Time between Request and Release of Data



Source: IFC calculation, based on Doing Business 2004 data.

- Time to correct errors:** Of the 103 credit bureaus surveyed in the Doing Business Survey, approximately 70 percent reported taking less than two weeks to rectify errors. Another 21 percent reported taking between two weeks and one month to correct errors (World Bank 2018a, “Getting Credit” indicator). Generally, when a CRSP finds errors in a file, it sends a correction to the data provider, who has the responsibility of correcting errors. Given the emphasis on ensuring that consumer rights are protected, regulations increasingly provide guidance on the amount of time available at the disposal of the CRSP to address issues related to incorrect information. Generally, the CRSP has about 15 days to address the error or to notify consumers that additional time is required.

Data Retention

Retention Period for Storing Data

Data should be retained safely for a sufficient amount of time. Most credit reporting service providers retain information for five to seven years. In some markets, the length of time that information may be stored is restricted by legislation. The retention period for information is determined by the purpose for which the data is used. On one hand, data should be kept for an amount of time sufficient for the purpose of debt collection and to reduce the risk of over-indebtedness, a period that, based on global experience, ranges between five and seven years. In jurisdictions where credit scoring and

other value-added products have been developed, data should be retained for at least three years to allow sufficient observations to build predictive scores. Data for supervision and statistical purposes may need to be retained for a longer period. In the United States, for example, information remains on credit bureau records for two, seven, or nine years, depending on the type of credit or debt. In some countries (Brazil, for example), information is never deleted from the database.

Retention Period for Disclosing Data

A distinction should be made between the length of time that data is retained and the length of time data is included in a credit report or disclosed to users. In some countries with a negative-only reporting system, once a bad debt is paid off, all negative data related to it is deleted from databases, either because deletion is mandated by law or because it is common practice in that marketplace. Such a practice may paint a false picture of a borrower, however, who may be a recalcitrant debtor who pays off an old loan only to get a fresh loan, which he or she then fails to repay. Conversely, disclosing data, especially negative data, for excessively long periods (more than five years) can unduly penalize a borrower who has otherwise reformed his or her payment habits. Most countries opt to limit the number of years that negative information may be shared to give previously delinquent borrowers a second chance in accessing credit.

Typically, legislation provides guidance on the number of years that data can be distributed, which, based on information from Doing Business surveys, ranges from two to ten years. Different types of data are subject to different distribution time limits. For information relating to previous inquiries (the data footprint left on the credit bureau each time an institution requests a credit report on a data subject) is of little value to lenders beyond events that have occurred in the previous 12 months and is, therefore, usually masked from credit reports after a year. In Brazil, while information is never deleted, it may not be distributed beyond a certain number of years; for instance, negative information is distributed for 5 years and positive information is distributed up to 15 years. (World Bank Doing Business 2019).

The agreement between the CRSP and the data providers will usually stipulate how long information will be shared, when it will be archived (and the purposes for which archives may be used), and when it will ultimately be deleted. In practice, data is archived rather than deleted so that it is always available, but it is no longer published after a predefined time period.

With the explosion of new data and technologies, all data relevant for making credit-related decisions should be considered as potential data sources for credit reporting service providers. This is important to provide a complete, nonfragmented picture of borrowers' credit profiles, whether they access credit through CRSPs or through nontraditional data providers. The collection and processing of new data (such as social media and other online data) continues to evolve; it is largely unregulated, and the predictivity of online sources in lending decisions has still not been observed for a sufficient period of time to prove decisive. To the extent these data sources are considered by CRSPs or nontraditional data providers, however, all the data rules applicable to traditional data providers—including data quality, sufficiency, timeliness, retention periods, and safety and security requirements to ensure consumer privacy—should apply to the use of these new data sources.

(For more on data retention, see section 4.2 of this Guide.)

5.4. Ensuring Financial Sustainability

A CRSP is a business and needs to be financially sustainable, regardless of the market in which it operates and regardless of the primary function it performs. The size of the credit-active population dictates the level of sophistication and complexity of the credit reporting system to be implemented. In emerging economies, a very large proportion of the population is often unbanked, with the result that existing credit accounts reflect only a small percentage of the potential market. Credit bureaus and commercial credit reporting companies depend on volume (number of inquiries or consultations by their users) to be sustainable and to generate profits. Although credit registries are not focused on profits, they should have access to a consistent source of funds to maintain registry operations.

CRSPs (mostly credit bureaus and commercial credit reporting companies) make their profits by selling reports in response to queries from users/members of the reporting service. Without a large borrower base, CRSPs must charge high fees for their credit reports, which may reduce the demand from lenders. In countries where the use of credit is not prevalent, CRSPs might face this challenge in their initial years of operation. Developed countries with small populations, such as Iceland (population 338, 349) and New Zealand (population 4.79 million), operate small but profitable credit reporting services because their populations, though small, use credit markets actively. For example, in New Zealand,

where the economically active population is estimated at slightly more than 2 million, one of the three credit bureaus receives about 4.5 million queries a year.

In emerging markets where the economically active population is too small to generate sufficient demand from lenders, a regional solution may be a viable option. The UEMOA region, for example has a single credit reporting service provider serving all eight countries in the UEMOA region. While the combined population across the region exceeds 122 million, each of the UEMOA countries are disparate in terms of population, level of credit activity and readiness for credit reporting. A shared credit reporting service provider leveraging common technology infrastructure and skills offered cost efficiencies and a significantly reduced time to market than setting up independent credit reporting service providers in each of the eight countries.

5.5. Creating an Appropriate Business Model

After the market assessment, the proposed credit reporting service provider should have an overview of the market environment and be ready to move into the “design-and-build” phase. Since conditions differ from country to country, what works best is a design suitable to a country's market environment, taking into account global best practices. Accordingly, the results of the market assessment will direct the next steps in the process: deciding on the best model for the credit reporting service, developing a business plan, and creating an enabling legal framework.

The market assessment or feasibility study will influence the model and business structure of the proposed credit reporting service. The most common models that have been tried and implemented in the past are:

- Credit bureaus (with commercial capabilities)
- Credit registries
- Public-private credit reporting service provider
- Commercial Credit Reporting Companies

(For more information see chapter 2 of this Guide.)

Model 1. Credit Bureaus (With Commercial Capabilities)

Chapter 2 covers the basics of credit bureaus and discusses the potential range of shareholders or owners of bureaus. Some markets demonstrate a willingness, as determined by stakeholder interest and readiness, to allow credit bureaus to provide credit information services in the market. The more common ownership

structures are (i) bureaus in which creditors/lenders are shareholders, and (ii) bureaus that are independently owned and operated. (See Table 2.1 for an outline of the benefits and disadvantages of each structure.)

Regardless of the bureau's ownership structure, a key consideration in determining the optimal model for setting one up in a market, is whether to host the bureau on- or offshore. Credit reporting is a capital-intensive business requiring significant investments both for start-up and, particularly, for the continual technological updates that the activity's evolution demands (for example, quality, security, integrity of data, value-added services development, compliance with the legislation, and others). Countries with large populations (such as China, Brazil, Indonesia, Mexico, and Russia) and a solid credit culture and consumer credit industries normally represent an attractive business case for credit reporting service providers. Significant volumes of inquiries dramatically shorten a bureau's break-even period for attaining financial sustainability, thus allowing the business to generate earnings and profits within an accelerated time. In smaller markets where local credit bureaus already exist, the challenge remains of meeting market needs by continuously innovating and investing in the latest technology and security/cybersecurity measures, all while remaining a financially viable ongoing enterprise.

In small markets where local credit bureaus do not already operate, or operate less successfully, partnering with existing known international credit bureaus may present a strong option. Sometimes, however, these markets face more difficulty in attracting skilled and renowned information providers. Alternative options such as offshore hosting (also called the hub-and-spoke model) and, given today's more advanced technology, cloud hosting may offer viable solutions.

The offshore hosting or hub-and-spoke model is optimal for smaller markets where establishing individual credit bureaus would not be economically viable. A single, internationally operating credit bureau is set up to serve multiple small markets. As the name suggests, a hub houses data in silos from each country while each spoke receives and delivers secure data for the respective country in which it is based. This configuration centralizes many common, repetitive, and time-consuming tasks, such as data cleansing, security, customer-support, and system maintenance. It also leverages the highly sophisticated security systems already in place for the hub and provides high-security facilities and systems to store data from the spokes at a fraction of the cost of creating

such secure facilities from scratch. Due to the sensitive nature of the data housed by a CRSP, it is critical that the service provider have extensive experience in managing a credit reporting service to international standards and in ensuring that no data is shared across the silos without a data-sharing agreement. This approach not only offers top service quality for users/data providers, it also allows small emerging markets to overcome the innumerable challenges of time and cost for developing credit reporting services. Other advantages include reduced staffing needs and personnel training costs and the ability to leverage products, technical experience, and the sophisticated value-added services used in advanced markets. The web-based technology used by most bureau operators allows easy inclusion of other countries or lending sectors regardless of size.

Established in 2000, TransUnion Central America is an example of a hub-and-spoke model, with a hub in Guatemala and regional spokes in Costa Rica, El Salvador, Honduras, and Nicaragua, covering a combined population of over 38 million. (The hub was originally established in Costa Rica, but in 2007 it moved to Guatemala, rapidly and without disruption, because telecommunications networks were of better quality and operational costs were lower.) Another example of exists in South Africa, where TransUnion runs a credit bureau that services Namibia and Botswana. In Europe, some of the large credit bureaus operate on the hub-and-spoke model or offer business continuity coverage to offshore operations through a similar configuration. This includes an outsourced arrangement for the Czech Republic and the Slovak Republic operated from Italy by CRIF (see Box 5.2). Some of the Pacific Islands have also adopted the model. More recently the UEMOA region in Africa has adopted a hub-and-spoke approach. (See section 7.7.) The individual country service providers (the spokes) share and leverage the modern and sophisticated technological system developed in the hub, thus improving efficiency. Furthermore, the creation of a single cross-border credit reporting service facilitates the design of standardized products and services across all UEMOA five countries, which greatly benefits lenders with cross-border business operations.

Model 2. Credit Registries

The market assessment might indicate a market preference, particularly by the central bank or other financial sector supervisory authorities and regulators, to develop a credit registry to meet the credit reporting demands in the market. Chapter 2 touched on the

Box 5.2. Outsourcing from the Czech Republic

Banks in the Czech Republic were eager to get the credit information that credit bureaus would supply, but while they were willing to pay on a per-transaction basis to acquire credit reports, they were unwilling to invest in developing a costly data security infrastructure. The solution was to outsource the operations of the credit bureau to CRIF, a leading Italian credit bureau.

In partnership with CRIF, two credit bureaus were set up in the Czech Republic, a banking bureau in 2001 and a nonbanking bureau in 2003, both using CRIF's facility in Italy. In 2006, the two credit bureaus began sharing credit information with each other (based on consumer consent), allowing financial institutions to have access to reliable, cross-industry credit information.

Using CRIF's platform, banks were not required to invest in developing a data security infrastructure for the credit bureau and were able to benefit from a higher level of data security than would have been conceivable in a bureau operated in the country. Fortunately, the legal environment posed no problems: Czech law states that personal data can be processed abroad, provided that the hosting country abides by data protection laws that are the same or stricter than those in the Czech Republic.

The business model based on outsourcing was designed to achieve the best, most cost-effective solution, along with the highest level of security. It also generated positive impacts on the overall operations. With a local staff fundamentally focused on clients instead of IT issues, a much faster start-up was possible in terms of both data collection and data dissemination. Best practice internal processes were put in place to fully integrate the two cross-border technical structures. Last but not least, the technical and process environment facilitated development of value-added products, reducing cost and time to market.

The bureau has reached full penetration in the retail banking market, with 25 member banks. The banking bureau match rate or hit rate¹³ is 92 percent, which is comparable to the hit rate in the most developed bureau markets. Over 13.5 million records are held in the banking credit register, covering more than 5 million people. The nonbanking bureau, with an additional 40 members from the leasing and consumer finance market segments, now has an additional 4.5 million credit files on 2.5 million people.

Inspired by the success of the Czech credit bureaus, the Slovak Republic chose to develop an outsourced credit bureau as well. In partnership with CRIF, a banking bureau was set up in 2004, and a nonbanking bureau in 2008. Both bureaus operate out of Italy.

purpose, features, and organization of credit registries. Registries are generally operated by central banks or other monetary authorities charged with a supervision function in an economy. Given that these registries house data that enable authorities to monitor the systemic risk levels in a market and maintain financial stability, a credit registry is typically hosted in the country in which it is established. The principles of data quality, integrity, security, and financial sustainability apply to the operations of a credit registry.

In some instances, the same entity housing the credit registry may also be responsible for overseeing its operations and ensuring it is in compliance with the legal framework. In Bangladesh, for instance, the central bank is charged with operating the credit registry, called the Credit Information Bureau, as well as overseeing the operations of the registry. In Haiti, similarly, the Central Bank has funded the development of a locally developed and operated Credit Information Bureau. Given the potential conflict inherent in this situation, it would be advisable for the central bank to entrust the two functions—operations and supervision—at least to two separate departments within the bank to ensure the system's integrity. In China, the credit registry, the Credit Reference Center, is operated by the People's Bank of

China and supervised by the Credit Information Services Bureau, a separate department under the People's Bank.

Model 3. Public-Private Credit Reporting Service Provider

In some instances, market stakeholders may indicate a preference for a hybrid model involving both the private and the public sectors. This model is based on a strong and significant partnership between the sectors, with the public sector playing a significant role in developing the infrastructure and processes for credit information collection and sharing. Central banks, in their capacity as regulatory and monitoring bodies for financial institutions, are well placed to steer the legal reforms that may be required and also to build awareness about the benefits of information sharing among financial institutions. In many countries, financial institutions have a high degree of trust in their central bank's role as an independent third party. In the absence of a data protection authority, central banks are often in a position to leverage this "capital trust" to establish credit reporting services in partnership with the private sector.

This model offers several advantages, notably providing the central bank with a wealth of free information allowing it to perform its primary function of monitoring

13. This is the ratio of the number of reports issued to the number of queries received. It represents an important indicator of the ability of the bureau to satisfy lenders' demand for information.

and managing systemic credit risk. This model also has these additional advantages:

- It prevents the creation of a monopoly on information sharing by allowing as many local and international private entities as possible to enter the market, where market size supports competition.
- It lays the groundwork for the creation of a solid, competitive, and dynamic information sharing market, allowing competition in terms of prices and quality of services, with the obvious resulting advantages for lenders and consumers.
- It establishes a complete and seamless credit information system accessible to all lenders.
- It facilitates the inclusion of data provided by entities not regulated by the central bank.

A disadvantage of this model is the duplication of effort involved, especially in setting up the technical infrastructure. As the collector of data from the entities it supervises and the distributor of data to CRSPs, the central bank must, in some cases, establish a basic technical infrastructure (a data warehouse). Furthermore, the central bank as aggregator of data must have and maintain the capacity to continue to provide this service, which may be costly. Public-private partnerships have emerged in several markets, such as Egypt, Morocco and the UEMOA region.

Model 4. Commercial Credit Reporting Companies

Purely commercial credit reporting companies have evolved organically over time in response to a market need for information about a fairly opaque credit market: lending to small businesses. For the most part, commercial credit reporting has developed in the absence of any specific legal and regulatory framework. These entities are normally organized as companies registered under their respective jurisdictional laws. As commercial credit reporting does not deal with personal data, these entities are not bound by specific data protection or privacy legislation. They are, however, responsible for complying with any legislation regarding the processing of commercial credit information and any other relevant legislation. Moreover, these entities should strive to abide by the General Principles for reporting on data, data processing, governance requirements, and cross-border credit reporting.

The models described above are not entirely exclusive. A country may very well have a registry and one or more consumer or commercial bureaus operating side by side. In markets where these entities do not already exist, the choice of model will be determined by assessing

the market and, in particular, the stakeholders. These assessments will suggest the preferable structure for the market, and the optimal number of entities will be determined by the size of the credit market.

New Models

In the more decentralized digital world, several new options have arisen as alternatives to the traditional centralized database models described above. For instance, some service providers are looking at the potential of compiling and creating records upon request, doing away with the need for centralized databases that require constant security and monitoring. New companies are offering or exploring the idea of portable credit reporting solutions that enable consumers to control their own credit information sharing and move it across borders. These exciting new developments and innovations have huge potential to transform traditional conceptions of the credit information sharing market. A key indicator is that even the leading service providers in the space are experimenting and rolling out prototypes for new ways of information sharing, indicating an awareness of and willingness to embrace the potential of disruptive innovation and technology to stay relevant.

5.6. Identifying Appropriate Technology Needs

CRSPs require adequate technical infrastructure and communications networks to process and manage data and databases as well as to offer effective and secure delivery of credit reports to clients. CRSP technical infrastructure systems are not off-the-shelf solutions that can be acquired and installed into a computer hardware system. CRSPs usually must develop or acquire locally adapted and customized systems that will enable data collection from existing and new data sources. The process may take 6 to 18 months to develop and involves an analysis of available data from data sources, preparation of functional specifications, actual system development, and acceptance testing. The process of lenders extracting data from their core systems is one of the most challenging and potentially time-consuming processes that has to be addressed as part of a CRSP establishment, and its challenges should not be underestimated. With recent proliferation in open banking practices and enabling frameworks like the EU's PSD2, some of these challenges may soon become a thing of the past, as different entities including credit reporting service providers may be able to extract data directly from data providers thus alleviating some of the burden on the latter.

Cost should not be the only driver in the decision to develop or purchase a technology platform for CRSP operations. In addition to a solid technical infrastructure, CRSPs require unique knowledge and experience because of the complexity of their technical infrastructure and the high sensitivity of the data held. In some emerging markets, newly established CRSPs face a shortage of specialized information technology and business skills. In these markets, the participation of an already established and experienced CRSP, as either a shareholder or a technical partner, greatly benefits a new CRSP in terms of technical expertise, reputation, crucial business know-how, and expertise in developing value-added services as the CRSP grows and the market matures.

Technological advancements in the last decade have dramatically alleviated the cost pressures of developing information technology systems for the credit reporting industry. Until a few years ago, the industry mostly operated on heavy and costly mainframes. It is now possible for new CRSPs in emerging markets to acquire information technology platforms from external sources—usually internationally reputable technology providers—rather than having to build them in-house.

Figure 5.2 outlines the qualities of a strong technical partner.

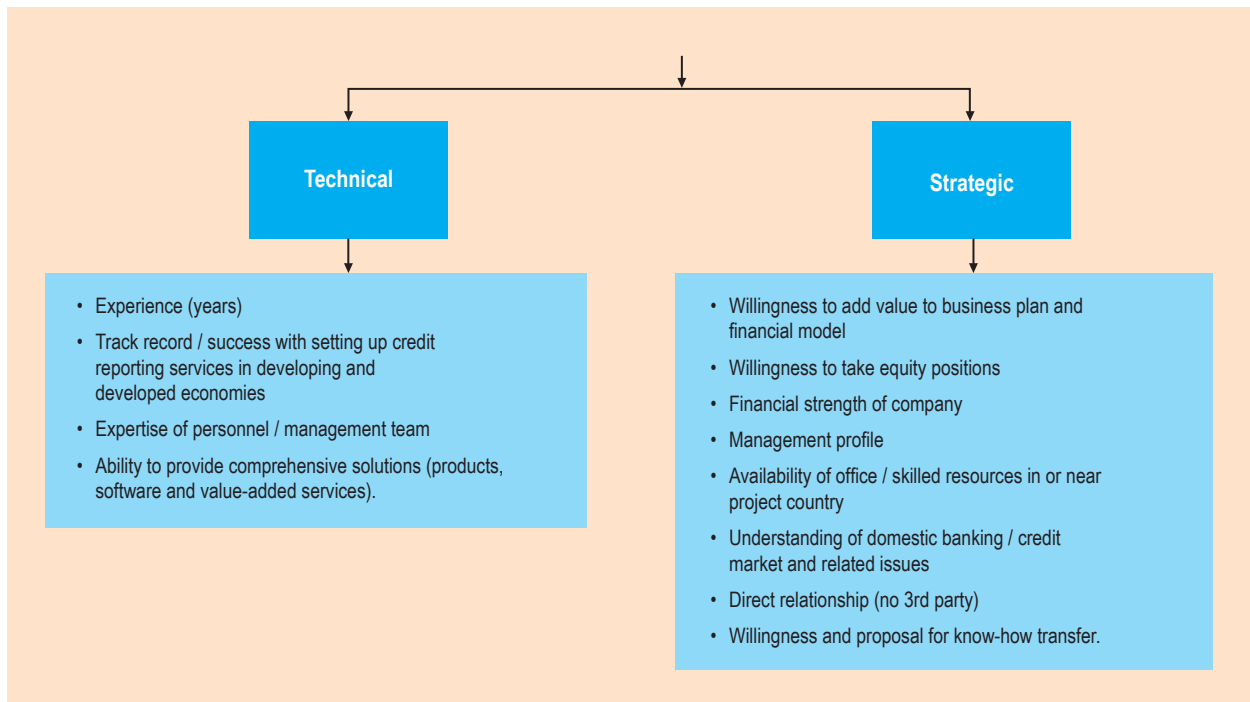
When selecting a technical partner, the CRSP needs to evaluate a potential partner according to the following criteria:

- *Technical*: Does the potential partner have the capability to implement the system in accordance with the local technical specifications? Does it have a track record in implementing credit reporting services in similar markets?
- *Strategic*: Is the potential partner able to commit to the CRSP over the long term?
- *Financial*: Is the cost of the system in line with the demand for services?

The CRSP's technology system must perform the following functions:

- Collect, validate, and merge data from all available, legally permissible and relevant data sources.
- Generate and distribute reports and other value-added products and services.
- Provide data security and backup.
- Provide system performance and monitoring reports.

Figure 5.2. Qualities of a Strong Technical Partner



Source: IFC.

These functions are described in more detail in the sections below.

Collect, Validate, and Merge Data

The success of a CRSP's operations depends on its ability to extract credit performance data from financial institutions and other lenders and to deliver, at a minimum, credit reports in an easy-to-use format. In the diverse countries of Egypt, India, and Russia, extracting data in a format acceptable to the respective CRSPs was a major challenge and required substantial investment in information technology resources to upgrade legacy systems. Extracting credit card records has proved much easier, since these tend to be hosted on more modern systems that store data in a more logical format. Legacy banks, often state-owned or recently privatized banks, and MFIs with large branch networks face a major challenge because often their records are paper-based and their credit functions decentralized. For CRSPs operating in these markets, the practical solution has typically been to start collecting the credit portfolios with better-quality information from banks able to provide the information easily and then gradually to start collecting information from more lenders and more portfolio types. CRSPs may benefit from open APIs going forward in collecting data. Companies focused on data automation and extraction and fintechs using this and proprietary data for lending decisions may help traditional CRSPs exploit these new alternative sources of data once its quality and reliability is proven.

The CRSP is responsible for validating all data it receives before uploading it. The initial phase may be labor intensive. The CRSP's system must include automated processes to check all mandatory fields are complete and conform to the standard format. The system must also be able to reject files containing critical errors or missing information, returning them back to the data provider to resend a corrected file.

After the data have been validated, the CRSP must merge the new data into its database. The system must be able to locate the respective subject, whether an individual or a legal entity, using national unique identifiers, such as passport or identity card numbers or tax IDs or other match-and-merge techniques discussed in section 5.3.1. The objective of the CRSP is to be able to match the incoming data with the single best possible match from all the files held on the bureau database.

Once the correct subject file has been identified, the system will update the existing record or, if the information relates to a new borrower, create a new credit file in the database.

Generate and Distribute Reports

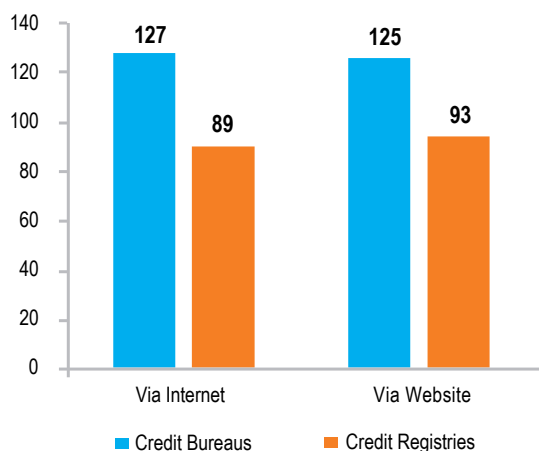
When enough data has been uploaded and the CRSP's process for validating and merging data is in place, the CRSP is ready to generate reports. Figure 5.3 shows several common delivery modes used by CRSPs. The typical modes of access for users are:

- *Online access:* The user's system is connected to the CRSP's interactive system and the user extracts reports as required. The interaction is system-to-system, that is, performed entirely through the user's system with no human interaction. Host-to-host connectivity may be a good solution for a newly established CRSP, since some data providers with large volumes of customer data could integrate their database systems with the CRSP's system, thereby eliminating data duplication and streamlining work flow. Some bureaus and fintechs provide APIs to allow users to access credit reporting information and integrate it with their credit management systems.
- *Dial-up or web:* The user accesses the CRSP's system via traditional internet browsers and PC software. Once connected to the CRSP's system, the user provides the necessary authentication information (user name, password, and so on) to validate access. This mode of access is less expensive and is preferred by users who are either not technically capable of permanent system-to-system connections or who submit limited inquiries to the CRSP. Increasingly, information is accessible through mobile applications, using SMS technology and other means that make the information readily available, on-the-go and in formats customized to meet specific user needs.
- *Batch access:* Data providers deliver information to the CRSP electronically or via portable storage devices. Batch access provides users with a cost-effective means of processing large volumes of inquiries. It is usually recommended for processing of risk monitoring for large client portfolios.
- *Consumer access:* Consumers seeking copies of their own reports must be able to approach the credit bureau in person, via an approved agent network, or using a web-based solution.

Provide Data Security and Backup

Data security is a high priority for CRSPs and data providers because they manage highly confidential consumer information. Secure systems protect the data and reports and in doing so protect the CRSP's integrity and reputation. The enormous amount of data collected is stored in database systems subject to loss, tampering,

Figure 5.3. Common Delivery Modes for CRSPs



Source: IFC calculations, based on Doing Business 2019 data.

destruction, theft, or misuse. Specific measures and safeguards should be adopted to cope with the logical, physical, and organizational aspects of data security with the objective of containing and limiting data security breaches and, in the event they occur, addressing them swiftly. Ensuring data security is an ongoing obligation and safeguard measures should be regularly reviewed and updated to be effective against newly emerging threats. Some security policies might include:

- Limiting access to the database via mechanisms for identifying and authenticating users (including staff and contractors)
- Maintaining and monitoring logs to track each access to the database
- Protecting the database against cyber breaches (hackers) and malware attacks
- Continually monitoring threats to existing technologies and ensuring up-to-date protection for the same
- Maintaining a database back-up
- Ensuring appropriate governance structure
- Continually updating all items stored in an offsite recovery database
- Periodically testing backup hardware and recovery plans
- Delineating authority among network administrators and staff
- Ensuring physical security of the facility, the systems, and the data
- Instituting organizational security policies and procedures for handling different types of data security breaches

With the increase in cybersecurity threats, credit reporting service providers (particularly those handling personal consumer information) will increasingly be required to comply with relevant cybersecurity regulations in different jurisdictions.

System Performance and Monitoring

The CRSP should create a plan for responding to different threats and assign specific accountability to different personnel (such as network administrators and IT directors) for ensuring compliance with security policies and procedures. CRSPs should develop and routinely test business continuity plans, and management should provide for regular IT audit checks to ensure adherence to and enforcement of security policies and procedures. Existing and new staff should be aware of the security policies and procedures through regular training, changes to these policies, and procedures and consequences for violating the policies and procedures. Extensive background checks should be conducted on CRSP new hires. In addition, management should review and update security policies and procedures periodically to ensure consistency with important factors, such as changing standards for data security, changing regulations, and system upgrades.

5.7. Operational and Practical Considerations

The CRSP's first operational task is to collect information from data providers and upload the information onto its own database for further processing. Information sharing between CRSPs and data providers/sources is usually governed by agreements between the parties. Since the principle of reciprocity is the basis for exchanging information, data providers are generally also users of the data. In some exceptional cases, a member (such as a public data source) may agree only to supply information and not to request information from the CRSP. In some instances, a user (such as a regulator or supervisor) may not contribute data to the database. Figure 5.4 summarizes the key issues to address in agreements between CRSPs and its users and data providers.

In the case of registries, the legal mandate to provide data will take precedence over any agreements; however, the registry and data providers still need to agree on data formats, data inputs, reporting frequency, mode of reporting, and other details. The owner of the registry (most often the central bank) will also need to ensure that data providers abide by the rules and submit data in required formats on schedule to ensure the integrity of the database.

Organizational Structure

Pre-Operational Phase

Initially, staff members should cover more than one role, whenever possible. The early phase of a CRSP can essentially be run by a general or project manager, an office/communication manager, and a technical coordinator. In general, employing a general or project manager who is knowledgeable, experienced, and well connected in the financial sector is critical for success. In addition to providing technical assistance, a reputable international technical partner can also provide strategy and business development support to management. Finance, administrative, and legal functions can be outsourced at the beginning.

Operational Phase

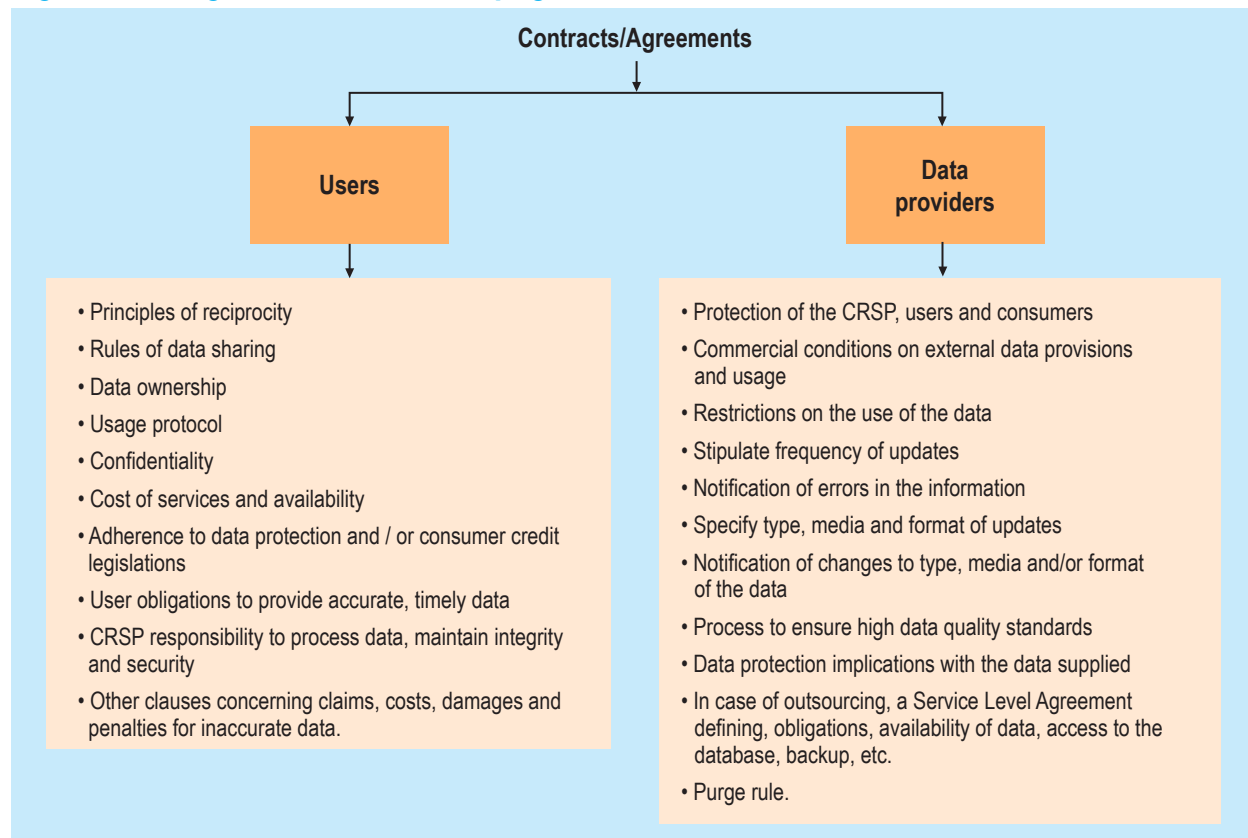
Once the CRSP becomes operational (that is, the system has gone live and has started selling its first reports) several factors affect the decision on staffing. A CRSP's function and its employees' duties are to obtain account

history data from data providers and to sort and aggregate the data into personal credit histories. The CRSP's system then generates reports based on the captured data. Among the factors to consider in determining workloads are the following:

- Number of existing and potential subscribers
- Number of branches/workstations connected to the CRSP
- Inquiry volumes
- Competitors' strength
- Consumer awareness and education needs
- Projected and actual database size
- Growth plans for the CRSP including new products and services, new members, new users, new target markets
- Complexity of operations (such as the need for off-line checks/updates overnight or on weekends)
- Dispute resolution trends

The main divisions of the operational CRSP are IT and Operations, Compliance, Business Development and Marketing/Sales, and Finance/Administration.

Figure 5.4. Key Items in Contracts/Agreements with Users and Data Providers



Source: IFC.

Divisional heads in each area report directly to the chief executive officer (CEO)/managing director, who manages the company's activities and, in turn, reports to the board of directors. The board, whose members are appointed by the shareholders/owners of the bureau, is responsible for overall corporate governance. Ideally, the board should include an independent director and one or two members of the executive team (the CEO/managing director and operations director/representative of the technical partner). The board of directors nominates one of its members as chairman of the board. Figure 5.5 shows a sample CRSP organizational structure.

Staffing requirements and responsibilities for an operational CRSP are outlined in Table 5.1.

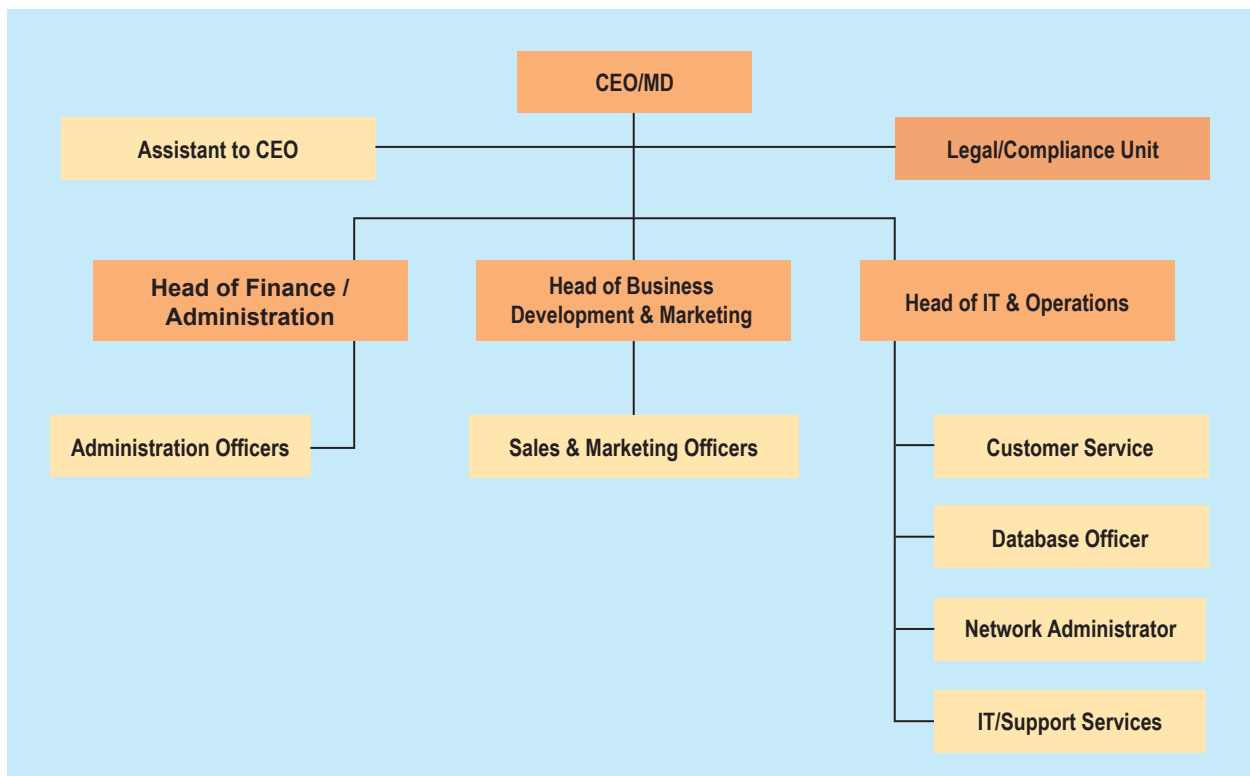
The CRSP should operate a help desk or customer service department. Help desk technical experts should assist members/users who have problems connecting to the system, uploading data, and modifying some of their data. They may also assist new lenders that require additional help in enabling their internal systems to connect to the CRSP system.

The help desk or customer service desk also deals with consumers and firms that have queries regarding credit reports or their information on the CRSP's database. They should be equipped to support customers in accessing their own credit reports or scores. The help desk staff should be knowledgeable on the CRSP's redress mechanisms, such as registering customer complaints and providing other educational information to customers in accordance with the CRSP's operations policies.

To accommodate the needs of growing numbers of users and borrowers and their respective requests, most of the growth in staff will occur in the customer service department. The sales and marketing group would also need to grow to promote the CRSP's products and services as it seeks to expand into new markets.

Last but not least, it is recommended that the CRSP appoint a compliance officer(s) early on in the operations set up process. CRSPs, which are regulated in most countries, need compliance officers to ensure that they are in compliance with regulatory obligations, internal operational policies, and industry codes of conduct.

Figure 5.5. Sample Organizational Structure of a CRSP



Source: IFC.

Table 5.1. Operational Phase Staffing

Role	Key Tasks
CEO/Managing Director	<ul style="list-style-type: none"> • Overall bureau strategy • Marketing / business development activities • Overall responsibility for performance of company Reporting to shareholders and Board
Head of Finance and Administration	<ul style="list-style-type: none"> • Finance and administrative operations • Human resources functions (recruitment, compensation, performance management, career development).
Finance / Administration	<ul style="list-style-type: none"> • Day-to-day administrative and bookkeeping operations.
Legal Counsel	<ul style="list-style-type: none"> • Overall legal support • Internal legal training.
Head of Business Development & Marketing	<ul style="list-style-type: none"> • Market segmentation • Product development • Branding • Advertising • Sales and promotion.
Sales & Marketing Officers	<ul style="list-style-type: none"> • Maintain relationship with existing clients and enroll new client • Implement sales & marketing plan and achieve business objectives • Advertising, conferences/exhibitions • Sales and promotion • Market research • Media affairs • Identify new data sources.
Head of IT & Operations	<ul style="list-style-type: none"> • Vendor relations • Data management • Technology management • Network and security operations • Customer service. • Member and user training. • CRSP staff training.
Customer Service Officer	<ul style="list-style-type: none"> • Consumer Help Desk. • Member/user support.
Database Officers	<ul style="list-style-type: none"> • Data quality checking procedures • Data uploading • Emergency updates.
Network Administrator	<ul style="list-style-type: none"> • Network administration • Subscriber communications interfaces • Network security.
IT Support Service	<ul style="list-style-type: none"> • Housekeeping • System administration • System and software updates and maintenance • Subscriber and internal Help Desk
Compliance Unit	<ul style="list-style-type: none"> • Internal process audit • External compliance • Oversee data quality and dispute resolution process.

Source: IFC 2012.

Financial Projections

Forecasting financial outcomes of a newly established CRSP requires an assessment of potential revenue and costs, and an identification of the drivers in each of these categories.

Revenue Projections

The main revenue driver for the CRSP is the number of credit reports or value-added services sold. Revenue projections are based on the estimated demand for credit reports and the pricing of reports. In most cases, the CRSP charges a flat membership fee plus a charge per inquiry (per click). Volume discounts usually apply, and it is common to have a pricing matrix that depends on the volume of inquiries and the type of user. Table 5.2 provides a hypothetical pricing matrix based on the annual inquiry volume per user. The cutoff points for volume discounts are determined based on projected demand and average expected inquiries.

It is important to note that the pricing matrix in Table 5.2 is purely hypothetical and is not intended as a benchmark for any market. Pricing in each market will ultimately be determined by the size of the market in terms of credit active population, the number of records in the database, the number of system users, and the volume of inquiries generated by users. In general, lenders in countries where the size of the credit-active population is small will face higher prices. Within a given market, lenders generating smaller volumes of inquiries (based on the size of their lending portfolio), including smaller microfinance lenders, would face higher prices. With the increased focus on microfinance credit reporting, however, CRSPs are beginning to acknowledge the need to price microfinance lenders' products and services differently than those for traditional commercial lenders.

Table 5.2. Hypothetical Pricing Matrix for Credit Reporting Service Providers

Inquiry volume	Price per Inquiry (in US \$)
<25000	1.75
25,001 – 50,000	1.00
50,001 – 100,000	0.95
100,001 – 250,000	0.85
250,001 – 500,000	0.8
>500,000	0.7

Source: IFC 2012.

The inquiry-demand estimate should be based on a survey of potential users. The financial projections for revenue should allow time between the launch of a CRSP's operations and the breakeven point at which it will achieve its targeted inquiry volume. It is common for many technical issues to arise relating to lenders' connections to the CRSP and to integration of CRSP information into lenders' billing cycles. Resolving these issues may take at least three to six months. The growth rate for the volume of inquiries is based on the projected credit growth rate for the economy and the expected number of new users joining the bureau. It is feasible to have growth rates of 50 percent and above in the first three to five years of a CRSP's operations in a country with stable credit growth and new users joining the CRSP.

Cost Projections

In large part, costs are driven by the choice of whether to acquire the CRSP's technology platform or to develop the technology platform in-house. With either choice, the possible cost range is wide and will depend on the system's level of sophistication and the types of products it is expected to provide.

Cost projections based on the assumption that an existing platform will be acquired should include the following cost elements:

- Development/customization/installation fee for the technology platform (usually paid in installments)
- Maintenance fee, usually a flat fee paid monthly, quarterly, or annually
- License and royalty fees paid to the technical partner based on the number of inquiries received by the system in addition to fees to cover ongoing updates and enhancements to the system, usually at an agreed-upon rate
- Consultancy fees charged by the technical partner for any service over and above the services specified in the development and maintenance agreement.

Other elements to be addressed in the cost projections include hardware such as database and network servers, network equipment and workstations, system software applications, disaster recovery arrangements, office furniture and equipment, utilities and telecommunications expenses, labor costs, and marketing costs, all of which can be substantial. As countries look at cloud based solutions and with greater access to the same, several credit reporting systems may potentially migrate to or be hosted in the cloud, which can change the cost structure of these platforms.

In some cases, an important cost component is the cost of data the CRSP may acquire from external data sources; for example, a source that contracts to provide data only to the CRSP.

Table 5.3 provides a hypothetical profit and loss statement for the first five years of a CRSP.

The above table itemizes the typical line items observed in a consumer credit bureau business plan. The template may be leveraged to create business plans for commercial credit reporting companies and credit registries. For instance, commercial credit reporting companies may spend a significant amount on purchasing data from different sources, such as business directories, and so on.

In preparing a business plan for the CRSP, it is important to assess high and low scenarios for profitability because the successful operationalization of the CRSP depends on many external factors. CRSPs often face start-up delays caused by banks' inability to upload data, for example. In many countries, historical data is simply not available to populate the database. The first few years may be dedicated to building a database from scratch. Underestimation of costs or time required to customize and implement the system is common. Usually, this means the CRSP may pay high consulting fees to the technology provider to finalize system implementation—likely delaying the breakeven point—and it may also prove costly for data providers that must adapt their systems but lack the budget or skill sets to do so in a timely fashion.

Although the need to generate revenue is obvious for consumer credit bureaus and commercial credit reporting companies that generally operate for profit, it is not as clear-cut for credit registries. Most credit registries are established under the mandate of a banking law, on a not-for-profit basis, to enable prudential supervision and systemic risk monitoring of the financial system. Traditionally, the tendency has been not to charge users (regulated financial institutions) for reports. This was the case for most registries operating in Latin America and the Caribbean. Their revenues would thus be zero. In some countries (for example, Algeria, Azerbaijan, Bangladesh, China, Lebanon, and Maldives), the law empowers the registry to recover the operating costs for its services. Pricing policies enabling registries to recover costs seem prudent in light of the objective of maintaining financial sustainability of operations.

Measuring Effectiveness of a Credit Reporting Service

The effectiveness of a CRSP, like that of any other business, can be measured in many different ways. A good performance measurement system includes multiple dimensions of performance, including financial, operational, and behavioral characteristics. The key categories for measurement include quality, quantity, timeliness of products and services delivered, financial performance, and customer satisfaction (see Figure 5.6).

Quantity

This category is a measure of the volume of goods and services delivered. Relevant indicators include:

- *Number of queries received by the system over the reporting period.* This is the key measure of the demand for the CRSP's services.
- For consumer credit bureaus and commercial credit reporting companies, the *number of credit reports sold.* This key output measure can also be tracked at the product level: how many basic reports are sold, how many reports with credit scores are sold, and so on.
- *Number of borrowers with credit records in the system at the end of the reporting period.* This can also be tracked for different categories of borrowers, such as firms and individuals.
- *Number of records in the system at the end of the reporting period.* Each borrower may have more than one credit line, and the history on each credit line is stored separately.

Figure 5.6. Key Performance Indicators of a Credit Reporting Service Provider



Source: IFC.

Table 5.3. Hypothetical Profit and Loss Statement for a Consumer Credit Bureau

	Year 1	Year 2	Year 3	Year 4	Year 5
Total revenue (in USD)	0	500,000	1,000,000	1,750,000	2,625,000
% change in revenue	0		100	75	50
Costs					
Operating cost					
Labor	315,000	346,500	450,450	585,585	761,261
Rent	50,000	52,500	55,125	57,881	60,775
Utilities	1,500	1,800	2,160	2,592	3,110
Office equipment, supplies	7,000	8,000	8,000	8,000	8,000
Telecommunications	14,400	17,280	20,736	24,883	29,860
Audit, legal and other fees	12,000	12,000	12,000	12,000	12,000
Insurance	13,000	13,000	13,000	13,000	13,000
External data, marketing	20,000	25,000	30,000	37,500	46,250
Total operating costs	432,900	476,080	591,471	741,441	934,256
% of total cost	52%	55%	54%	53%	53%
Fixed costs					
Rent, furniture, other fixed costs	20,000	20,000	20,000	20,000	20,000
System hardware & software	75,000	75,000	75,000	75,000	75,000
Technology platform	300,000	300,000	400,000	550,000	725,000
% of total cost	36%	34%	37%	40%	41%
Total fixed cost	395,000	395,000	495,000	645,000	820,000
Total cost (\$)	827,900	871,080	1,086,471	1,386,441	1,754,256
% change in cost		5%	25%	28%	27%
Net income before interest & taxes (\$)	(827,900)	(371,080)	(86,471)	363,559	870,744
Tax	0	0	0	109,068	261,223
Net income after taxes (\$)	(827,900)	(371,080)	(86,471)	254,491	609,521

Source: IFC.

- *Hit ratio.* This is the ratio of the number of reports issued to the number of queries received. It is an important indicator of the CRSP's ability to satisfy lenders' demand for information. The hit ratio is indicative of the depth of data available in the CRSP.
- *Number of products offered.* This measure could include basic reports, detailed reports, credit scores, alerts, portfolio monitoring, fraud detection, consumer products, and other item.

A CRSP's objective is to simultaneously increase its coverage ratio, defined as the number of borrowers in the system divided by the active population, and its hit ratio. Consideration of only one of these two measures does not provide an adequate understanding of the CRSP's performance. The hit ratio may be high in a CRSP with a very low coverage ratio, for example. This situation, often found in underdeveloped credit markets, indicates that the formal financial system serves a small group of individuals and that most lenders continue targeting the same group for new lending.

Quality

This category refers to the accuracy, completeness, consistency, and currency of the CRSP's data. Information, the main asset of the CRSP, only has value if it is accurate and current. Relevant indicators of quality include:

- *Number of complaints.* The CRSP must have a mechanism to receive and log complaints from consumers/borrowers about the accuracy of information in their credit reports.
- *The percentage of complaints with inaccuracies due to actions of the CRSP.* Many complaints that a CRSP receives may be unjustified or result from errors stemming from the data provider. Tracking the number of complaints that can be attributed to the CRSP's actions allows the CRSP to improve the quality of its processes.
- *Data quality reports.* The CRSP should run data quality reports to analyze the completeness and consistency of the data. Such reports produce tabulations of fields such as IDs and addresses, dates of birth, and other identifying information, allowing the CRSP to determine whether the system contains duplicate or incomplete files.
- *Number of rejected files.* When accepting a data file from the data provider, the CRSP runs simple consistency checks on the data (for example, checking for minimum inputs). If the file does not pass this test, the system rejects it and sends it back to the data provider. Tracking the number of rejected files allows the CRSP to monitor the quality of data available in the market.

Timeliness

CRSPs should monitor their performance based on how quickly they can respond to inquiries/requests from users, how quickly they can turn around requests to rectify errors, and how quickly they can update, assimilate, and merge records. (See also section 5.2.2 of this Guide.)

Financial Performance

Whereas return on equity, profit margins, and operational costs are standard indicators of financial performance, the CRSP may also track more specific indicators, such as:

- *Profit margin per product line.* The services that CRSPs (mostly consumer and commercial bureaus) provide vary greatly and are bound to have different levels of profitability and cost structure. While the CRSP may sell credit reports at a relatively low cost, for example, it may sell analytical products, such as credit scoring and portfolio monitoring, at higher margins.
- *Profit margin per client.* Credit Bureaus aim to attract large creditors by providing significant volume discounts. On the flip side, smaller creditors such as microfinance institutions are less likely to pay the same prices for credit reporting products as their banking counterparts. The bureau would stand to gain more by offering lower prices to small creditors to attract greater numbers of them to enroll as bureau users. Analysis of profit margins by clients allows a bureau to better tailor its pricing strategy.

Registries that do not operate for profit will want to closely monitor the sustainability of their operations year after year and devise simple cost recovery mechanisms.

Customer Satisfaction

Methods used to measure this category include customer surveys or actions taken by customers.

- *Number of complaints.* By tracking complaints from lenders separately from those of data subjects, the bureau can identify areas for improvement.
- *Average time to resolve complaint.* Providing fast responses to complaints is one way to improving client satisfaction. Help desks with staff available to answer questions and complaints promptly can contribute to this effort.

Systematically tracking a set of key indicators enables the CRSP to monitor its performance and formulate a clear strategy to improve service.



CHAPTER 6.

Developing Value-Added Services

As competition increases in every sphere, including in credit information sharing, traditional service providers are pushed to develop innovative products and services to meet their users' growing needs. This entails providing a whole suite of services that address all the needs of creditors from prospecting to origination to portfolio management and collections. Additionally, service providers are pushed toward finding newer, more efficient ways of serving customers while enhancing the customer experience through sophisticated and evolving user interfaces.

Value-added services (VAS) comprise a broad class of products that more sophisticated credit bureaus can offer. (Based on the functional differentiation between bureaus and registries, discussed in chapter 2, value-added services generally fall within the domain of bureaus, although some registries, such as those in France and Palestine, do offer credit scoring products.) Such services entail the manipulation, processing, and analysis of raw credit and financial data to produce tools that can be easily integrated into other financial products and tools. The range of potential value-added services is extensive and includes, but is not limited to:

- Marketing services
- Credit scoring
- Application processing
- Portfolio monitoring
- Fraud detection
- ID verification through digital technology
- Collections
- Business insights
- Consumer products and services

- Commercial credit reporting products and services, such as business information on enterprises (reference data), ratings, financial ratios of companies, information on shareholding patterns and shareholders, economic groups composition, balance sheets, ad-hoc investigations, and more

Raw credit data can be useful in each of these areas; however, significant time, resources, and expertise is required for proper analysis and interpretation. A variety of techniques, ranging from simple data aggregation and cross-referencing to complex statistical algorithms, can provide lenders with a simple interpretation of information (such as a risk score).

6.1. Automated Decision-Making Systems

Given the volume of decisions typically required to manage a retail portfolio (for example, grant/reject facility, over-limit authorization, cross sell/up sell, past due action required), many lenders turn to automation for efficiency. Credit information as raw data can be extremely difficult to integrate into such systems, but fortunately, many types of VAS (such as application processing systems and behavioral risk assessment) lend themselves well to inclusion in automated systems.

The major benefit of automated decision-making systems is that they allow users to manage many customer decisions on an exceptions basis rather than having to review each case. This reduces the need to employ highly experienced, often very expensive, individuals to make mundane or rudimentary decisions and allows lenders to channel their experience into more productive tasks.

Larger financial institutions operating in developed markets typically develop customized value-adding tools, either using in-house analytical teams or by contracting with one of the many specialized companies that have emerged to service this market. Smaller financial institutions, particularly in emerging markets, may have customer databases too small for such solutions to be statistically reliable or may find it difficult to justify the up-front capital cost of development.

In emerging markets, therefore, the credit bureau can play an important role in making these services available to a broader audience by pooling data across a range of customers and by spreading the cost of development across its user base.

Although users still must pay for these services, typically on a “pay as you go” or “click” basis, they get immediate access to the benefits of improved lending methodologies, more cost-effective processes, and increased operational efficiency that, under other circumstances, would be available only to larger institutions.

6.2. International Industry Trends in Developing Value-Added Services

The range of value-added services offered by credit bureaus has broadened significantly over the past three decades, fueled both from the demand side—users wanting increasingly sophisticated products—and the supply side—bureaus trying to increase or maintain income margins in an environment of downward pressure on commodity prices (the cost of the raw data).

The scope of products offered is a function of the environment in which the credit bureau operates: that is, the extent to which the raw data can be used. The trend in developed markets has been to create a suite of value-adding products aligned to what is sometimes referred to as the “customer life cycle.” Figure 6.1 displays the core business functions most lenders apply when managing customers: prospecting and marketing, new business acquisition (loan processing), customer relationship management, and collections.

The credit bureau, typically, builds products or solutions to help its customers in each of these business functions make better or faster decisions by using the predictive nature of bureau data. In effect, the bureau is recycling its databases so users access files beyond just at the point of an initial loan inquiry. A behavioral scoring system may access a customer’s credit file monthly to identify updates, for example, rather than only at the point of application.

Figure 6.1. Customer Life Cycle: Offering Value-Added Services



Source: IFC.

Some VAS may be no more than enhanced bureau reports, such as an alert service that proactively advises a lender of a change to a customer’s file and requires little in the way of analytical expertise. Having introduced these services at a relatively early stage, most credit bureaus aim to move up the value chain to add increasingly more sophisticated tools, such as scoring and credit information management software. These more complex solutions have the dual benefit of generating greater revenues for the bureau and also of locking clients in to bureau services (that is, users become more reliant on the supplying bureau and thus less likely to turn to competitive sources of information).

More mature bureaus tend to use specialized internal analytical teams to develop and maintain these value-added services. More frequently, however, bureaus outsource their development, often to the same specialized vendors that supply custom services directly to the lenders. The critical issue, however, is not who develops the services, but when they can be offered.

The credit bureau databases in most developed countries have had many years to develop, are rich in information, and usually offer high-quality data, thus providing an ideal base for data mining and data modeling. The credit bureau databases in many emerging markets, however, are considerably less rich: They may have information only from banks and may not have operated long enough to house historic information and build the diversity of information sources required for value-added products.

In these circumstances, it may be difficult, or indeed impossible, to build some of the more sophisticated solutions, such as credit scoring.

Planning for VAS development requires understanding the stages required for a credit bureau to mature.

Stage 1: Initial Deployment

At inception, a new credit bureau must work to build up its database of records. In some instances, no data may be available, and the bureau must essentially start from scratch to build up a records database. In other instances, particularly in the case of consumer credit bureaus, the regulator can step in and mandate that all regulated entities collect consent from their borrowers to share historical and new credit data with the bureau. This process, which should occur prior to developing the bureau, enables the bureau to populate its database with historical records.

Stage 2: User Acquisition

Although not necessarily the case in all countries, the trend in many emerging markets is for the initial development of credit bureaus to take place within the banking community. The main driver behind this approach is that the banks are the major providers of credit and have one clearly defined supervisory entity. The first step is to upload the data from the initial members, that is, the lenders.

Stage 3: Data Diversification

In parallel with Stage 2, the bureau attempts to augment the basic credit history data with other forms of information that may be beneficial to users, such as electoral rolls, identity records, court judgments, telephone numbers, and company registration records. This type of data can be particularly useful to members: It may be predictive of future borrower behavior, or it may make their processes simpler by providing a portal to a one-stop data shop. The data also provide a valuable source of information for data mining and modeling.

Stage 4: User Diversification

Even if banks take a proactive role in establishing the credit bureau, it is often clear from the outset that, at some point, the user base should expand to include nonbank creditors, such as telecommunications companies and microfinance lenders. The introduction of new users can have a profound effect on the composition of the bureau databases and, therefore, on the predictive nature of the data. In several countries, expanding to include

telecommunications providers has had a significant impact on the predictive power of the inquiry database because the pattern of telecommunications payments may be indicative of future defaults on bank credits.

With the explosion of new data sources and types, consumer bureaus are looking at capturing data from these new sources, depending on their reliability and predictiveness. All data relevant to making credit decisions should be shared across different market players. In reality, however, as different actors amass large databases, like the telecom providers, they tend to guard the data and not share any of it, leading to data fragmentation. While acceptance is growing of the need to integrate alternative forms of data, like data from telecoms, utilities, and others, with credit information sharing platforms, the number of the alternative data providers sharing data is still fairly small. For the most part, the incentives for sharing data are not well articulated. A whole host of other challenges to integrating data frequently arise, among them: databases may not record information systematically; the quality of data may be suspect; platforms may not be interoperable, creating integration issues; no clear mandate prevails for sharing data; the organizations are not set up to collect and share data and do not have relevant resources assigned for these purposes; and the supervisory bodies overseeing these providers are frequently not the same ones that supervise the traditional financial sector. In the case of the new generation of data, including big data, however, examples exist of nonservice providers that leverage such data and successfully build digital identities and credit histories, particularly for marginalized segments of society. Although the regulatory landscape surrounding these new players and the use of these new data sources remains unclear at this stage, it could potentially play a big role in how these sources get mainstreamed.

Adding new bureau members also has implications in terms of reciprocity, namely access to the information on the basis of their level of data contribution. The rules of reciprocity extend to the design and delivery of value-added products. A bureau score that incorporates positive credit history information, for example, should not be made available to a member that provides only negative information, even if the member never actually sees the positive data.

Stage 5: Database Maturity

Credit bureau databases change over time as the availability of data sources and the number and type of users change. Databases typically tend to grow in both

depth and breadth—but not always. Privacy restrictions can result in changes to the availability of certain types of information, as was seen in the United Kingdom in 2000, when restrictions were placed on using electoral roll information.

In general, the core bureau database needs a period of time to mature through the stages of development outlined above before its data can be predictive of a future outcome (see section 6.3.1). The ever-changing nature of the database explains why value-added products and services require continuous monitoring and fine tuning. Estimates based on today's data may not apply 12 months from now as the overall economic environment may change.

Stage 6: Service Expansion

No rules apply as to when VAS can be introduced. Simple services, such as expanded credit reports, can be introduced at low cost at a relatively early stage, even during Stages 2 and 3. Bureaus typically develop more sophisticated products, such as credit scoring, which are usually more expensive to build and maintain, when the database and to some extent the user base have reached a level of maturity where the resulting products will be both robust and have a reasonable shelf life. This level is most likely to occur once the bureau has reached Stages 3 or 4. It is only when the bureau has reached Stage 5, however, that a broad suite of products, as described in Figure 6.1, can be contemplated.

Two other key factors that a bureau would typically take into consideration when developing VAS are (i) return on investment and (ii) users' capacity to adopt the service.

- *Return on investment.* A clear business case must exist for the development of a VAS. The projected revenue from the sales of the services must cover the investment cost and produce positive return. The pricing and marketing strategy often includes bundling VAS with the sale of core data.
- *Capacity of users to adopt the service.* Members will only demand a service if they have the capacity to use the service to improve some element of their own processes. A bureau score, for example, adds no value unless the lender is able to integrate it into its credit underwriting process to lower the costs of credit approval. User-side constraints have a significant bearing, especially in emerging markets, on who will use the services and in what quantities.

Even in developed markets, the uptake of new bureau products and services is not guaranteed and typically

requires a highly proactive sales and marketing department/staff to promote the product. In emerging markets, the problem of acceptance is even more pronounced. Except for the international banks, many lenders in emerging markets lack an understanding of the lending methodologies that can be implemented using VAS and of the information technology infrastructure needed to deploy them.

Credit bureaus in emerging markets should not underestimate the need for in-house outreach training, market development, and sales functions. As products become more sophisticated and more analytical, bureaus should also recognize the need to have internal specialist resources to monitor and maintain the products and, perhaps more importantly, communicate the benefits to potential users.

Developing VAS can benefit both the bureaus and their customers and ultimately may improve access to finance for the broader community. The opportunities, challenges, and ensuing benefits, however, will vary considerably depending on a bureau's individual circumstances and the market in which it operates.

6.3. Products

The following list, although not inclusive of all value-added products that credit bureaus, both consumer and commercial, can provide, serves as a guide to the key services typically available. The accompanying examples indicate how these products are deployed in certain markets and why they may not be applicable to all circumstances. Both consumer credit bureaus and commercial credit reporting companies offer similar types of products and services, broadly speaking, built on the different types of underlying data they collect.

Bureau Scores

A *credit score* is a number assigned to a borrower based on his or her ability and capacity to repay debt. This number falls within a range with a higher score indicating a more creditworthy borrower. The score is computed from available credit history information using a statistical model or mathematical algorithm. Credit scores can be used in the loan approval process for simple accept/reject rules or for more sophisticated risk-based pricing rules and credit limits.

A *bureau score* refers to a credit score developed on the basis of the credit bureau data. These differ from the credit scores developed on the basis of the data supplied by an individual lender. Bureau scores are

based on the information pooled across many creditors as well as public information sources and thus include characteristics otherwise unavailable to the individual lender, such as total exposure, number of outstanding loans, and previous defaults within the system. All of these are highly predictive measures of future repayment. Consumer credit bureaus typically build scores using three historical data files unique to the credit bureau:

- Defaults on previous credit transactions
- Positive payment behavior (trade line data)
- Previous searches/inquiries

In certain circumstances, the models may include other types of data, such as:

- Third-party data (such as court judgments and bankruptcies)
- Demographic data (such as applicants' personal attributes, such as age)
- Geodemographic data, aggregated information at the geographic level

Each of these components could potentially add predictive power to a bureau score, but care must be taken to ensure that the resulting models do not conflict with a lender's existing decision-making process. For example, a bureau score that incorporates the customer's age may be incompatible with a lender's custom scorecard that also includes age. Typically, therefore, a credit bureau may choose to develop a suite of models rather than just one model to accommodate as many different customer requirements as possible. Examples include:

- Positive bureau score for closed user group members providing both positive and negative data and typically used as a plug-in or addition to in-house custom scores
- Enhanced bureau score incorporating additional customer demographic data and typically used on a stand-alone basis by lenders with no other scoring models
- Industry-specific bureau scores using data derived from specific industry sectors, such as banking or telecommunications
- Public domain reporting companies score using data available in the public domain and, therefore, available to all customers

Commercial credit bureaus offer business credit scores that are developed using algorithms that run off a number of variables, primarily:

- Credit history of the business, including trade lines, outstanding balances, payment history, credit utilization, and others

- Publicly available information, including liens, judgments, or bankruptcies
- Demographic information on the company, such as years in business and on file, standard industry classifications, if any, and business size

Commercial credit reporting scores provide lenders insights into potential for delinquency, default, risks of bankruptcy, and general level of creditworthiness.

Because different users can use the scores for different purposes, the credit bureau typically uses a variety of distribution channels. In its simplest form, the credit score can be incorporated into a credit report, usually with some explanation as to its meaning. Alternatively, the bureau may supply the score to the users electronically so that it can be incorporated into customized scoring solutions or automated software applications. A third and increasingly popular service is a regular batch service that rescores complete portfolios periodically. The charging structure for each of these services also varies, although most bureaus charge users on a per-score or per-click basis. In the United States, following reform measures taken in the wake of the 2008 financial crisis, financial institutions now offer consumers their credit scores on a monthly basis along with their financial statements as a way of keeping consumers more informed of the underlying factors that determine credit decision outcomes.

When adequate quantities of reliable information are available, bureau scores can be statistically derived, typically by using some form of multivariate regression analysis. The techniques used to develop the models are similar to those used for any other type of customized model development. Several unique challenges can complicate the process of building/deploying bureau models, however, as described below.

Retrospective Data

A key requirement of the analysis is the ability to observe the transition of a credit file from the point at which an application was made, through the observation period, to the outcome. This requires the bureau be capable of retrospectively reconstructing a credit file at various points in time. With adequate archiving of the database, reconstruction may not be a significant issue. Changes in customer name, address, ID numbers, and the like, however, can cause tracking problems if not appropriately addressed.

Thin File

The data files may range from extremely detailed, as when a data subject has a variety of preexisting credit facilities with various outcomes, to very thin, as when the bureau has no preexisting information on the applicant. When a bureau has only a limited amount of data on borrower performance and outcomes, standard statistical multivariate analysis may not apply and other methods should be used.

Scoring Model Calibration

The bureau builds the credit scores from a broad spectrum of customer histories found in its database. The derived scores are typically calibrated for an average portfolio; that is, the distribution of customers across the range of scores reflects what is seen across the whole spectrum of customers at the bureau. While probability of default at any given score should remain constant for all users, the cumulative good-to-bad odds will vary from portfolio to portfolio depending on the risk profile of the applicant base. This can have a profound effect on the way lenders manage their cut-off strategies (the scores at which the lender chooses to accept or decline applicants). It is highly recommended, therefore, that individual portfolios be retrospectively tested before the models are implemented.

In emerging markets where either the market is too small or the credit bureau is insufficiently mature to have confidence in the data, the bureau may consider offering models that rely more heavily on customer demographic characteristics than on credit performance data. Although less predictive, these models often provide a useful introduction to the methodology for lenders with little or no previous experience in credit scoring. In other markets, bureaus and new entrants are experimenting with the use of alternative data or big data to develop alternative credit scoring methods. (See section 7.6.)

Software Applications

A key advantage of credit scoring is the bureau's ability to establish a quantifiable measure of risk in what is otherwise a highly subjective process. Having a numeric value (a measure of probability of default) for risk is valuable in its own right, but it becomes increasingly powerful when integrated into automated processes and used to proactively manage strategy and lenders' appetites for risk.

To help facilitate this process, many credit bureaus in mature economies have developed a range of software solutions that complement both the raw bureau data and the scoring process adopted by sophisticated lenders. These solutions are commonly provided either as software applications—customized to specific user requirements and maintained within the client's own systems environment—or as bureau solutions, more generic in nature and hosted at the bureau. The available solutions are many and varied, but the following represents a summary of the more popular applications.

Application Processing. A key driver of profitability in mass market lending environments (such as consumer loans and credit cards) and in small business lending is the ability to keep the cost of new business acquisition to a minimum. Many financial institutions have turned to automated application processing systems as a means of streamlining the credit-granting process. Many examples of such systems exist, but the common design incorporates several fundamental features:

- *Electronic data capture.* Typically, an application processing system has a series of standardized data capture screens. These screens allow the operator to capture the information necessary to process the decision and, perhaps more importantly, store the customer data in a format that can later be used for analysis.
- *Rule/scoring engine.* The system captures the application data electronically, then the software automatically applies policy rules (such as minimum required lending criteria) and scoring algorithms (including score cut-off criteria).
- *Decision output.* An automated application processing system assimilates all of the input data, including any available online information from the credit bureau; applies the rules and scoring models from the decision engine; and presents the operator with a recommended course of action, such as accept, refer, or reject. This output is then queued so that the final decision is presented to an individual with the appropriate level of underwriting authority. The degree of complexity of such software solutions varies depending on the user's technical sophistication. Advanced decision systems are capable of managing almost all aspects of the decision-making process, including customer segmentation and strategy allocation (for example, terms, limits, and product features) and even champion/challenger strategy setting to test the lender's appetite for risk.

Behavioral Scoring

For a variety of credit products, such as credit cards, charge cards, and overdrafts, the initial decision whether to lend is only the first of many that must be taken during the life of the lender-borrower relationship. These dynamic products require a greater degree of monitoring than term loan products since the exposure to risk increases over time. Additional credit decisions must be taken on a variety of issues, such as limit management, over-limit authorizations, and card reissue.

Behavioral credit scoring is an adaptation of more traditional scoring techniques specifically designed to observe and evaluate the payment behavior patterns of borrowers. The output score changes to reflect the changing risk profile over time and can be used either to automate routine decisions or to provide operators with an immediate assessment of current risk.

A range of powerful software solutions has been designed to host card management solutions and provide strategic control over practically all aspects of customer relationship management. While the complexity of these systems has a correspondingly high price tag, they have become almost an integral part of mass market credit management.

Model Tracking and Performance Monitoring

An overlooked benefit of introducing credit scoring methodology into the lending process is the ability to monitor customer risk in an objective and quantifiable manner. Undertaking this analysis requires an in-depth understanding of the way the models are performing. Several credit bureaus provide score diagnostic tools that monitor and report on the performance of scorecard characteristics in terms of their continuing ability to discriminate and the way shifts in the applicant population may create misalignments that would affect the quality of the decisions.

Collections Scoring

Collections scoring systems help lenders identify and differentiate between clients that have a high probability of payment despite late payments and those that have a high probability of nonpayment. Based on these scoring systems, lenders can apply different strategies or collection actions that more accurately reflect the client's risk, as opposed to relying on traditional strategies, such as past due times (for instance, all clients that are 30 days late receive the same call/letter). Lenders stand to benefit because a tailored strategy helps reduce delinquencies

and losses, provides a more proactive collection strategy, and enables more efficient use of resources.

Collections Services (Receivables Management)

A long and often successful association has existed between credit bureaus and debt collection companies. In several instances, negative information in credit bureaus has been derived directly from information gathered by debt collection companies (as was done by Baycorp in New Zealand, Credit Reference Bureau in East Africa, and InfoScore in Germany).

Many different collections products and services are available, with the following three among the most common.

- *Tracing.* Tracing products use the credit bureau data to identify the whereabouts of a customer with whom a lender has lost contact (“skips”). These products either trawl bureau databases to identify contact information of which the lender may be unaware (such as telephone numbers or a new address) or place a marker on the customer file so that if the customer subsequently makes another application for credit, the previous lender can be informed.
- *Debt management.* Debt collection is an expensive and time-consuming function and typically requires specially trained and dedicated personnel. Some lenders, therefore, opt to outsource this function, sometimes to credit bureaus. These services are usually performed on a fixed-fee basis or on a performance basis under which the collector gets to keep a proportion of any monies recovered.
- *Debt purchase.* Credit bureaus that specialize in receivables management may choose to take the ultimate risk and buy distressed or nonperforming accounts from the credit provider. In these circumstances, the bureau purchases the outstanding balances from the lender at a discount, assumes responsibility for collecting the debt, and keeps the proceeds once the debt has been collected.

Collateral Registries

For secured loans, a lender must establish that the collateral used for the loan actually exists and is unencumbered. Developed credit bureaus, therefore, often attempt to become more than just a source of credit data by providing customers with access to associated lending information, such as collateral registries. Bureaus can provide this service either by building an automated link to a third-party database or by building and hosting the service themselves. Whether dealing

with fixed assets, such as land and buildings, or movable assets, such as motor vehicles, these services typically provide two basic functions:

- *Inquiry.* This function allows users to ascertain the bone fide nature of the asset—and whether it is encumbered—prior to purchase or acceptance of the asset as collateral.
- *Registration of interest.* This function allows the lender or individual to register a notice of a charge or lien on the asset.

Marketing Services

The use of credit bureau data, especially closed-user-group data, for marketing purposes is often a highly contentious issue. In many countries, including Australia, for example, laws either prohibit the use of such data or severely restrict it to specific applications. In many other countries, especially in emerging markets where lenders are already nervous about sharing credit information, marketing applications are intentionally excluded from the definitions of permissible purpose in either the industry code of conduct or the membership agreement between the bureau and its customers.

Bureaus can provide several value-added marketing services that do not necessarily involve the use of credit bureau data, however. The range of potential products/services that can be offered is extensive. The following list represents a sample of the most common:

- *Customer profiling.* Historically, many financial organizations have suffered from poor knowledge management systems (for example, paper-based customer records). Consequently, these organizations have relied heavily on branch distribution channels to obtain comprehensive information about their customers. Customer profiling attempts to bridge this knowledge gap by providing analytical services that profile the attributes of particular types of customers. This service may include augmenting the lender's existing customer information with additional data from the credit bureau. The subsequent analysis identifies homogeneous customer clusters or segments that have similar profiles, such as young, credit-active high achievers, that can then be used to help the financial institution either provide a more tailored relationship or better target cross-sell and up-sell promotions.
- *Modeling.* As with credit scoring, the number of applications for modeling services is extensive. Among the more popular are propensity modeling and response modeling. Propensity modeling tries to

predict the likelihood that a particular prospect will take up a marketing offer; response modeling measures the effectiveness of particular marketing campaign to increase the responsiveness of customers in the future and thereby optimize the cost of new business acquisition. More complex forms of modeling include applications such as customer worth or customer lifetime value. These techniques analyze customer potential not only in terms of actual, current contribution/profit but also in terms of what a customer may contribute over the lifetime of the relationship.

- *Geodemographic analysis.* Geodemographic modeling looks at the relationship between geographical areas, indicated by zip codes or postal codes, and the types of individuals/businesses that live or work in a given area. The technique creates similar customer profiles to those described above but does so using aggregated rather than individual data.
- *List services.* In countries with mature direct marketing industries, many credit bureaus have developed products and services to assist with customer prospecting. These services range from providing prospect lists (the names and contact details of potential customers), augmented with credit bureau or geodemographic data, to taking on management of a client's customer relationship management database.
- *Mail screening.* Again, in countries that use direct mail extensively as a means of acquiring customers, the credit bureau can be useful in helping ensure efficient targeting of potential customers. Mail screening removes from a mailing list those applicants who are most likely to be rejected for an offer of credit were they to apply. This screening saves the lender time and effort. This service also has positive customer benefits in countries that operate a do-not-mail database—a screening facility for consumers preferring not to receive unsolicited marketing offers.

Where marketing services are permissible (as in the United States and United Kingdom) and extensively used, they have proven to be a highly lucrative form of added value for the credit bureau and a significant value-added proposition for the user. These services also have a positive effect on the bank's risk management process by allowing the bank to prescreen offers.

Portfolio Monitoring

Monitoring and maintaining credit quality is a task that all lenders undertake but one that has taken on more prominence in recent years with the introduction of the various Basel accords. Some credit bureaus have been

providing services in this field for many years, using a range of standard reporting and bureau scoring products.

- *Portfolio monitoring services.* These services advise a lender of any significant change to a customer's credit file, such as a default registered by another lender.
- *Batch screening.* This service allows lenders to periodically update the risk profile of entire portfolios by reviewing the current credit scores of its clients.
- *Monitoring and reporting.* These services typically help smaller lenders with limited internal analytical capacity to produce the management information required to track credit quality.

With the introduction of Basel III reforms following the 2008 financial crisis, the need for lenders to comply with the best practice risk-management guidelines has increased the focus on lenders' ability to monitor portfolio quality. Implementing Basel II's advanced internal ratings-based approach requires all lenders to be capable of calculating not only "probability of default" but also "loss given default and exposure at default." Credit bureaus with developed analytical capabilities have seized this opportunity to use advanced modeling, software solutions, and consultancy to help their clients with these compliance issues.

Fraud Detection

As the world becomes more interconnected, fraud and identity theft occur more and more often. Measures to accurately identify and verify individual identities have thus gained even greater significance than in the past. Estimates by the World Bank's ID4D program indicate that approximately 1.1 billion people around the world cannot prove their identities. Several initiatives at the global, regional, national, and local levels aim to create unique identification systems for individuals. Retail credit bureaus have traditionally used sophisticated match-and-merge algorithms to accurately identify individuals. However, in today's digital world, these service providers must go beyond identifying individuals and must help their customers proactively manage identity-related fraud. Big data and alternative data is finding value in the development of fraud detection and fraud monitoring systems.

As an economy's retail credit market grows, so will the incidence of fraudulent financial transactions. Fraudulent activity can range in severity from what is sometimes referred to as soft fraud—embellishing application information to obtain credit—to hard forms of fraud, such as identity theft. A variety of products and services

can be developed on the back of the bureau platform to help lenders identify and prevent fraud. These products include, but are not limited to, the following:

- *File cross-referencing.* These relatively simple products cross-reference various data files to identify anomalies.
- *Known/suspect fraud closed user groups.* These industry initiatives, such as the Credit Industry Fraud Avoidance Scheme in the United Kingdom, pool information about known or suspected fraudulent activity.
- *Fraud scoring.* This product may be custom built models for individual institutions or generic models developed by the credit bureau. Some bureaus are experimenting with the use of machine learning and its application towards detecting fraud in applications and other aspects of the credit information sharing process.
- *Fraud detection systems.* These sophisticated software solutions use a combination of rules logic, scoring, and enhanced databases to identify application fraud. A range of software solutions have also been developed specifically to track card fraud by means of payment behavior analysis. Providers are partnering with third-party solutions providers that provide layers of customer data, such as a customer's online behavior, manner and frequencies of access, social networks, actual identification, physical location, and operational systems use behavior, all compiled to determine incidents of fraud.

Digital Identification Services

Digital identity is well established as one of the most significant technology trends in the world, and for a growing number of public stakeholders and citizens, it is already a day-to-day reality. As a result, the way individuals interact with public and private institutions is quite revolutionary. Credit reporting companies are fast getting in on the act too.

In 2016, national ID schemes increased in number, visibility, and reach. The UN and World Bank ID4D initiatives set a goal of providing everyone on the globe with a legal ID by 2030. Numerous new national electronic ID programs (including card and/or mobile-based schemes) were launched or initiated. Examples include new schemes in Algeria, Cameroon, Italy, Jordan, Senegal, and Thailand, major announcements in Bulgaria, Jamaica, Liberia, the Netherlands, Norway, Poland, and Sri Lanka, and a pilot scheme in Myanmar. Most of these programs now include biometrics, the majority in the form of fingerprints. Schemes such as the Gov.UK Verify

initiative were also introduced in 2016, and Australia announced the first phase of its digital identity program intended to be launched by August 2017.

In the past few years, new technologies and regulations emerged, supporting and shaping the digital transformation ahead. Digital driver's license projects (also known as mobile driver's licenses) gathered momentum in countries including Australia, the Netherlands, the United Kingdom, and the United States. Early tests of blockchain technologies took place: in Estonia, to aid development of a groundbreaking transnational e-residency program, and in the United Kingdom, to see how it can be used to help make efficient welfare payments to citizens. Microsoft is moving forward to implement a blockchain-based ID system. It also plans to add digital ID support to its Microsoft Authenticator app to manage identity data and cryptographic keys. The app, which was launched in August 2016, is used by millions of people, according to the company. The European Union's Electronic Identification and Signature (eIDAS) regulation came into force in July 2016, requiring mandatory cross border recognition of electronic ID by September 2018.

In the credit reporting industry, Experian's Prove-ID compares the customer information entered with over 1 billion records held by Experian. A decision on the authenticity of the identity is provided in real-time with an easy to interpret traffic light system. Fast and confident decisions can then be made as to whether the transaction is genuine. Auditing facilities help you to demonstrate compliance to regulation. Creditinfo and Finpass launched a digital know-your-customer (KYC) and onboarding web and mobile application for individuals and legal entities for digital onboarding through video selfies, passport or identify card scanning, and checking information against credit bureau and other data sources. Creditinfo and Shocard launched Credit Passport to share securely consumers credit history and identity over blockchain: The app enables individuals to claim their identity and obtain personal credit information that can be shared with any third party, as well as be independently verified with proof of certification using the blockchain.

New standards have also emerged in the past few years for fostering compatibility and interoperability. The U.S. Commerce Department's National Institute of Standards and Technology (NIST) awarded a federal grant to further support development of trusted identities, based on the digital driver's license.

In 2017 some of the most accelerated evolutionary changes in the field of secure digital identity so far experienced took place in developed and emerging countries. These changes represent essential considerations for policy makers and authorities wishing to make digital identity and online services (particularly mobile services) defining features of their modernization processes in the years to come. Going forward, it is expected that the industry will see more mobility, increased demand for security and trust, more calls for public supervision of digital identification systems, even more national ID card and electronic ID programs, and national ID initiatives and implementation.

Consumer Products

Bureaus are increasingly recognizing the importance of providing products and services to address their biggest asset: the underlying borrowers. Some of the more frequently observed consumer products and services offered by bureaus include:

- *Credit reports.* These are generally free once a year or in case of an adverse event, and available for a fee at all other times. Consumers are generally advised to check their credit reports periodically to determine the accuracy of the information contained therein, which has implications for their credit profiles.
- *Credit scores.* Generally, credit scores are available to borrowers for a fee. These are static and describe a certain point in time.
- *Fraud alerts and monitoring.* Given the rise of digital hacks and incidents of identity theft, several bureaus offer products and services that enable consumers to receive alerts regarding suspicious activity affecting their accounts, to freeze their credit accounts, and to protect themselves against identity theft.
- *Dispute portal.* Most bureaus offer consumers an opportunity to dispute errors or inaccuracies in their credit reports or otherwise file disputes.
- *Education.* Credit bureaus offer educational material, primarily online, that explains the basics of credit reporting and how its careful management is important for consumers.

In the case of commercial credit reporting companies, similar products are offered for businesses, including business credit reports; education on how to manage credit as a small business; the ability to monitor business credit continuously for adverse events such as business identity theft and fraud; tools to manage cash flows,

including monitoring suppliers, customers, and partners; and debt collection and management services.

6.4. The Use of Credit Information Data for Prudential Supervision¹⁴

Because banks and other financial institutions are highly leveraged, several international guidelines have been set to control the systemic risks that these institutions pose to the economy. These standards are captured by the various Basel accords.¹⁵

The 2007–2008 subprime crisis showed that the market, on one hand, and the financial institutions’ supervisors, on the other hand, were poorly equipped to deal with systemic risk issues stemming from widespread and concentrated exposure to credit risks in the financial markets. Supervisory authorities did not have access to broad, timely, and reliable information, especially about off-balance-sheet exposures, which tend to be unregulated, and they were also not adequately prepared to assess all the risks assumed by the financial market players dealing with complex and innovative financial instruments (such as derivatives, options, and asset-backed securities). The tools supervisors used to conduct on-site inspections and off-site monitoring of regulated institutions—econometric models, stress testing, accounting criteria—were outdated and inadequate to preemptively identify the potential risks assumed by the system as a whole and recommend appropriate preventive action.

With the crisis, recognition grew of the need for not only microprudential supervision and regulation, but also for a macro approach to supervision and regulation of the financial markets, given the interconnectivity of lenders and borrowers in credit markets. Credit data collected on a regular basis by different types of credit reporting service providers can also be used to help perform analyses like the following for detecting the potential build-up of risks for systemic financial stability:

- *Credit growth in the financial sector*: for example, at the level of individual credit institutions, by type of credit institution, at the level of the sector as a whole, and so on

- *Credit growth by nonfinancial sector lenders*
- *Building of asset bubbles*: for example, trends in the value of residential and commercial mortgage loans, changes in the value of real estate property pledged as collateral, changes in the value of other assets pledged as collateral, and so on
- *Concentration risk*: share of total and/or new lending to specific economic sectors or activities or common borrower entities, growth rates of lending to those economic sector, activities or common borrowers, and so on
- *Contagion (spillover) risk and interconnectedness*: from/to/with other institutions in the financial sector, from/to the real sector or interconnections with real sector entities, from/to other countries through cross-border lending activity, and so on
- *Credit risk transfer*: for example, the instruments used and the circumstances in which they are used
- *Estimates of debt service ratios of households and corporations and other risks for loan repayment*
- *Magnitude and relevance of nonperforming loans*: their share in the total loan portfolio of banks and other credit institutions, changes and recent trends, and so on
- *Currency, original maturity and product type of loans as well as data on guarantees and collateral received*, including the type of collateral and its valuation
- *Individual performance of systemically important credit institutions*

In addition to detection of risks, analysis of credit data can help in defining and setting indicative thresholds to guide policy decisions on when a preventive intervention from the authorities responsible for financial stability may become necessary.

Credit registries and, increasingly now, credit bureaus and commercial credit reporting companies have important roles to play in supporting the prudential supervision and risk monitoring function of supervisory bodies. To be effective, however, credit registries and bureaus must contain accurate, complete, and up-to-date records, and supervisors must be able to access credit information data from a comprehensive range of credit providers, including both bank and nonbank creditors. To be useful for prudential supervision, the data should include, but

14. While the section on value-added services speaks specifically to products developed by consumer and commercial bureaus, this section on prudential supervision relates directly to a function performed by regulators using credit registry databases or data provided by credit bureaus.

15. As this Guide deals specifically with credit reporting and its use for various functions, the various capital and provisioning requirements set by international frameworks such as the Basel Accords are not discussed in detail. For more information on these accords and the prudential supervision function of supervisory bodies, see the website of the Basel Committee of Banking Supervision (BCBS; <http://www.bis.org/list/bcbs/index.htm>).

not be limited to, borrower type and identification data, current risk classifications, credit information data, and collateral and guarantee information, all of which would enable supervisors to model different borrowers' probability of default and calculate and monitor potential loss given defaults of the various creditors.

Supervisors can use the information contained in credit registries or bureaus to monitor the credit risk undertaken by an individual institution, by a peer group of institutions, or by the financial system as whole. The information contained in registries allows supervisors to assess the quality of credit assets and to get a holistic picture of the concentration of risk exposures (by sector, geographic distribution, type of borrower, or type of credit). Thus, supervisors can assess whether financial institutions meet capital adequacy requirements as stipulated by their own relevant legislation or the Basel framework, which in turn is an indicator of the systemic risk level in the economy. Systemic risk levels rise when a large number of financial institutions are exposed to the same risks. Supervisors can keep track over time of the losses incurred in every single credit, compare the level of risk and credit classification for a particular borrower across the financial system, and compare levels of provisions and, consequently, capital allocation according to the risk level.

Supervisors typically use off-site surveillance and on-site inspections to monitor the overall health of the financial institutions that they supervise. Data in credit registries, credit bureaus, and commercial credit reporting companies can serve as important inputs into the various tools supervisors use while undertaking inspections and surveillance. On-site supervisions can be costly and time consuming. Moreover, supervisors are unlikely to be able to analyze every credit record in the portfolio of the financial institution being inspected. Credit registry or bureau data can provide useful "sample data" that highlight key trends and characteristics in a financial institution's portfolio, including changes in portfolio quality due to the introduction of new financial products. Supervisors can use the information from the sample data to determine what areas of an institution's portfolio requires closer review and thus allocate their time and resources more effectively. Samples obtained from credit reporting service providers can also flag discrepancies in the financial institution's risk classifications and borrower ratings and whether adequate loan-loss provisions have been made.

While frequent on-site inspections cannot feasibly be conducted, off-site surveillance tools can support supervisors in continuous supervision and monitoring. Once again, data from credit reporting service providers can be valuable inputs into some of the tools supervisors use in conducting off-site surveillance. These tools include the following:

- *Indicators.* Supervisors can use the data obtained from service providers to create regular reports containing different indicators summarizing the exposure to credit risk of different financial institutions. Such indicators include concentration expressed as a percentage of total risk exposure, concentration expressed as a percentage and origin of funds, exposure by economic sector, volume of nonperforming loans, credit classification, level and evolution of credit provisioning, growth of credit portfolio, growth by credit lines, and historical loss for each line of credit (eventual adjustment of regulation and capital requirement), at both the individual level and the institutional and system level. The indicators can help supervisors verify whether the financial institutions are in compliance with prudential regulation for borrower risk classification and also indicate the level of interlinkages among different financial institutions (which raises the level of systemic risk). These indicators can provide a framework for comparison of borrower ratings across different financial institutions in an economy and flag outliers or aberrations to the authorities. It may also provide valuable confirmation that regulated entities are complying with any mandatory requirements to submit data to credit reporting service providers and to consult this data before extending credit.
- *Early warning systems.* The indicators developed using data from credit reporting service providers can be used in early warning system models that enable supervisors to focus on vulnerabilities and critical levels of exposure in the market. This in turn enables them to focus their surveillance and inspection efforts and thus optimize the allocation of supervisory resources. Early warning systems can prompt early action on the part of the supervisory bodies with minimal disruptions to the financial markets.
- *Stress testing.* Supervisors use stress testing models to understand the impact of different economic shocks on financial market players. Based on the various scenarios developed and the results of the stress testing, supervisors can recommend adequate capital

levels to absorb losses associated with large, and often unpredictable, shocks. For instance, supervisors can stress test the impact of a downgrade of one, two, or more levels of borrower risk classification in a portfolio and compare the effects of such downgrades from a financial institution or in the system as a whole. The results would demonstrate potential impact on capital requirements and profitability due to additional provisioning requirements. Supervisors can also stress test the actual level of provisioning against different economic conditions, as well as the consistency and robustness of rating systems and credit classification models used by financial institutions over a period of time.

- *Transition matrices.* Another tool used by supervisors is the transition matrix. Banks and other creditors generally develop their own internal borrower ratings systems, which classify borrowers by their risk profiles. Supervisors are increasingly developing such rating systems to validate the systems developed by the financial institutions that they regulate. Transition matrices track movement of borrower ratings, based on individual credit operations, from one level to another (upgrade or downgrade) over different periods, such as three months, six months, one year, or five years. Data from credit reporting service providers can supply valuable inputs into transition matrices. Supervisors can analyze ratings with differences across different time periods, geographical areas, or economic sectors; with different levels of volatility; or with different average default rates for borrowers grouped by similarities in credit type, financial institution type, or other factors. Over time, series of observations of behaviors across a transition matrix provides supervisors with insights into the probabilities of default and the level of risk in the system.

- *Financial regulation.* Another key tool regulators can develop based on credit data obtained from credit registries, bureaus, or commercial bureaus includes regulation around the financial sector, primarily to support financial stability, competition, and consumer protection. Based on credit data, for instance, supervisors may be able to define parameters such as probability of default, loss given default, and loan loss provisioning requirements, all of which the financial institutions need to develop internal ratings systems and ensure compliance with national limits and Basel Accords. Such data can also be helpful in designing policy measures and mitigation strategies aimed at supporting macroprudential supervision.

Although the possibilities of using credit reporting data to support the prudential supervision function are limitless, challenges remain. Whereas supervisors oversee only regulated financial institutions, financial markets comprise other types of creditors that are unregulated and yet may be interconnected with the formal banking system as major customers of the banking sector or as entities having the same exposures as the banking sector. Using credit registry data that only provides information on regulated lenders limits the supervisor's ability to assess the risks posed to the system as a whole from this interconnectivity of different regulated and unregulated lenders. Against the backdrop of the 2008 financial crisis, many countries have made efforts to optimize their credit registries' data collection, aiming to collect data from a broad range of financial market participants and thus to ensure that significant exposures across the financial system are adequately captured. Since credit bureaus generally collect a wider range of information, incorporating data from credit bureaus can complement the data from credit registries.



БИ МОКЕТС
БОЛОНАЙЫЗЫСЫЗ



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CHAPTER 7.

Case Studies

7.1. Reforming Credit Reporting Systems in Central Asia

IFC's financial infrastructure development project was initiated in 2009 with the objective of enhancing financial infrastructure in the Central Asian countries, including Azerbaijan, the Kyrgyz Republic, Tajikistan, and Uzbekistan. In the Kyrgyz Republic, the credit bureau was initiated as a local noncommercial entity and had been functioning for 10 years without a clear indication of further development in terms of products or services. In Tajikistan, the development of a credit information sharing system was started by a local company in partnership with CRIF, the end-to-end knowledge company that includes 70 subsidiary companies serving over 50 countries, including the delivery and/or management of credit bureau solutions in over 20 countries across 4 continents, and with local financial institution stakeholding. IFC's involvement was requested in both the Kyrgyz Republic and Tajikistan to enhance corporate governance practices to ensure the long-term sustainability of the credit bureaus and the efficiency of the credit reporting systems in each country.

This experience showed that no silver bullet can resolve all challenges: Rather, customized approaches are required. Nevertheless, experiences in both countries show that applying proper mechanisms of corporate practice might be the means for mitigating the most challenging risks; complex approaches have been taken in both countries, including revising current governance structure and documentation, providing continuous capacity enhancement activities, and establishing an independent board within the governance structure.

Context

In Tajikistan, the credit bureau began with a memorandum of understanding between leading financial institutions and the selection of the requirements for a preferred potential technical partner. During the selection and negotiation process, ACAFI provided neutral guidance on selecting the appropriate technical partner. A credit bureau company was established in 2010, complete with a management team and corporate governance rules. The work of establishing the bureau had its fair share of challenges, as local stakeholders lacked relevant expertise on credit reporting business, the technical partner lacked sufficient country knowledge, management lacked expertise in the core business of credit reporting, and the regulatory framework was weak because it was a new area for the regulator and the market lacked sufficient oversight or regulations.

Following the effort to identify and form the bureau, the management team changed as did the composition of the oversight body and the board of directors. The work and expectations of management were set and basic corporate governance rules were accepted, yielding positive results; the number of data providers rose, the inquiries increased, and the quality of the reports and services improved. The improved credit reporting system oversight and data transparency helped the National Bank slowly reduce system-wide Non Performance Loans (NPLs) from 56% at its peak to 34%. This positive trend also reflected increased lending volume in the market, but it still was not enough for the company to break-even and generate returns on investment.

Since late 2015, Tajikistan, like several other markets, has faced severe financial sector turmoil caused by a combination of factors, including a decreased volume of international remittances, which in turn affected the financial sustainability of the financial institutions that are the credit bureau's stakeholders. As lending fell, so did the financial capacity of institutions, leading financial institutions to prefer cost-cutting measures to new investments. Given these circumstances, it was difficult to introduce new products or services. Furthermore, financial institutions, including bureau stakeholders, requested that the bureau lower the prices of its products, which ran counter to the business rationale. At the same time, the deep devaluation of the local currency to the U.S. dollar severely impacted the credit bureau, which had solution and maintenance costs in dollars but was earning revenues in somoni. This situation brought to the surface an inherent risk of internal conflict of interest; the local financial institutions occupy dual positions as both users of the service and stakeholders, while the technological partner is both an investor and the credit bureau's service provider. These internal conflicts of interest among the stakeholders made the corporate governance structure of the credit bureau vulnerable to external factors as well as caused complications within the company and the management team.

Mitigation

The credit bureau stakeholders sought assistance with the ongoing situation with corporate governance and staking. The project, leveraging IFC's expertise, provided technical advice by conducting an assessment and face-to-face interviews with all the stakeholders. The report was issued, and the corrective actions suggested. Among others, the recommendations included the revision of the corporate governance documents, including the charter; changing the composition of the board of directors and introducing an independent board member; establishing a formal documentation process; and hiring a corporate secretary. The recommendation that an independent board member be selected and appointed was implemented. The goal was to have an independent board member who is close to the sector but not involved in it, to avoid further conflicts of interest. Tension among other board members subsequently eased, giving stakeholders confidence that balanced decisions would be taken.

Also, the technical provider was allowed to purchase the shares of financial institutions that elected to leave the company. It became the majority owner, thus eliminating

the inherent conflict of interest between shareholder and technical provider as accounts were consolidated. As a result of the project involvement, the credit bureau developed and accepted new strategic and operational plans, reshaped the management team, introduced new products, and increased its visibility in the market, all actions resulted in strengthened financial sustainability of company.

In 2017, the Project initiated a study to examine the impact of the credit bureau data & scoring products on banks' lending practices, including operational efficiency, improved decision-making, etc. A survey of Tajikistan's 8 major banks found that nearly 90% of loans were issued with the use of the credit bureau data. In addition to providing evidence-based decision-making tools, the bureau's automated technology & models have completely re-engineered loan application processing, by eliminating paperwork, redundant data entry and offering a more responsive service. This further translated into reduced operating costs and higher efficiency as total time to collect, analyze and process borrower information shrank by 1-3 days on average. Similarly, customer credit history inquiries surged twelve-fold, as borrowers increasingly become aware of the benefits of loan repayment discipline. In some banks, good credit history qualified applicants for up to 4% interest rate discount and compared to 2013, the share of long-term loans rose by 20%, giving borrowers more time to fulfill their repayment obligations, decreasing borrower default rates.

Statement of Facts Concerning the Kyrgyz Republic

The situation with the Kyrgyz Republic differed from that of Tajikistan, although the outcomes were similar. Here a well-established noncommercial credit bureau had been functioning smoothly and serving its purpose for some time. Total membership (shareholders) in the credit information bureau (CIB) stood at 52 and was based on a one-share, one-vote principle, however, creating bottlenecks in the strategic decision-making process, since participants competed with each other. The problem was compounded by shareholders' efforts to influence the management team, regardless of individual shareholder's size or financial standing, and refusing to give in to the majority's opinion. This inefficient corporate governance and organizational structure was exacerbated by poorly defined and cumbersome internal processes and procedures yielding poor quality credit bureau data and no commercial incentives for sustainable

development. The proposed solution was to transform the credit bureau into a commercial entity and invite a strategic technical partner.

Challenges

Leaving its comfort zone and giving up the nominal power of decision making for the sake of better services was a key challenge for the country. Transforming the bureau into a commercial entity meant that some financial institutions, the stakeholders (mainly the smaller ones), would lose control over the company due to lack of resources. As a result, the smaller stakeholders tried to block the strategic solution.

Once the solution to this first challenge was implemented, other challenges arose; the negotiation process between stakeholders on establishing a new commercial entity and defining roles and responsibilities as well as an operating model became subjects of long-lasting disputes and dragged on for almost two years. And as in Tajikistan, the inherent risk arose of internal conflicts of interest between stakeholders as users and as service providers.

Mitigation

The methods of enforcing the transformation to the commercial mode of operation was mostly supported by reforming the legislative and regulatory environment; the new model established by the new regulation redefined the scope of the decision-making chain by trimming managerial layers and making them more transparent, with a clear separation of shareholders' interests from those of the users. This forced the process of acquiescing to the new concept and going commercial.

In addition to enforcing regulatory tools, the coordinated daily work with the stakeholders and the management team of the newly established commercial credit bureau was initiated. This resulted in the project team spearheading a competitive selection process for the prospective technical vendor and strategic partner. Three reputable credit bureau operators were shortlisted, and site visits for the bidding committee members were organized to assist them in making their final selection. Ultimately, following a long negotiation process that spanned 24 months, the strategic partner was selected. Among others, the corporate governance documents and rules and procedures were developed. Finally, the initial stage of collaboration between partners and stakeholders included developing an exit strategy clearly stipulating the roles and responsibilities of the parties.

Expectations

The most practical solution for instituting an independent board member is to allow all participants a balanced opinion. Also, it is strongly recommended to mandate periodic revisions of the corporate governing documents and practices. The role of the general manager is also vital as its main responsibility is to ensure company development. Balancing the rights of many stakeholders, however, each of which may have interests conflicting with those of the others, is a difficult task. A practical solution is to include written rules in the founding documents stipulating that a certain percentage of revenues must be allocated for innovations and development.



7.2. The Role of Outreach and Financial Literacy in Mobilizing Credit Reporting System Reforms

In recent years, financial literacy has become an important factor for all financial markets and for society, contributing to the stability and sustainable growth of national economies. Limited trust in financial institutions and lack of understanding of financial products and services among small businesses and the general population hampers access to finance. On the other hand, continuous development of new financial products and services and their active promotion across financial markets may result in considerable rise in indebtedness and borrower defaults, which could affect the quality of financial institutions' portfolios. These effects are more pronounced for the less educated population segments. It is widely acknowledged that the financial acumen of financial institutions' clients, especially consumers and small businesses, is relatively low, and less-educated and rural populations, even in developed countries, are in dire need of higher levels of financial literacy. To fill in this gap, starting in 2013, IFC's Finance, Competitiveness and Innovations Global Practice has been implementing a financial literacy program in Central Asia.

Financial literacy is built on three pillars:

- *Knowledge*: understanding financial products, concepts, terms, and definitions
- *Skills*: the ability to take appropriate and effective financial decisions
- *Behavior*: attitude towards financial organizations and credit institutions, acceptance of individual responsibility for one's own financial decisions

In terms of the credit reporting sphere, financial literacy encompasses increased knowledge about a credit bureau's functions and operations, the ability to properly use its services, and the intention to manage one's own credit history.

To ensure the sustainability of and exit strategy for the Financial Literacy Program, IFC engaged leading financial institutions and embedded financial literacy trainings in their Know your customer (KYC) procedures. Engaging reputable financial institutions, and skills helped to secure the trust of the financial sector and to raise portfolio quality; to increase staff skills, preventing growth of over-indebtedness; and to foster smart borrowing principles, as well as stimulate deposits and cross-selling.

While developing content for financial literacy products, it is important to use a tailored approach and adapt materials to local customs and traditions, so the general population may easily absorb credit reporting knowledge and learn to take better care of their credit histories. Beyond improving financial plans, smart borrowing, and money management, the Financial Literacy Program helped individuals to increase credit responsibility; understand the terms, conditions, and benefits of various financial products; and choose the best mix of products to fit their financial strategy for achieving their goals.

To reach a broader audience, a well-rounded financial literacy toolbox was developed and customized for Central Asian countries, which included:

- *Training of trainers*, who will train staff of financial intermediaries to transfer financial knowledge to general population living in urban and rural areas
- *Training for counselors (loan officers)*, to provide consultations to existing and potential borrowers
- *Marketing gadgets and materials for the general population*, broadcast across all the countries in the region in collaboration with leading financial institutions

(Additional material on the Financial Literacy Program partners can be found at www.ifc.org/ecacip.)

To ensure proper penetration of financial literacy into both urban and rural areas, the following steps are recommended:

- Conduct quantitative surveys among the general population to determine current levels of financial knowledge, skills, and behavior.
- Conduct qualitative surveys among financial intermediaries and existing borrowers to prioritize financial topics.
- Engage leading local financial intermediaries for social responsibility and cost effective Financial and Credit Reporting Program implementation.
- Find and fill in gaps with financial and credit reporting knowledge to increase skills and improve financial behavior of general population, as well to upgrade training knowledge and skills of financial intermediaries' staff.
- Develop the content of training and marketing materials to focus on relevant key messages, adapted in accordance with local customs and traditions through regular meetings and in-depth discussions with local partners.

- Use appropriate (country specific) delivery channels to broadcast and disseminate marketing materials countrywide.
- Conduct a second wave of quantitative research among the general population to measure the financial literacy level. This initiative could serve as a tool for monitoring the Financial Literacy Program's implementation.
- Liaise with local partners on a regular basis to ensure the program's smooth implementation.

This approach yielded the greatest results in Tajikistan, where the project, on a cost-effective basis, reached more than 380,000 people, or approximately 4 percent of the general population, through in-depth consultations.

The financial literacy efforts required measurement, thus in 2017, the project conducted research in the Central Asian project countries to compare the level of financial literacy among the adults versus some baseline indicators, collected in 2013 (when the FL program started). In the Kyrgyz Republic and Tajikistan, a comparison of respondents' self-assessments regarding their knowledge of financial terms and the proportion of the correct answers indicated that respondents tend to overestimate their knowledge, at the same time, due to the collective efforts of credit bureaus operations, financial institutions and intensive work of financial literacy partners. A comparison of the responses to the "knowledge indicator" and the correct answers 2013 vs 2017 demonstrated 5% growth in the group of people who correctly answered the question about "what is credit bureau". Improvement regarding financial and credit reporting literacy is always welcome, and the project anticipates using a tailored approach to extend the Financial Literacy Program content to other countries.

7.3. Overcoming the Issue of Consent: Guyana's Credit Bureau

The decision to establish a credit bureau in Guyana grew out of the country's Financial Sector Assessment Program (FSAP) of 2005/2006 and the first economic summit of 2007, which recommended establishing a Credit Bureau, among a number of other measures, to improve access to capital. The Guyanese credit market suffered from fragmented credit information sharing among financial institutions and from the reluctance of key lenders to share credit information. Establishing a credit bureau was therefore seen as an important element for developing the country's financial sector and fostering economic growth.

The International Finance Corporation (IFC), a member of the World Bank Group, was instrumental in helping the Bank of Guyana (BOG) to establish the country's first credit reporting system. IFC assisted the BOG with expertise for soliciting and evaluating potential credit bureau operators. IFC also provided technical assistance to develop the legal and regulatory framework that laid the groundwork for licensing and operating the Credit Bureau in Guyana.

Introducing a credit bureau in Guyana required enabling legislation, the Credit Reporting Act of 2010, and accompanying regulations pertaining to licensing, fees and cost of inspections, and cross-border transfer and storage of credit information. The law and regulations also provided the Bank of Guyana with regulatory and supervisory oversight capacity.

The CreditInfo Group, established and headquartered in Reykjavik, Iceland, was chosen by the BOG, with advisory support from IFC, from a field of four applicants following a rigorous vetting process that began in April 2011. The Credit Bureau in Guyana represents the second regional presence for the group, following the Credit Bureau established in Jamaica in March 2012. A leading provider of credit information and risk management solutions in mature and emerging markets and operating more than 25 credit bureaus in more than 40 countries on four continents, CreditInfo met all the requirements of an established set of criteria. On July 15, 2013, the BOG licensed CreditInfo Guyana, the first ever credit bureau in Guyana.

Under section 12 of the Credit Reporting Act of 2010, the following entities were designated as credit information providers (CIPs):

- Commercial banks
- Nonbank depository financial institutions
- Nonbank non-depository institutions
- Licensees under the Financial Institutions Act of 1995 (for example, merchant banks and building societies)
- Utility companies
- Any other entity the BOG designates as a CIP under the Credit Reporting Act of 2010

To date the Credit Bureau has 21 CIPs:

- Commercial banks: 6
- Nonbank licensed financial institutions: 4
- Utility companies: 3
- Hire-purchase companies: 1
- Other designated CIPs: 7

The Credit Reporting Act of 2010 contained a number of weaknesses, however, which stymied the growth and viability of the Credit Bureau in Guyana. For instance, it allowed the CIP to share a customer's financial data or information only with the customer's prior consent. This greatly hampered the transfer of customers' information from the CIPs to the Credit Bureau and as such resulted in the slow population of the bureau's database. Additionally, the Act also allowed credit institutions to provide customers' credit information to the bureau on a voluntary basis.

The Credit Bureau (Amendment) Act of 2016 subsequently addressed these weaknesses in the following ways:

- It compelled credit information providers to pull credit reports from the Credit Bureau prior to granting or renewing credit facilities to a consumer. This is a mandatory component of the evaluation of the consumer's credit risk.
- It compelled credit information providers to share credit information with the Credit Bureau on all persons to whom credit facilities have been extended.
- It mandated that credit information providers share with the Credit Bureau data and information on consumers without consumers' prior consent; it prohibited credit information providers from submitting a request to the Credit Bureau for information on a consumer without obtaining the consumer's prior written consent; and it discontinued the requirement that credit information providers obtain the consumer's prior consent to share his/her personal information with the Credit Bureau.

As at July 2017, CreditInfo Guyana had in excess of 230,000 active consumers, while the number of accounts on its database was approximately 324,000. When the Credit Bureau began reporting to the BOG in 2015, the number of inquiries amounted to a paltry 25, while the number of credit reports issued for the same period amounted to approximately 16,000. Since the amendments to the Credit Reporting Act 2010 in 2016, the Credit Bureau has witnessed a noticeable increase in its operations, with the number of inquiries increasing to approximately 102,000 and the number of credit reports issued to approximately 41,000 for the year. As of June 2017, just over 53,000 inquiries were made and just over 26,000 credit reports were issued, an indication that by the end of 2017 the number of inquiries and credit reports will exceed the 2016 figures in these two areas. Since its inception as to June 2017 the Credit Bureau had processed 155,317 inquiries and had issued 83,468 credit reports.

According to the World Bank 2019 Doing Business Report, Guyana advanced 82 places to rank 85 in 2018 in the ease of getting credit, up from 167 in 2013 at the time of establishment of the Credit Bureau. Through the Credit Bureau, applications for credit are being evaluated at a faster rate and institutions are able to more accurately assess risk and determine creditworthiness. Consumers will benefit from shorter processing time for credit applications, lower interest rates in some instances, and greater access to credit.

The proposed expansion of value-added services provides additional evidence that the Credit Bureau is advancing in efficiency and effectiveness. It is expected that, over time, consumers will gain confidence in the Credit Bureau and its services, which can lead to easier access to credit and greater financial inclusion.

7.4. Jamaica's Experience in Licensing and Regulating Credit Bureaus

Background

The Jamaican financial crisis of the mid to late 1990s accentuated the need for overall improvement in the legislative and regulatory framework of the country's financial system. Subsequent modernization of the framework included strengthening the regulatory and supervisory mandate of the Bank of Jamaica as well as establishing both the Jamaica Deposit Insurance Corporation, providing deposit insurance protection, and the Financial Services Commission, overseeing supervision of nonbanks. These improvements in the financial system's regulatory framework were geared toward ensuring that deficiencies in regulatory oversight and the safety net that had been identified in the precrisis and crisis eras were not perpetuated under the new regime.

One of the gaps identified was the absence of effective credit information sharing among financial institutions, which contributed to high levels of problematic loans in lending institutions. In particular, in the early to mid-1990s, asymmetric information between borrowers and lenders was exploited by customers, particularly those with poor credit histories, contributing to significant increases in nonperforming loans. The proliferation of nonperforming loans triggered a regulatory response that required banks to increase loan loss provisioning and engage in loan write-offs, leading to deteriorating earnings positions for financial institutions.

Coming out of the banking crisis in 1996, various lending institutions and other stakeholder groups, including the Jamaica Bankers Association, proposed that the Jamaican

government put appropriate legislation in place to facilitate credit information sharing and to provide a regulatory framework within which stakeholders would operate. After several years of consultation, along with other major financial sector reform programs, the Credit Reporting Act (CRA) was passed in August 2010. The Credit Reporting Regulations, which served to operationalize the Act, were promulgated in January 2011.

The Credit Reporting Framework in Jamaica

The CRA and accompanying regulations established the legal and regulatory framework for the creation and operation of credit bureaus and the sharing of credit information among eligible institutions. Initially, the eligible credit information providers (CIPs) under the CRA consisted of deposit taking institutions, credit unions, securities dealers, insurance companies, hire-purchase companies, and selected government lending agencies. Subsequently, the Minister of Finance exercised his authority to designate additional categories of CIPs to participate in the sharing of credit information with credit bureaus. The additional CIPs designated were microfinance providers; utility companies, including the power, water, and telecommunication service providers; and entities that extend credit solely incidental to conducting their main businesses.

Under the CRA, Bank of Jamaica (BOJ) was designated with supervisory responsibility for credit reporting. Pursuant to this designation, BOJ conducted substantial research before determining an appropriate operational structure and the resources necessary to effectively execute its mandate in accordance with international best practices. This included structuring and resourcing a new unit in the supervisory department of BOJ tasked

with establishing the requisite policies, procedures, and guidance under the credit reporting framework. This body of work included creating and maintaining a database for customer complaints. Additionally, BOJ established a public education program to sensitize stakeholders about the requirements and implications of the new legislation.

Operationalizing the Oversight of Credit Bureaus

Under the CRA, BOJ received seven applications for licenses, of which three were approved: Creditinfo Jamaica Limited, licensed March 2012; CRIF NM Credit Assure Limited, licensed April 2012; and Credit Information Services Limited, licensed August 2014.

As part of its effort to operationalize its mandate of credit reporting oversight, BOJ established quarterly reporting requirements for credit bureaus to facilitate ongoing monitoring of key performance indicators and assess the impact of market developments on the bureaus' operations. Additionally, on an ongoing basis, BOJ conducts research and monitors credit bureaus to ensure that under the newly implemented framework disclosure and credit information sharing proceeds on a level playing field.

Currently the legislative framework does not provide for mandatory participation or reciprocity in credit data sharing, therefore participation in Jamaica's credit reporting regime has been market driven. This has not impeded the pace of expansion under the existing regime, however, as a very competitive credit reporting market has emerged. See Table 7.1 below for a summary of selected indicators.

Table 7.1. Select Indicators for 2013–2016 for Jamaica

Indicators	2013	2014	2015	2016
Number of licensed credit bureaus	2	2	2	3
CIPs signed with credit bureaus	36	53	69	84
CIPs pulling data from credit bureaus	8	29	47	63
CIPs submitting data to credit bureaus	8	18	19	36
Credit reports issued during the year	1,722	69,939	129,698	250,122
Population coverage (percent)*	9.6	21.6	20.6**	22.6

* Percentage of population covered by credit bureaus; the credit granting population segment, ages 18 to 74 years old in 2014, was 1,807,197. (Source: Statistical Institute of Jamaica Demographic Statistics.) Data on credit granting population size data for 2015 are not available.

** One bureau performed a system upgrade during 2015 that eliminated data subjects previously duplicated in the system, thereby reducing the number of data subjects reported for the year.

Achievements of the Regime

The 2019 edition of the World Bank Doing Business Report, rated Jamaica's ease of doing business as 75, making it the highest-ranked country in the Caribbean region. This represents a significant improvement from its ranking of 94 in 2013. Jamaica's establishment of credit bureau operations was cited as one of the main contributors to this significant achievement.

Since the credit bureaus were established, information asymmetry has been reduced, as evidenced by the number of CIPs using credit bureau data in the market (see Table 7.1). The increased role of credit bureaus has also influenced consumers to rehabilitate and preserve

their credit ratings to access new financing from financial institutions (see Figure 7.1).

Additionally, the banking system has recorded a notable improvement in the trend for key credit performance indicators, such as the total nonperforming loans (NPL) ratio for commercial banks, which had increased notably following the global financial crisis, improving for the period 2012 to 2016, subsequent to the introduction of the credit bureaus (see Figure 7.2).¹³ Increased access to borrowers' information has also enabled better credit underwriting by lending institutions, which in turn has helped bring about sharp reductions in the levels of nonperforming loans in deposit-taking institutions.

Figure 7.1. Trends in Annual Loan Recoveries at Jamaica's Commercial Banks

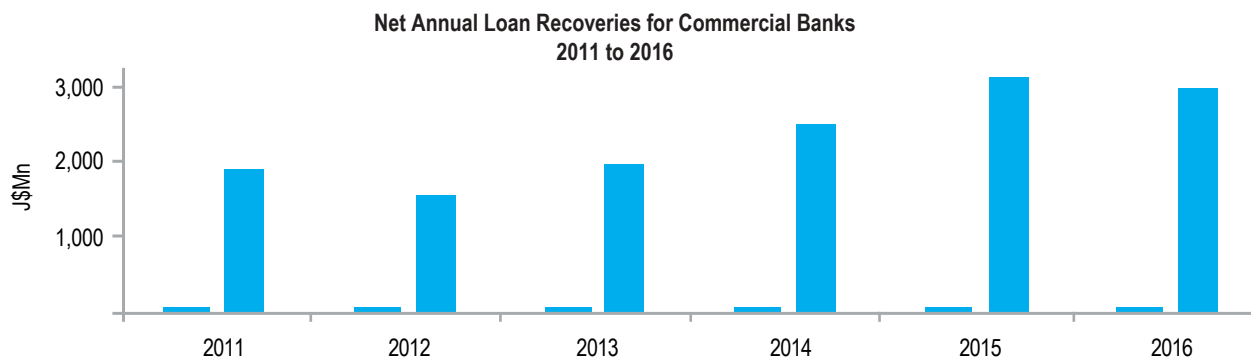
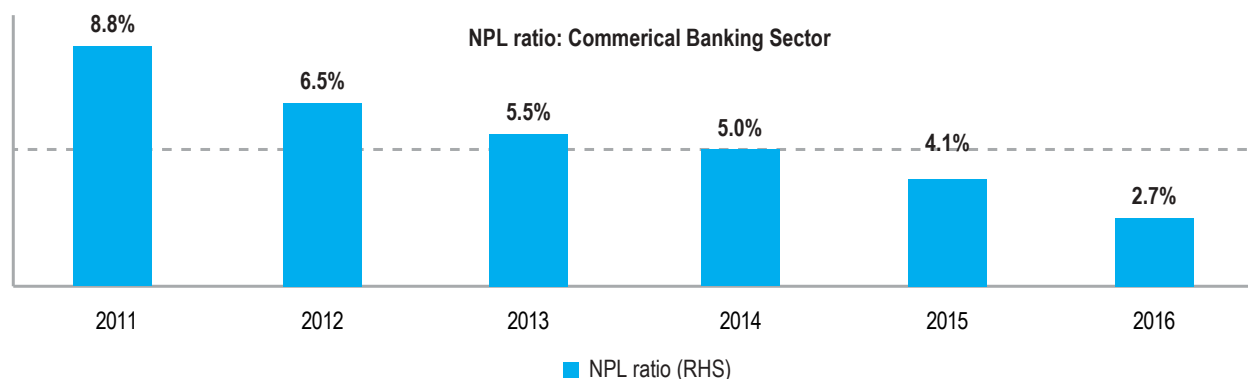


Figure 7.2. Changes in Total NPLs for Period 2011–2016 for Jamaica



13. The improvement in the NPL ratio between 2012 and 2014 was primarily due to transfers of large NPLs to special purpose vehicles (SPVs), net write-offs to large corporate borrowers, and net repayments on corporate facilities. These sources of decline in NPLs were partly moderated by growth in new NPLs (largely nonperforming loans from the personal, nonbusiness, and SME sectors).

From 2014 to 2016, new NPLs had a net decline. This turnaround in new NPL performance, which occurred against the backdrop of improvements in macroeconomic conditions, was largely attributable to the operationalization of the credit bureau industry, which saw a material increase in the number of credit reports issued and the number of CIPs signed with credit bureaus. For further details, see the Bank of Jamaica's April to June 2017 Quarterly Monetary Policy Report, Box 4, page 25–27.

Success Factors and Lessons Learned

The introduction of regulated credit reporting in Jamaica has been recognized by key stakeholders as a critical element of financial sector reform and a vital part of the wider strategy for inclusive growth and development in the Jamaican economy. Jamaica's experience has confirmed the following:

- A good credit reporting system hinges on a strong legal framework that provides for credit information sharing among lenders and restricts access to customer information without the customers' consent. Therefore, the legal framework should adequately consider consumer protection matters such as privacy, the right to lodge a complaint and the avenue for doing so, and mechanisms for appeal. The law should also outline the rules of engagement for credit information providers, including their rights and responsibilities, within the market.
- Stakeholders' confidence in the system depends in large part on the robustness of the technology platforms used by credit information providers and credit bureaus to ensure the accuracy and integrity of credit information being shared.
- Confidence in the system can be bolstered through adequate consumer awareness programs that highlight the potential benefits of the regime to individuals and outline the consumer protection mechanisms within the framework.

In Jamaica, incremental expansion of the number and types of CIPs to include nonbank entities (i) allowed significant growth in the credit reporting regime as measured by the number of credit reports issued annually, (ii) facilitated expansion of the credit bureaus' databases to cover a wider cross-section of consumers, and (iii) increased the potential for access to credit for unbanked consumers.

7.5. Establishing Credit Histories for Low-Income Women in India

History of India's Credit Bureaus

India's credit reporting industry grew on the back of the Asian financial crisis of 1997, which was catalyzed

by a boom in borrowing during which short-term foreign borrowings were extensively used for long-term investments in Southeast Asian economies. While India's stringent capital account restrictions prevented large volumes of capital flows, the 1997 foreign exchange crisis did prompt a reexamination of existing credit information infrastructure across Asia and the adverse impacts of excess lending. The Reserve Bank of India (RBI) recommended a framework for setting up credit bureaus through a Working Group established in 1999. Until this time, no institutional mechanism in India collected and furnished information on existing and prospective borrowers.

Accordingly, Credit Information Bureau (India) Ltd. (CIBIL) was incorporated in August 2000 and launched operations in 2004. A landmark legislation was enacted in 2005 (the Credit Reporting Act, or CICRA) with a view to regulating credit information companies (CICs), since provisions of multiple banking legislations prohibited disclosure of borrower information. The roll out of individual and commercial reporting was initially slow, but it picked up pace by end of the 2000s. In 2009, RBI licensed three more bureaus (privately owned by technology partners and financial institutions) to provide credit information services, which added to the momentum.

Credit reporting emerged as a tool for streamlining credit flow to low-income borrowers in India, when microfinance institutions (MFIs) stepped up their use of credit reports. This practice gained momentum following a regulatory directive issued in the aftermath of the Indian microfinance crisis.¹⁶ The example of one credit bureau, CRIF High Mark, demonstrates the remarkable pace of growth of India's credit reporting industry, especially given the initially low levels of awareness around credit reporting among many lending institutions, particularly MFIs. High Mark, now known as CRIF High Mark, started operations in early 2011 and within just four months had received 35 million records from 30 lenders. In 2017, CRIF had 3,600 members covering all public/private banks, MFIs, housing finance companies, regional rural banks, and many nonbanking financial companies (NBFCs) and cooperative banks. It maintains the histories of more than 80 million microfinance

16. Easy liquidity and low barriers to entry led to instances of multiple lending and client over-indebtedness among Indian MFIs. Concerns about this came to the fore in 2010, when mass instances of loan nonrepayment occurred in the state of Andhra Pradesh, following allegations of coercive practices by some MF players and related political pressure. The AP state government issued an ordinance with stringent operational controls over MFIs, including on new lending and recovery, leading to large-scale defaults and increased NPLs in MFI portfolios. This had spillover effects across the country when bank lending to MFIs came almost to a standstill.

borrowers and more than 360 million borrowers overall, and it has supported more than 200 million lending decisions to date.

So how did a new industry create such remarkable growth in such a short time, especially in building credit histories for low-income women? And what was the role of the World Bank Group in catalyzing this growth?

Understanding the Client

India currently has among the largest number of low-income borrowers of financial services in the world. The typical female microfinance borrower has monthly household income between INR Rs1500 (US\$22) and about Rs60,000 (US\$1,000). About 59 percent of MF borrowers generate income through manufacturing and trade activities, and the rest through agriculture, nonfarm labor, livestock, and services. Rarely do these activities fall within the formal sector. Only 6 percent of MF clients have completed higher secondary education; 67 percent are illiterate or have below primary education (Grameen Foundation).

Low-income women borrowers have largely received financing from two complementary sectors in India: the SHG (Self-Help Group)-Bank linkage program (SBLP) and the microfinance sector.¹⁶ In India, MFIs are registered as nonbanking finance companies, not-for-profit companies, trusts, societies, or cooperatives. Many function as NBFC-MFIs (regulated by RBI) to ease the difficulty of raising of equity. Currently, the regulated microfinance market covers 50 million clients, served by more than 100 regulated institutions, with a network of 10,553 branches and 80,097 employees across 32 states and union territories.

By the late 2000s, Indian MFIs achieved very high growth rates, but by 2010, the vulnerabilities of the sector became clear when concerns around multiple lending culminated in the crisis noted above. It became critical to ensure that MFIs' underwriting practices were standardized and that client over-indebtedness was adequately assessed before sanctioning credit. RBI also stepped in, capping the amount lent to borrowers at a time and limiting the number of MFIs from which borrowers could receive loans. The sense was that growth of the required credit appraisal systems had not kept pace with the growth in portfolios. The emerging challenge was to create robust, standardized tools of credit analysis for a

borrower segment for which information existed only in fragments.

Catalyzing Integration

Recognizing early on the potential for multiple lending and risks inherent in fast growth of the MF sector, the World Bank Group (WBG) commissioned a scoping exercise in 2009, well before the MF crisis. The objective was to assess the readiness of MFIs to share credit information with bureaus. This analysis underscored the lack of standardization in data collection and submission processes across MFIs, challenges in identifying and matching individual borrowers, and a limited understanding among lenders about the need for credit reporting. As part of its key recommendations, the WBG suggested a redesign of the credit information report to incorporate the group lending structure and concept of joint liability loans, and it pushed the sector to work together on a common data format.

The microfinance crisis in 2010 hastened the sector towards reevaluating its appraisal practices, which the WBG had been urging. New regulations were soon put in place mandating that MFIs submit borrower data to all credit bureaus. As indicated, since regulations limited the number of NBFC-MFIs a customer could borrow from, credit bureau checks became important tools that could be used to verify this. Given the limited experience of MFIs in working with credit information bureaus, what the sector needed was a partner to help implement a roadmap for integrating borrower data while upholding standards of quality and security. The WBG, given its existing engagement with CICs since 2009, emerged as a key stakeholder that could support the sector in this transition. Using the lessons learned from this program, a new project was started to meet the sector's needs. Program design was structured to include a multistakeholder approach, incorporating advisory support to network associations, CICs, MFIs, and borrowers.

Challenges and Solutions

Capturing the identity of a borrower in the credit reporting system was a particularly challenging task as demographic details usually required for building a borrower's credit history were difficult for bureaus to ascertain. Diversity within and across Indian states in names, addresses, and forms of identification made

17. While the SBLP facilitated credit linkages between banks (primarily public sector) and SHGs (groups comprising of 10 to 20 women), microfinance was driven primarily by the private sector, with MFIs primarily financing joint liability groups (JLG) comprising 3 to 5 women.

it challenging to standardize data. A common name like Lakshmi, for example, can be spelled as Laxmi, Lakshmee, Lachmi, or Lakkhi, depending on the region. It soon emerged that many borrowers were ignorant of basic information such as date of birth. It was common practice for an entire joint liability group (JLG) to provide the same date of birth (such as January 1, 1980) for all its members. It was also difficult to identify locations, given duplication of village/street names, especially in rural areas. At times, the “address” of a borrower would coincide with that of the local post office. If members were related, a single address would be provided, even if separate residences were maintained. Typical identifiers used in a credit information report were therefore not applicable in this context. In addition, MFIs, especially the smaller ones, faced capacity issues, with poor MIS, high probability of error in data entry, and susceptibility to data manipulation and fraud. To mitigate this challenge, bureaus developed more complex algorithms.

The WBG program came in with timely interventions, in collaboration with industry association Microfinance Institutions Network (MFIN). A technical assistance program was developed for 20 smaller MFIs, with emphasis on capturing and submitting required borrower information to credit bureaus. This also ensured buy-in of existing users and increased usage of credit reports. Another example was that of a data quality review to assess quality control processes followed by MFIs while collecting and submitting data, as well as processes followed by CIBs in collecting and processing submitted data. Recommendations included standardizing rejection

criteria across CIBs and submission formats across MFIs, standardizing Know Your Customer requirements, and identifying categories of inconsistencies to enable MFIs to investigate them. MFIs agreed to capture seven mandatory fields, devised stronger processes, and established contact points with other MFIs to gather information on negative bureau matches. This helped establish some basic standards in the credit infrastructure market. WBG provided support to High Mark (HM, now CRIF High Mark) and Equifax to expand coverage and develop new products, under which these algorithms were piloted. To address the end borrower, the WBG partnered with MFIN to support creation of a CIB awareness toolkit for MFI borrowers.

For a borrower data set to be usable for generating a credit information report, the personal data points in Table 7.2 are necessary.

Impact

This effort became the WBG’s largest credit reporting project; it enabled outreach to nine million clients and achieved six million IFC Development Goals (IDGs). During the project period, 45 million incremental inquiries were received in CIC databases, and 150 MFIs were added since inception. Through this project, HM and Equifax developed a combined database of more than 80 million microclient records, the largest repository of such data in the world.

The project demonstrated effective use of sectoral channels to maximize institutional impact. The WBG repeatedly convened multiple stakeholders for conferences or workshops, including banks and donors, to discuss the need for robust credit reporting practices. Along with awareness raising initiatives, the WBG facilitated sessions by technical experts aimed at improving use and interpretation of credit reports. WBG thus combined broad sectoral guidance with specific operational support for enhancing use, identifying risks, and improving data quality.

Among institutions, based on case studies documented by MFIs and HM in 2013–14, multiple instances were observed of women identified as delinquent borrowers who serviced their outstanding loan and returned with updated statements to access fresh credit. The prevalence of credit reporting and citing a credit information report (CIR) also reduced the number of false declarations by clients. With credit reports enabling 50 percent lower default rates and increased ability to identify overheated areas, lenders could target unbanked areas better and enable clients’ access to a wider range of products.

Table 7.2. Personal Data Points Need to Generate Credit Information Reports

Data Type	Data Field
Primary Header	Borrower Name
	Complete Address
	Date of Birth
	Voter’s ID
	Ration Card/Other ID
	Telephone (Land/Cell)
Secondary Header	Gender
	Marital Status
	Spouse’s Name
	Father’s Name
	Age
Center’s Address	

GAINS TO THE MICROFINANCE INDUSTRY FROM INCREASED USAGE OF CREDIT INFORMATION REPORTS

Parameters	Small MFI	Medium MFI	Large MFI	Industry
Gross loan portfolio	Rs.1 billion (\$16.67 million)	Rs.2.5 billion (\$41.67 million)	Rs.12 billion (\$200 million)	Rs.300 billion (\$5 billion)
Gains due to PAR90 savings	Rs.2.36 million (\$39.333)	Rs.5.9 million (\$98.333)	Rs.28.32 million (\$472.000)	Rs.708 million (\$11.8 million)
Gains from collections	Rs.253,600 (\$4.227)	Rs.634,000 (\$10.567)	Rs.3.043 million (\$50.720)	Rs.76.08 million (\$1.268 million)
Total Gains	Rs. 2.61 million (\$43.560)	Rs 6.53 million (\$108.900)	Rs 31.36 million (\$522.720)	Rs 784.2 million (\$13.07 million)
Average ticket Size	Rs.10,000 (\$166.67)	Rs.11,000 (\$183.33)	Rs.12,000 (\$200)	Rs.12,500 (\$208.33)
No. of applications	110,000	250,000	1,100,000	26,444,000
Gains per application	Rs.23.76 (\$0.396)	Rs.26.14 (\$0.436)	Rs.31.38 (\$0.523)	Rs.29.65 (\$0.494)

Source: High Mark Credit Information Services Private Limited, from research carried out in 2013–14 in partnership with WBG.

There are two types of Credit Reports: a Consumer credit report is an individual's credit payment history across loan types over a period of time, and a commercial credit report is a record of a company's credit history. While commercial and consumer credit reports are similar in purpose—to provide prospective lenders with credit profiles for determining credit risk—they differ in the types of information they contain and how they are used.

It's important for business owners to establish separate credit profiles for their businesses. Until they do, they are personally liable for any loan obligations, even if the business is a separate legal entity. Without a business credit profile, lenders rely on the business owner's personal credit profile to determine credit risk, which can limit the business's capacity to borrow what it needs.

Lenders also observed high operational efficiencies with increases in borrower disclosure and repayment of older over-dues. When a loan was denied based on a CIR with a long overdue loan, 54 percent were repaid.

Thus, credit history emerges as a powerful tool for the financial inclusion of women from low-income households. It can create a transaction trail enabling them to graduate to higher ticket loan sizes and move from credit for consumption to credit for livelihoods. Inclusion of this level of borrower data helps identify financially excluded pockets and provides information on geographies where financial inclusion efforts should be targeted. It also helps identify over-indebtedness among borrowers; consequently, it contributes to reducing NPLs. Given the strong value proposition and support from the regulator and stakeholders such as the WBG, the industry has been able to progress fast.

With the push toward seeding for all borrowers of Aadhar (India's 12-digit unique identity number, issued to all Indian residents based on their biometric and demographic data), client identification is now more efficient and streamlined. The WBG program has also expanded further and now focuses on bringing SHG member information into CIC databases. While the journey has been long and arduous, the results for the credit reporting industry have been remarkable. India presents an important example of how responsible lending can be put into practice through stronger credit infrastructure. The contributions of this program were recognized by the WBG in 2017, when it received the VPU award for outstanding achievement for "enabling credit for low-income women and small enterprises [India].

7.6. Increasing the Coverage of Commercial Credit Reports and Using Alternative Sources of Data to Reach Underserved MSMEs in India

Lack of adequate credit information on microenterprises and SMEs hampers economic growth. The micro, small, and medium enterprise sector (MSMEs) sector is crucial to India's economy. (The designation as a micro, small, or medium enterprise is based on the enterprise's initial investment in plant and machinery per India's MSMED Act, 2006.) India has 48.8 million MSME enterprises in various industries, employing 111 million people. Of these, 7.4 percent are women-led, and close to 55.3 percent are based in rural areas. Estimates indicate that the manufacturing sector accounts for 21 percent of all MSME enterprises, while the services sector accounts for 79 percent (India, Ministry of Micro, Small, and Medium Enterprises 2016; India, Ministry of Micro, Small, and Medium Enterprises 2007; IFC Intellectap).

MSMEs are more prone to credit constraints than are larger companies. Lack of adequate and timely access to finance remains the sector's biggest challenge and has constrained its growth. A large number of MSMEs in India continue to be unserved and underserved; and this is particularly true for the unregistered and the informal sector. Many MSMEs, especially those in the service sector (such as retail trade; legal, educational, and social services; restaurants; and artisans), face serious challenges in obtaining finance from formal sources due to non-availability of adequate identity or vintage identity documents, non-availability of adequate credit history or a repayment track record, and non-availability of property collateral.

Estimates put the sector's informal sources of debt at Rs39 trillion (US\$601 billion) or 75 percent of its

credit supply. Informal sources include institutional sources, such as money lenders and chit funds, and non-institutional sources, such as family, friends, and family businesses. Early-stage MSMEs often turn to moneylenders with high costs and unclear lending terms.

A strong correlation exists between the presence of robust credit information system and penetration of formal finance in an economy. A well-developed financial infrastructure makes credit markets more efficient by reducing information asymmetries and legal uncertainties that may hamper the supply of new credit. Transparent credit reporting can support the internal risk management of financial institutions and supply regulators with timely information on the risk profile of systemically important financial institutions (World Bank 2013). Credit reporting systems help ensure financial inclusion by enabling access to finance for the underserved and unbanked. Credit reporting systems are a critical component for any country in ensuring financial inclusion.

The WBG Doing Business 2019 data show that India's credit information companies cover approximately 479 million individuals and 17 million firms (or the equivalent of 56% of the population). Credit information companies and credit bureaus in India, such as Equifax, Experian, CRIF High Mark, and CIBIL TransUnion, provide lenders with credit scores based primarily on the loan applicants' past repayment history. These credit bureaus are still in their fledgling stage. The first bureau, the Centre for Information Bureau (India) Limited, more commonly known as CIBIL, commenced operations in August 2000; its Consumer Bureau was launched in 2004 with 4 million records; and its Commercial Bureau was launched in 2006 with 0.7 million records. While the consumer bureaus and records in these CICs have

In the words of Financial Institutions and MSMEs interviewed under the WBG Project:

"Willing to pay even 3x the current cost if reliable, high-quality and comprehensive credit report is available at my perusal."

—Business Head, Private Sector Bank

"Ready to provide any information if we are benefiting from receiving financing assistance for our business needs"

—MSME

been growing, the database for microenterprises and SMEs is not adequately populated, and differentiation of microenterprises and SMEs is inadequate. In addition, use by financial institutions of commercial credit reporting products remains limited.

Alternative data sources increase the effectiveness of credit reports in enabling access to finance in the MSME segment. These additional data points are increasingly used to predict risk and repayment behaviors, and credit bureaus may be able to build credit reports that more accurately reflect defaults and in turn enable financial institutions to grant more loans to a broader population.

Borrowers often lack the necessary information financial institutions require to assess their creditworthiness, such as reliable identification, business track records, and sufficient turnover and cash flow records. This lack of information reduces their chances of getting financed. Moreover, credit assessment of borrowers by financial institutions are often subjective, time consuming, and expensive, involving home visits by loan officers to interview applicants and their neighbors.

Many small companies make steady payments (such as rent, utilities, and cell phone bills) outside the formal credit markets, however, and these can be used to determine creditworthiness. Such alternative data sources offer a potential solution to the challenges of MSME

financing. Alternative data points, along with the existing data, are already being piloted by financial institutions (globally and in India). MSMEs stand to benefit, as a good profile on a credit report could help them gain faster and cheaper credit to meet their business needs. Financial institutions are realizing the value of using alternative data sources and are investing in technology to develop advanced credit-scoring models. Alternative credit-scoring solutions can augment the credit assessment process, particularly for small-ticket loans.

Companies making use of alternative data can bridge this gap for the unbanked and underbanked and plug them into the formal sector through sophisticated use of advanced technology and available records from alternative sources. In addition to financial institutions, traditional credit-scoring companies are exploring partnerships with fintech companies to include alternative data in their credit scores. In Chile, for example, the credit-scoring agency Equifax has partnered with a start-up, Cignifi, which will use cell phone data to provide a “Predictor Inclusion Score” for people with no credit history.

Leading alternative-scoring players in India include companies like Credit Vidya, an alternative credit-scoring platform that uses big data and advanced machine learning techniques to build credit scores. Another firm, Spotco, builds customer models using data touch points

Figure 7.3. Commercial Credit Reporting India Project Pillars

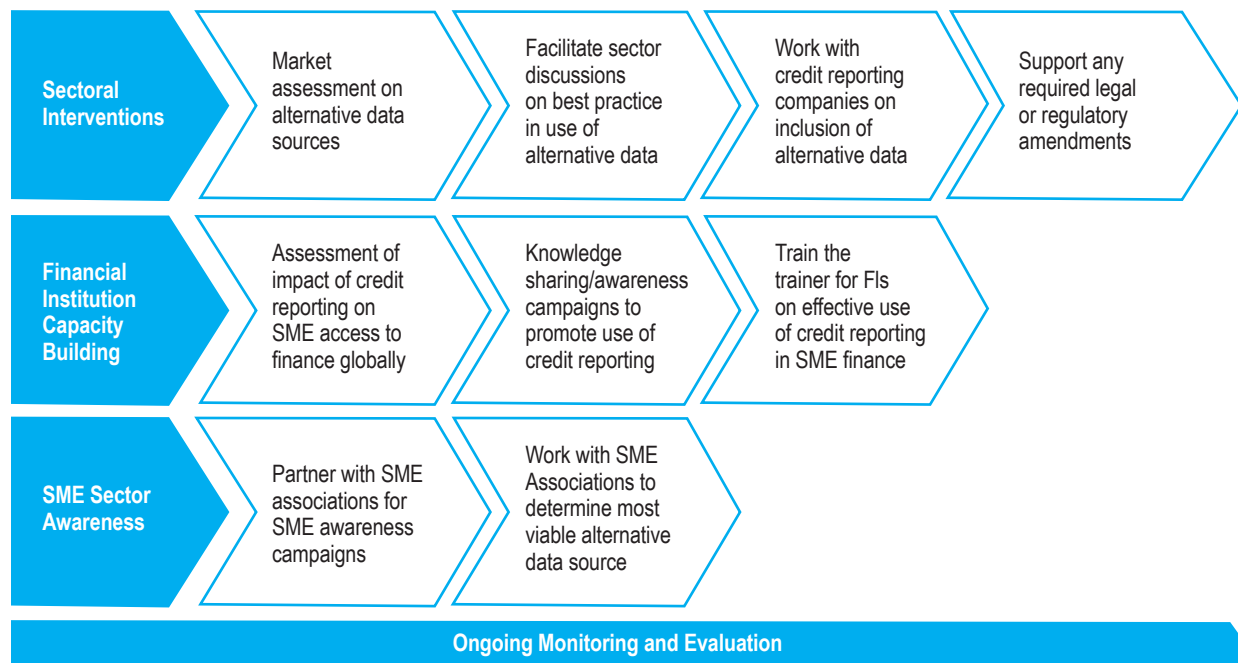
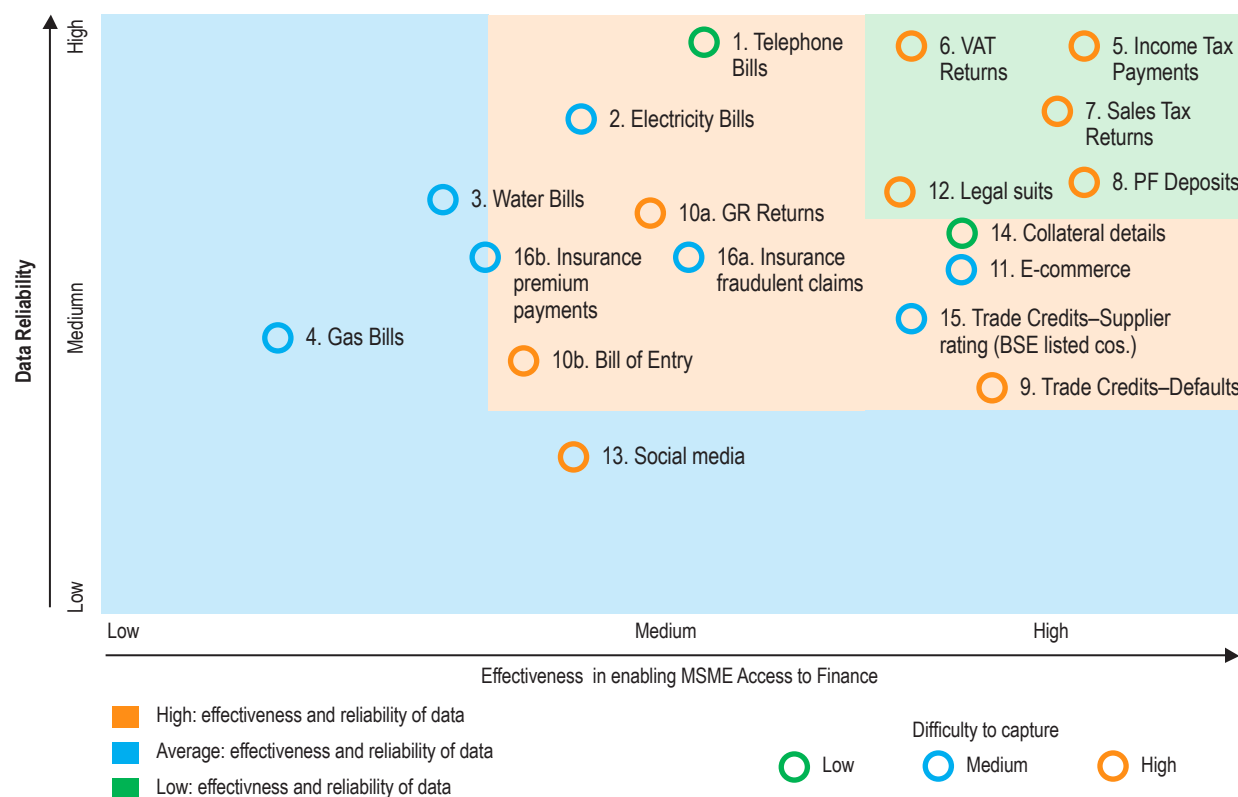


Figure 7.4. Potential Alternative Data Sources for India's Underbanked and Unbanked MSMEs

Financial Institution's view point on effectiveness and reliability of alternate data



Increasing Awareness on Commercial Credit Reporting

MSMEs lack awareness of their level of understanding of credit reports and credit bureaus. They lack understanding that a credit report captures the repayment conduct of the borrowing entity, which forms a key element in credit decision making by financial institutions. With this background in mind, one WBG project component has focused on increasing knowledge among MSMEs on credit reporting. The following activities were carried out under this component:

- Design of trainings modules (separate for FIs and SMEs) on credit reporting¹⁷ Trainings raise awareness on the benefits of credit reports and importance of credit bureaus.
- Collaboration with national and regional MSME associations (FISME & CII), conducted through 10 face-to-face SME trainings and 6 webinars, reaching more than 450 MSMEs.
- One workshop for more than 40 NBFCs (CXO staff) was recently conducted.
- E-modules of the credit reporting trainings, one each on FI Training and SME Training (links given below), have now been created or more widely disseminated. This content also helped lead to a global WBG CR training e-module.

17. Links for trainings on credit reports for FI and SME, respectively :https://wbg.sabacloud.com/Saba/Web_spf/NA1PRD0002/common/leclassview/dowbt-00028867 and https://wbg.sabacloud.com/Saba/Web_spf/NA1PRD0002/common/leclassview/dowbt-00028932

such as borrowers' location, browsing habits, social media profiles, type of mobile app usage, behavioral tracking, device tracking, thus assessing individual's persona and willingness to pay. Other companies, like VisualDNA (now acquired by Creditinfo and other), conduct customer profiling through personality quizzes, an example of psychometric tests/scoring that try to assess the socio-psychological profile of borrowers (an intent-to-pay measure). Many financial institutions have already started using these credit assessment tools, like Janalakshmi Financial Services (JFS), a company in the top 10 of Indian MFIs, which engaged EFL in April 2013 to control risk and expand individual lending. (See <https://www.eflglobal.com/wp-content/uploads/2014/09/JFS-Case-Study.pdf>.) In conjunction with traditional credit underwriting tools, EFL demonstrated the ability to accurately measure credit risk among clients.

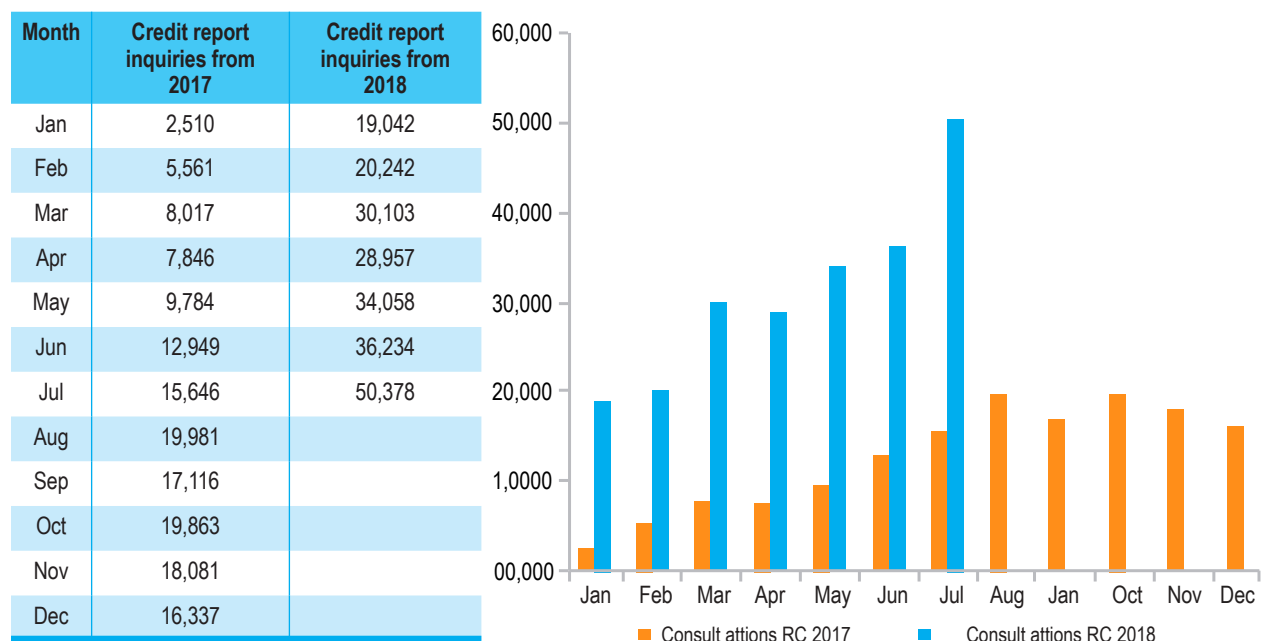
WBG/IFC continues to support development of India's commercial credit reporting market. The WBG's Finance and Markets Global practice has held multiple meetings and workshops with various stakeholders as part of its Commercial Credit Reporting India Project. Key issues raised included (a) use of only standard credit information, (b) limited use by financial institutions, (c) poor data quality, and (d) lack of awareness in the MSME sector. The project has accordingly engaged with various

stakeholders (including all the four credit bureaus, RBI, MSME associations, MSMEs, and financial institutions) over the last two years. The program works with commercial credit bureaus and is the first of its kind in the emerging markets global portfolio. Project components appear in Figure 7.3.

A key focus of the WBG/IFC Commercial Credit Reporting India Project has been working on pushing for change in the existing Credit Reporting Act (CICRA) to try to integrate alternative data into the credit reporting system. As a part of this work, a research study was carried out in 2015–16 and summarized in “The Role of Credit Information on Level of Access to Finance for MSMEs and Inclusion of Alternative Data Sources in MSME Credit Reporting.” Some of the potential alternative data sources for underbanked and unbanked MSMEs captured appear in Figure 7.4.

As noted in the report, “to enable access to finance, Financial Institutions want existing MSME credit reporting to be enriched with alternative data like Trade Credit Data, repayment conduct on utility payments (i.e., telecom data, electricity data, gas bills and water bills), statutory payments, tangible collateral as well as reputation collateral, etc., to enable credit decision making even in cases of unbanked /underbanked MSMEs that lack a loan repayment history.”

Table 7.3. Trend of Credit Report Inquiries



Following discussion with the various stakeholders, several additional research reports have been prepared, covering essential topics, including:

- understanding the availability and viability of trade credit data from the MSME segment; and
- analysis of regulatory and legal challenges/concerns when sharing specific data from utility and insurance companies and recommendations for integrating the data.

The findings of these reports have also been presented and discussed with the regulator, RBI. As a continuation of this work, the project team's next steps include an agreement with a credit bureau, already signed, to conduct a pilot to record and capture trade credit data from MSME associations and e-commerce companies and quantitative research to support inclusion of alternative data (for example, telco, utilities, and others). The result of these pilots will be presented to and discussed with the regulator, CICs, and other stakeholders.

An important conclusion to be drawn from this case study is that credit reporting systems constitute a dynamic industry that can be expected to mature over time, with the necessary regulatory changes, to efficiently fulfil the demand from financial institutions and MSME borrowers for improved services. Credit information reports must not only be credible, reliable, and robust, they must also contain the right information to help conduct correct analyses.

As noted above, a key focus has been the push to change India's existing Credit Reporting Act (CICRA) to integrate alternative data in the credit reporting system. The inclusion of alternative data sources in the credit reporting structure will not only help MSMEs receive financing for their many business needs, it will also help financial institutions make better credit decisions, increase their MSME portfolios, and decrease their default rates. Although financial institutions and other lenders already make use of these data points, legal and regulatory frameworks are necessary to achieve a better understanding of privacy issues and the scope and use of this data by both the supply and demand side and to further develop the country's credit infrastructure systems. The various components of this ongoing project address these aspects by working with various stakeholders, with the objective of increasing the scope of commercial credit reporting in India.

7.7. UEMOA: Pioneering a True Cross-Border Credit Information Sharing System

Context

The subregion known as the Union Économique et Monétaire Ouest-Africaine (UEMOA), or the West African Economic and Monetary Union (WAMU), comprises eight countries—Benin, Burkina Faso, Côte d'Ivoire, Guinea Bissau, Mali, Niger, Senegal, and Togo—with a combined population of 122 million people and an average GNI per capita of US\$670. With the exception of Côte d'Ivoire and Senegal, which are categorized as middle-lower-income nations, the UEMOA members are considered to have low-income economies. The UEMOA countries participate in an economic and monetary union with established regional institutions that governs economic and monetary issues for all the states. The regional Central Bank, Banque Centrale des Etats de l'Afrique d'Ouest (BCEAO), has as one of its objectives fostering financial inclusion across the eight countries by supporting increased lending to MSMEs and consumers.

In 2012, all countries in this subregion ranked 126th out of 183 countries in the World Bank Group Doing Business ranking on getting credit and 1.0 (out of a possible 6.0 at the time) on depth of credit information. The percentage of the adult population covered by private credit bureaus in 2012 was zero, and although all countries in the region had a central public registry managed and operated by BCEAO, no private credit bureaus were operational. Coverage by the public credit registry was limited to between 0.9 percent and 10.7 percent across the region. The scope, breadth, and quality of information provided by the public credit registry did not help banks meet their credit risk management requirements. Moreover, only loan data above a certain threshold was collected from regulated entities.

Issue

Consumer and MSME access to credit in the UEMOA region is hampered by a lack of robust credit data to inform lending decisions. As such, a significant part of the population (estimated at more than 60 percent) cannot obtain credit because they lack adequate traditional collateral. A credit bureau in this region would help

compile credit histories on consumers and MSMEs, thereby helping these segments to build “reputational collateral” to use to obtain credit. Given the limitations in information sharing in the credit market, BCEAO requested IFC support to establish a regional private credit bureau solution that would use a hub-and-spoke approach to achieve economies of scale in the region and create a state of the art credit reporting solution for all member states, regardless of the size or the strength of their individual national economies. The deployment of a regional credit bureau was seen as one way, among others, to promote increased lending and financial inclusion while helping to prevent over-indebtedness.

Resolution

As a result of this request, IFC entered into an agreement with BCEAO to provide credit information advisory services as an independent and neutral advisor over several years. Specifically, the project delivered the following:

- IFC undertook a detailed market analysis of the credit markets, credit information sharing infrastructure, and the legal and regulatory landscape in the region. A detailed strategy report with recommendations was provided to the BCEAO, including strategic issues for consideration, best practice advice drawing upon international experiences, and a proposed solution customized for the region.
- Following the legal and regulatory framework analysis, IFC supported the BCEAO in drafting a harmonized uniform regional credit reporting bill that could be adopted by all eight UEMOA countries. The credit reporting bill included all the important provisions that would ensure the development of a best practice credit reporting system. IFC and BCEAO carried out extensive awareness raising and sensitization regarding the contents of the credit reporting legislation through numerous workshops across the region.
- Following the adoption of the strategy report by BCEAO, IFC worked with BCEAO and other stakeholders in developing a technical Request for Proposal to solicit proposals from established credit bureaus to establish a regional credit bureau using the hub-and-spoke system for the UEMOA region. IFC provided capacity building to the BCEAO to evaluate and score proposals based on an objective score card and to select the most capable provider to set up a bureau in the region.
- In parallel, IFC supported BCEAO in developing its capacity as a licensing authority and supervisor of the

credit bureau, providing numerous documents and guidance and undertaking detailed supervision training and study tours to other jurisdictions to visit bureaus and supervisors. Simultaneously, IFC provided training to the supervisor of financial institutions (the banks) to ensure that regulated entities were meeting their responsibilities under the credit reporting law.

- IFC undertook two GAP analyses of the existing public credit registry to determine what upgrades or improvements would be needed to ensure that the registry would support financial sector supervision and develop appropriate monetary and fiscal policy for the region. These analyses were followed up with a recommendations report.
- IFC provided training to BCEAO and the Commission Bancaire on the utilization of credit reporting data for regulators’ institutional tasks (micro- and macroprudential supervision, monetary policy, statistics, financial stability, and so on).
- Numerous workshops and conferences were held, including two high-level international conferences to raise awareness about credit reporting among all stakeholders in the region.
- IFC provided support to the BCEAO for developing original consumer literacy materials on credit reporting to foster greater consumer awareness of credit reporting and its implications for borrowers. Materials included a videoclip on the benefits of credit reporting for borrowers that is shown inside bank branches throughout the UEMOA region.

Results

The project has been very successful and has thus far achieved the following results:

A harmonized credit reporting bill was adopted by the Conseil des Ministres (the highest decision-making body in the BCEAO) and adopted and passed by each of the eight member countries.

For the first time, uniform legislation allows the fluid sharing of information across borders. In that sense, the project encompasses a true cross-border information sharing credit reporting system. All credit information is stored in a shared database in a central location, but thanks to the legislation, a borrower from Senegal can apply for credit in Côte d’Ivoire and have the lender in Côte d’Ivoire access his or her credit history from Senegal or other parts of the region through the regional credit bureau. It is worth noting that this is one of the few, if not the only, real cross-border credit bureau information

sharing systems established since credit reporting began in 1960. It not only increases financial inclusion, it also facilitates individuals' mobility within the region.

Following a detailed RFP and selection process, BCEAO awarded a license to Creditinfo Volo to operate a regional private credit bureau covering all eight countries.

Since the bureau has been operational, it has gained 192 members, 152 of which share data with the bureau, it also serves a total number of 3.5 million clients (as of July 2018), the volume of outstanding loans is about US\$27 Billion and the number of inquiries is rapidly surging (as shown in table 7.3) - given the trend of inquiries, the bureau is estimated to receive more than 300000 inquiries in 2018 thus far facilitating an estimated \$668,887 in new credit.

With IFC support, BCEAO has finalized and rolled out a consumer awareness campaign. The primary product is a 15-minute animation displayed on the premises of lenders on a continual basis. A TV spot employing actors is also being produced.

Success Factors

The role of a strong and committed stakeholder to lead and champion the project was vital to project success. In this case, BCEAO was the primary counterpart for project implementation, and it was willing to dedicate the time and resources needed to support the roll out of a regional private credit bureau solution across eight countries in what can be considered record time: within five years.

IFC brought more than 15 years of experience working with over 60 countries globally to the project. Moreover, IFC's role as a neutral, independent, third-party advisor was critical to the system's successful implementation.

7.8. Credit Registry of the Bank of Italy

The Public Credit Registry of Italy (Centrale dei RischiBankitalia) was developed in the 1960s with the objective of supporting the Central Bank of Italy with its financial supervision function. Bankitalia considers its Public Credit Registry a "strategic resource" to support banking supervision, monetary policy, financial stability, studies, research, statistics, and dissemination to the public. In fact, Bankitalia's PCR is also open to public on Bankitalia website (<https://infostat.bancaditalia.it/inquiry/lite/mobile/en/iq#/P2NvbnRleHQ9dGF4byZzZWNoaW9uPWxpc3Q%253D>). The credit registry contains over 2,000 data points and is an invaluable source of information to the banking supervision

departments within the Bank of Italy as well as the regulated financial institutions it supervises. The credit registry offers the following services:

- Periodic consultation and information services on both registered borrowers and economic groups, as well as various alerting services
- Centralized management of the repository and communications to contributors and users of any updated information from official sources of information (including legal and economic connections between borrowers identified in the database)
- Creation of personalized information for each Supervised Entity, consolidated across customers
- Production of aggregate statistics
- Extraction of specific information flows (according to the needs of the various departments of the Central Bank and the specific requests of the supervised entities).
- Specific consulting services for the public

The Public Credit Registry was developed as a unique point of data collection, which with appropriate data extraction tools, could be exploited by every departments of the central banks then analyzed with tailored reporting by each of the main functions of the central bank.

The database is in practice a data-warehouse, fed by numerous sources of data (periodical data provided by the supervised entities but also reference data on companies, balance sheets, legal data, data provided by other authorities, data on securities, external statistics, and by aggregated data periodically supplied by the credit bureaus).

More than 1,140 supervised entities supply periodical data on all loans above Euro 25,000 to the Public Credit Registry. All the other loans below the Euro 25,000 threshold can be found in the Italian credit bureaus (CRIF and Experian).

The Public Credit Registry also offers the following services to the regulated entities: monthly return flow of aggregated data on their own clients/portfolio, alerts on large borrowers performance, messaging portfolio analysis, portfolio re-classification, etc.

The next step for Bankitalia's Public Credit Registry is represented by the need to harmonize its platform with the new European Central Bank's AnaCredit system, to avoid any redundancy and to minimize the effort of supervised entities during contribution activities and data exploitation activities

7.9. The AnaCredit Project

The AnaCredit project is a euro-zone-wide, cross-border credit information sharing project that started in 2014 to enable information sharing on firms with credit exposures across borders. The threshold is set at €25,000 (loan-by-loan approach), and all information relevant to the supervision and statistics needs of the European Central Bank will be collected and shared in this scheme.

The objective of the AnaCredit project is to integrate and centralize on a single platform a wide range of granular information about borrowers (information on exposures, accounting information, prudential information, provisions, interest rates, and so on) that are currently subject to different collection activities by various devices. The project is part of the strategic vision of adopting a unique European Reporting Framework, bringing together different data collection initiatives such as AnaCredit, the FINREP (Financial Reporting in the EU and UK), and COREP (Common Reporting Framework in the EU). In an initial phase only, legal entities data will be collected, and the target will be enlarged in a subsequent phase to include also individuals (with loan exposures above the threshold).

The 2008 financial crisis highlighted that credit and credit risk data are essential for microprudential supervision. The credit risk data are considered relevant within the European System of Central Banks (ESCB) for use in monetary policy decisions, thus for financial stability and also for analytical research and production of ESCB statistics. The main channels for acquiring this data are at the level of central credit registers (CCRs), credit rating systems, or borrower loan monitoring. The ESCB has explored the future potential of credit data, seeking in particular to understand the extent to which their content can be strengthened and adapted to the Eurozone

and its needs for statistics and financial supervision, as well as analysis and recommendations to meet the user requirements mentioned above while reducing the burden of the respondents' declarations and thus increasing transparency. CCRs are databases maintained by national central banks (NCBs) that contain national-level information allowing the exchange of information on outstanding credit in the financial circuit; they are used for analysis in the supervision of loans at the level of each borrower.

AnaCredit requirements may pose some challenges to the lending industry (especially banks), however. With AnaCredit reporting, data quality and data management will become key areas of focus. Sourcing data from multiple and various data sources and certifying its completeness could be challenging. Also, NCBs will be asked to submit AnaCredit reporting to the European Central Bank; financial institutions therefore will need to report to their NCBs. Multi-entity financial institutions in particular might struggle to tackle this multijurisdictional aspect of the regulation. These challenges can be approached in two ways: (i) apply short-term tactical fixes, and (ii) take a strategic approach by taking a long-term view of the opportunities underlying this project. In the long term, the financial institutions will have the occasion to improve invaluable data management capabilities as well as the efficiency of their business and operational models.

Anacredit, is supposed to start its official activity in November 2018; it will be the only public cross-border data sharing system existing in Europe, and one of the only 2 currently existing worldwide (the other is the UEMOA Regional Private Credit Bureau, which links the databases of the 8 countries belonging to the West African Economic and Monetary Union).

Appendixes

Appendix 1. Contents of an Individual Credit Report

Section on Personal Details

Personal Information			
NAME ARUN KUMAR	DATE OF BIRTH 14-06-1978		GENDER MALE
IDENTIFICATION TYPE	NUMBER	ISSUE DATE	EXPIRATION DATE
Income tax ID number(pan)	AABBB1234C	30-07-2000	-
Passport number	-	-	-
Voter ID number	-	-	-
Driving license number	MH019933333	12-2-2006	11-12-2006
Ration card number	-	-	-
Unique ID number (UID)	-	-	-
Additional ID#1	-	-	-

Note: These are some of the basic details contained in a typical report. Actual contents will vary depending on the credit bureau.

Section on Credit Facility and Account Details

Account Information			
Account detail	Dates		Account status
Member name	Date opened/disbursed	Credit limit	Rate of interest
Account number	Date closed	High credit	repayment tenure
Account type	Date of last payment	Current balance	EMI amount
Ownership	Date reported and certified	Cash limit	Payment frequency
		Amount overdue	Actual payment amount
Collateral	Status		
Value of collateral	Suit filed wilful default		
Type of collateral	Written-off- and settled status		

Section on Inquiries

Payment history (up to 36 months, left to right beginning with the most recent payment)												
Payment history start date			28-04-2003 DD-MM-YYYY			Payment history end date				28-11-2009 DD-MM-YYYY		
DPD, Days past due						AC, Asset classification						
DPD/AC	000	000	000	000	STD	STD	000	000	000	000	000	000
Month-year	11-09	11-09	11-09	10-09	09-09	08-09	07-09	06-09	05-09	04-09	03-09	03-09
DPD/AC	000	000	000	000	STD	STD	000	000	000	000	000	000
Month-year	11-09	11-09	11-09	10-09	09-09	08-09	07-09	06-09	05-09	04-09	03-09	03-09

Section on Inquiries

Personal Information			
Member name	Date of enquiry	Enquiry purpose	Enquiry amount
XYZ Bank	11-07-2006	Credit card	50,000

Appendix 2. Contents of a Commercial Credit Report

Company / Entity Profile

Profile			
Name	Sample india limited		
Short name	SIL	D-U-N-S Number	91-859-3443
PAN		Legal constitution	Private limited
Class of activity	01101/01102/01103	Address	1/2,AB Sarkar prabhakar road,sarakham
City/Town		Telephone number	
District		Fax number	
State/Union Territory	Maharashtra	PIN code	400001
Country	India	File open date	08-May-2008

*Note: Classification of Activity/Occupation as per Reserve Bank of India, Handbook of Instruction, Basic Statistical Return 1 and 2, Latest Edition

Report Summary

Report Summary						
No. of Credit Grantors	1	No. of Credit Facilities	3	No. of closed credit facilities		1
No. of Credit Facilities Guaranteed by others	0	Latest Credit Facility open date	01-Aug-2011	First credit facility open date	01-Feb-2010	
Credit Facilities	No. of standard	Current balance in standard	No. of other than standard	Current balance in other than standard	No. of lawsuits	No. of Wilful defaults
As Borrower	1	1,15,92,506	2	2,66,03,547	1	1
As Guarantor	0	0	0	0	0	0

Credit Facilities / Accounts Summary

Credit Type Summary								
No. of Credit facilities as Borrower	Credit type	Currency code	Asset classification				Special mention A/C	Current balance
			Standard	Sub-Standard	Doubtful	Loss		
1	Overdraft	INR	1,15,92,506					1,15,92,506
1	Demand loan	INR		0				0
1	Long term loan (period above 3 years)	INR				2,66,03,547		2,66,03,547
		Total	1,15,92,506	0		2,66,03,547		3,81,96,053

Inquiries Summary

Enquiry Summary								
Enquiry	3 months	6 months	9 months	12 months	24 months	>24 months	Total	Most recent date
No. of Enquiries	1	1	4	15	17	3	20	22-May-2014

Section on Relationship Details

Relationship details			
Relationship 1			
Related entity name	Sample individual		Related D-U-N-S number
Relationship	Promoter director		Related type
PAN			Percentage of control
Address	1/2,AB sarkar prabhakar road,sarakham		City/Town
			Mumbai

Section on Credit Facility / Account Details

Credit Facility Details						
Credit facility 1						
Credit facility type	Overdraft		Credit grantor name		Cibil internal	
Account number	Cibil 123					
Sanction date	Sanctioned amount	Currency code	Drawing power	Current balance	Asset classification	
01-Aug-2011	1,20,00,000	INR	1,20,00,000	1,15,92,506	Standard	
Wilful default status	Wilful default date	Suit filed status	Suit filed amount	Suit filed date	Account status	Last reported date
Not wilful defaulter		*No suit reported by the member			Open	30-Nov-2011

Section on Inquiries

Enquiry details last 24 months			
Credit grantor	Enquiry date	Credit type	Enquiry amount
XYZ Bank	22-May-2014	Advances against export cash incentives and duty draw back claims	1,000
XYZ Bank	17-Oct-2013	Letters of credit	1,00,00,00,00,00,000

Appendix 3. General Principles for Credit Reporting and the International Committee for Credit Reporting (ICCR)

The *General Principles for Credit Reporting* (published in 2011) provide guiding principles for the development of reporting systems and are intended to be used by policy makers, regulators, financial supervisors, credit reporting data providers, CRSPs, and consumers (World Bank 2011). In addition to the five core general principles, the originating task force identified and developed a set of specific roles for each stakeholder involved in credit reporting systems and recommendations for effective system oversight. The General Principles were designed to be useful for establishing and developing a credit bureau, a credit registry, or any other information-sharing institution. Based on the World Bank Group's experience, the five general principles address the challenges most commonly faced when developing credit reporting systems in emerging markets.

The five General Principles are:

Data

General Principle 1: Credit reporting systems should have relevant, accurate, timely and sufficient data - including positive - collected on a systematic basis from all reliable, appropriate and available sources, and should retain this information for a sufficient amount of time.

Data Processing: Security and Efficiency

General Principle 2: Credit reporting systems should have rigorous standards of security and reliability, and be efficient.

Governance and Risk Management

General Principle 3: 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 fair access to the information by users.

Legal and Regulatory Environment

General Principle 4: 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.

Cross-Border Data Flows

General Principle 5: Cross-border credit data transfers should be facilitated, where appropriate, provided that adequate requirements are in place.

In addition to the core principles, the General Principles also describes the roles of the key players in the credit reporting system and provides recommendations for effective oversight. The General Principles provide guidance, but no standard model exists for establishing and developing a credit reporting service. Experience suggests that the most effective solutions are those that apply the general principles in light of the country's existing market environment. For additional information, refer to *General Principles for Credit Reporting* (World Bank 2011).

The International Committee for Credit Reporting (ICCR)

The initial task force that spearheaded the development of the General Principles for Credit Reporting has now been reconstituted as the International Committee for Credit Reporting (ICCR). The ICCR provides methodologies to policy makers, authorities, supervisors, and regulators for assessing existing credit reporting systems within their respective jurisdictions against the guidance provided by the General Principles. In addition, the ICCR has developed guidance around the use of credit reporting for supervision and financial regulation, facilitating SME finance through the use of alternative data, and increasing financial inclusion.

Appendix 4. World Bank Doing Business Surveys

A significant amount of the work undertaken by the World Bank Group in reforming credit information systems is driven by information collected through the World Bank's annual Doing Business surveys. Among other points, these surveys assess the status of credit information sharing systems across the globe through the Getting Credit Indicator.

Doing Business surveys measure the quality of credit information in a region or country based on coverage and the Credit Information Index (CII). (*Coverage* is defined as the number of records in the bureau or registry divided by the country's adult population aged 15 to 64.) Currently, Doing Business does not collect information on commercial credit reporting companies, although it does ask existing consumer bureaus whether they collect information on small and medium enterprises and what types of products and services are developed or provided to meet the needs of creditors to these business segments.

In addition to coverage, the Doing Business CII measures credit information availability in a country based on the eight key factors listed below (see Figure 3.5 for information on CII by region; World Bank 2012). A country receives one point for its concurrence with each of the factors; the points are totaled to arrive at the country's index score.

- Data on both firms and individuals are distributed.
- Both positive credit information (for example, original loan amounts, outstanding loan amounts and a pattern of on-time repayments) and negative information (for example, late payments and the number and amount of defaults) are distributed.

- Data from retailers or utility companies are distributed in addition to data from financial institutions.
- At least two years of historical data are distributed. Credit bureaus and credit registries that erase data on defaults as soon as they are repaid or distribute negative information more than ten years after defaults are repaid receive a score of 0 for this component.
- Data on loan amounts below 1 percent of income per capita are distributed. A credit bureau or registry must have a minimum coverage of 5 percent of the adult population to obtain a score of 1 for this component.
- By law, borrowers have the right to access their data in the largest credit bureau or registry in the economy. Credit bureaus and credit registries that charge more than 1 percent of income per capita for borrowers to inspect their data obtain a score of 0 for this component.
- Banks and other financial institutions have online access to the credit information (for example, through a web interface, a system-to-system connection, or both).
- Bureau or registry credit scores are offered as a value-added service to help data users assess the creditworthiness of borrowers.

Index scores thus range from 0 to 8, with higher values indicating the availability of more credit information, from either a credit bureau or a credit registry, to facilitate lending decisions. If the credit bureau or registry is not operational or covers less than 5 percent of the adult population, the score on the depth of credit information index is 0.

Appendix 5. Examples of Specialized ADR service providers dealing with credit disputes

The following three scenarios illustrate the flexibility of specialized ADR service providers in dealing with credit disputes: (i) an ADR service provider offers a spectrum of services such as mediation and arbitration (Financial Industry Disputes Resolution Centre, or FIDReC, located in Singapore); (ii) a banking mediation center (Moroccan Centre of Banking Mediation, or CMBB, located in Casablanca); and the (iii) Danish Dispute Complaints Board system.

Singapore's Financial Industry Disputes Resolution Centre (FIDReC). FIDReC is an independent institution providing dispute resolution services to financial institution customers. It covers Singapore's entire financial industry. Since its launch in 2005, complainants have hailed from 35 foreign jurisdictions in addition to Singapore. FIDReC is overseen by a board comprised of members of the finance industry, members with nonindustry backgrounds, and an independent chairman. Its mediators and adjudicators come from a mix of legal and financial backgrounds, and they participate in in-house training programs and advanced seminars on ADR in Financial Disputes. FIDReC has jurisdiction to mediate any amount between consumers and financial institutions and to adjudicate disputes up to S\$100,000 per claim for claims between customers and insurance companies and up to S\$50,000 per claim for all other disputes, including disputes between banks, disputes between CRSPs and consumers, third-party claims, and market-conduct claims. Resolving disputes through mediation costs financial institutions S\$50 per claim and is free-of-charge to consumers. Adjudication costs the complainant S\$50 and the financial institution S\$500. To emphasize fairness in the process and to instill a better balance of power, the number of financial industry representatives that can attend the mediation or adjudication hearing is limited. As an illustration of flexibility of their services, FIDReC has created an adjudication process that can be conducted by hearing or by documents only. The award of the adjudicator is binding on the financial institution, but not on the complainant. This means that the complainant can go to court should he or she be displeased with the results.

Morocco's Centre of Banking Mediation (CMBB). The CMBB is a nonprofit organization with the mission of facilitating settlement of disputes arising or that may arise between clients and banks, CRSPs, financing

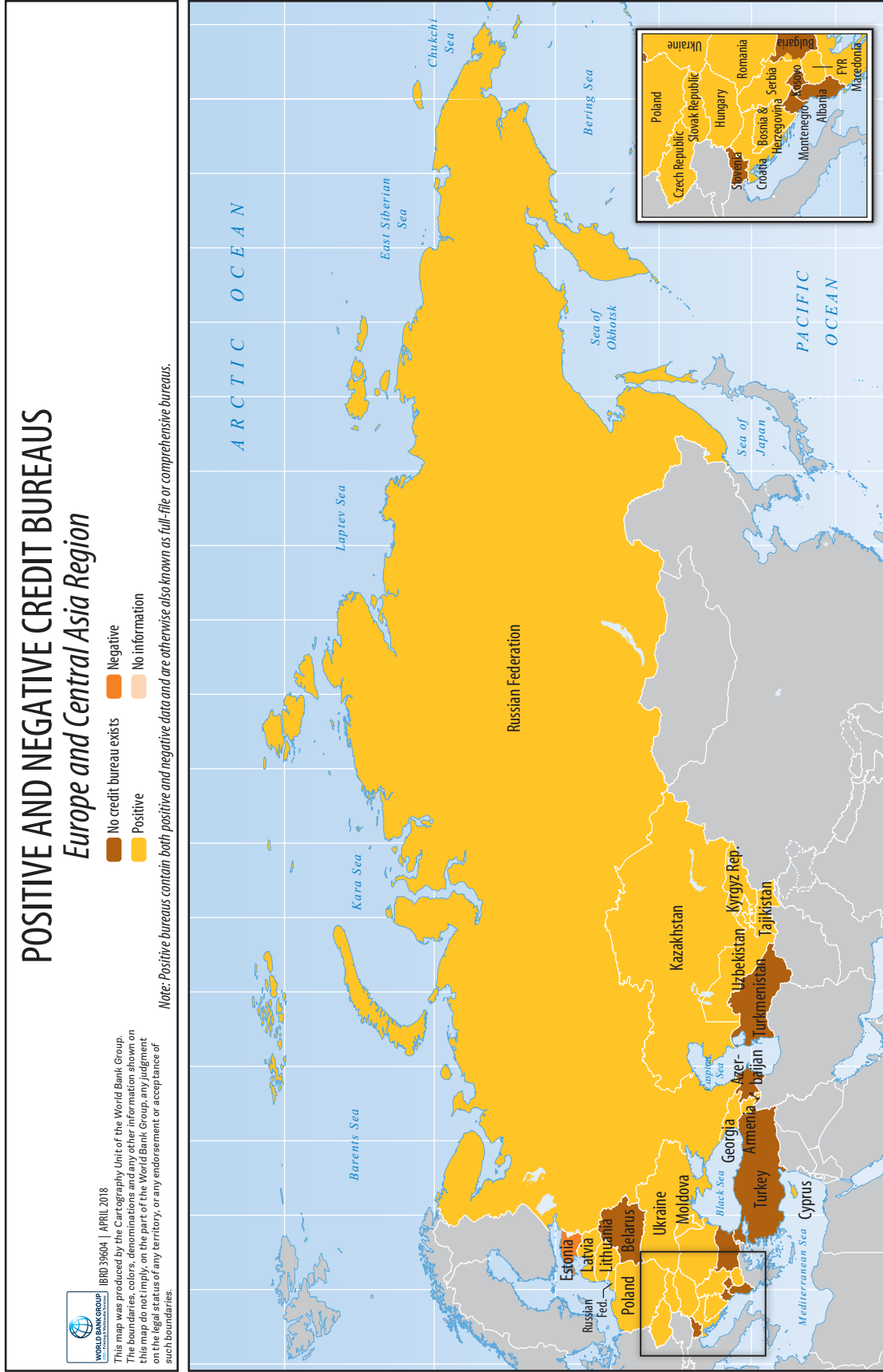
companies, or microcredit associations. CMBB has a board of directors composed of independent experts as well as industry representatives from Bank Al-Maghrib (BKAM), the National Agency for the Promotion of Small and Medium Enterprise (ANPME), the Moroccan Banking Association (GPBM), the Professional Association of Financing Companies (APSF), and the National Federation of Associations of Micro Credit (FNAM). Moroccan banking law makes it mandatory for all credit institutions to adhere to a mediation service (Article 158, Banking Law 103-12 24/12/2014). The Centre has one permanent mediator and may require the help of assistant mediators, all of whom are bound by a Code of Ethics. The Centre deal with disputes in conformity with its mediation rules. It offers two services: institutional mediation and conventional mediation. Institutional mediation is voluntary and free of charge for financial consumers. Disputes are eligible when the amount involved is less than or equal to 1 million dirhams (approximately US\$110,000), including those relating to current accounts; term deposits and savings accounts; the means of payment; financial assistance repayment terms; issuance of documents to clients (for example, release, amortization schedule, or outstanding certificate). The mediator has complete latitude to hear the client as well as the representative of the institution concerned and to reconcile their views and offer them a solution they consider appropriate. Conventional mediation services are also offered by CMBB when the parties want to settle a dispute over 1 million dirhams. Mediation is voluntary, and fees are payable in equal shares on the basis of the percentage of the amount in dispute.

The Danish Dispute Complaints Board. In Denmark, a system of specific complaint boards (credit, insurance, mortgage, banking, investment funds, security and brokering companies, and so on) have been established to deal with unsatisfied consumers of goods or services purchased. The complaint boards are established under the Danish Act on Consumer Complaints and approved by the Minister for Economic and Business Affairs. Consumers must submit the details of their complaint in writing and upload them to the Complaints Board's web portal. All decisions rendered are publicly available through the Complaints Board's website. Decisions are delivered by a panel of three adjudicators. In the Complaint Board of Credit Services, for instance, the chair is a supreme court judge and the two vice-chairs are a high court judge and a city court judge. The decision makers are appointed by bodies in which half

the members come from the credit industry and half from the Danish Consumer Council. Consumers pay a fee of Dkr 200 (approximately US\$33), but this is refunded to the consumer if the complaints board upholds the complaint. Consumers must complain to the CRSP first. The credit company has a time limit of five weeks for responding. The CRSP must tell the consumer about the Complaints Board. The board's decision is binding on the credit company unless it disputes the decision within

30 days; in that event, the consumer can get legal aid to take the case to court. No minimum applies to the amount of the claim, and no maximum applies to the amount awarded. Decisions from the Complaints Board are enforceable, and the bailiff's court can help the consumer enforce a claim if the decision is not followed by a bank. The Danish Competition and Consumer Authority may in some cases cover expenses incurred to enforce a Complaints Board decision.

Appendix 6. Maps of Credit Registries and Credit Bureaus Regional Maps of Positive and Negative Credit Bureaus

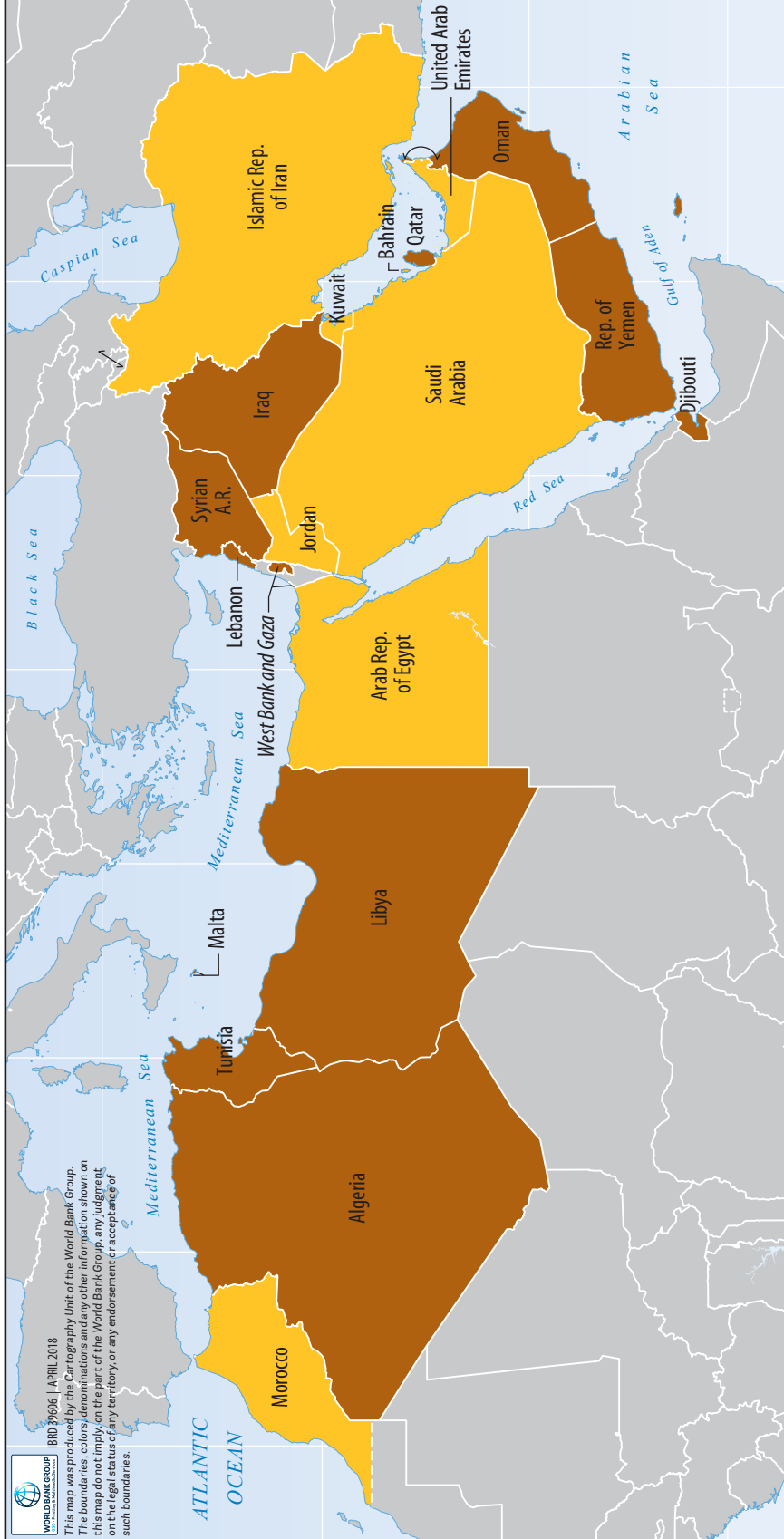


POSITIVE AND NEGATIVE CREDIT BUREAUS

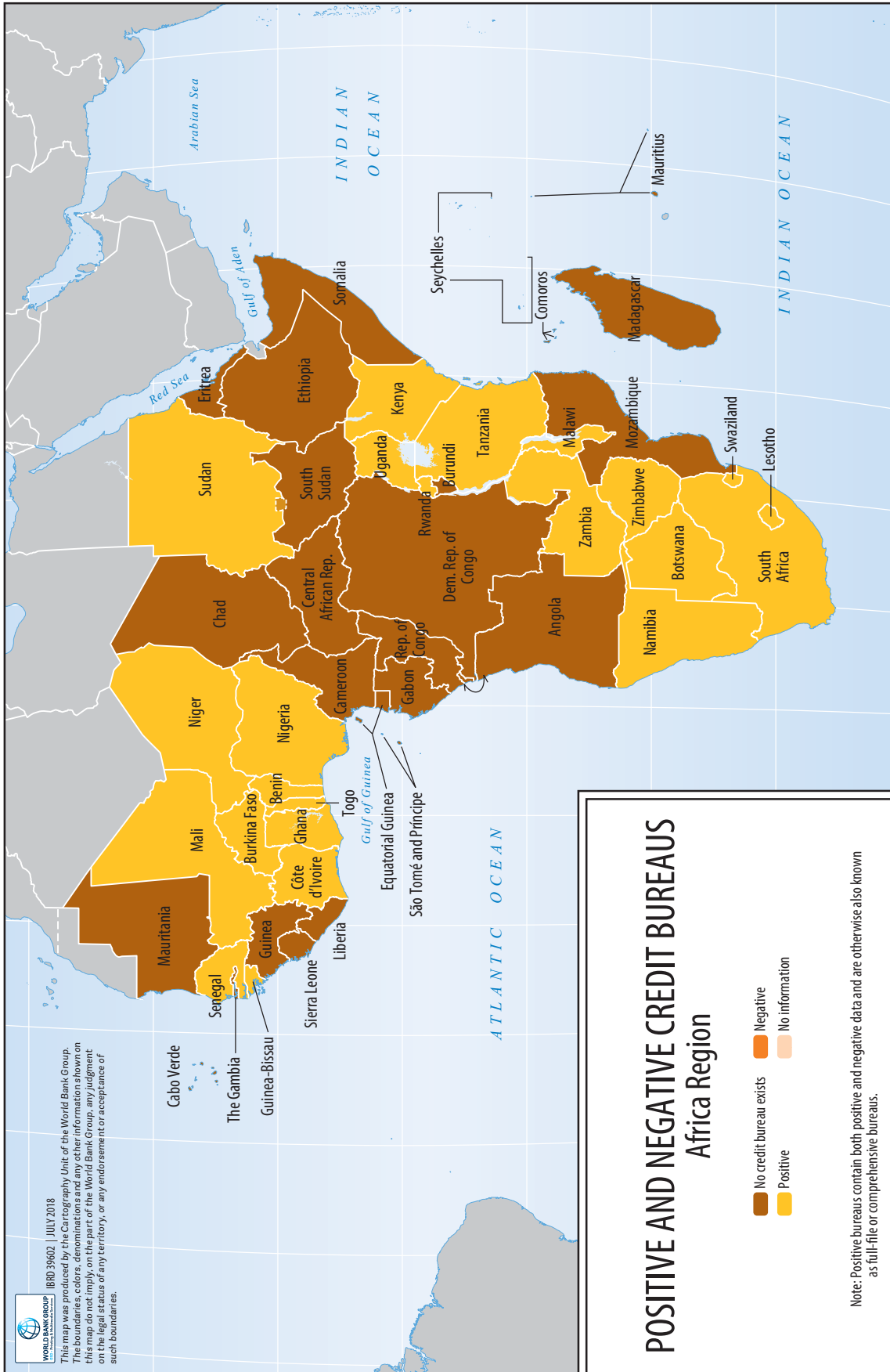
Middle East and North Africa Region

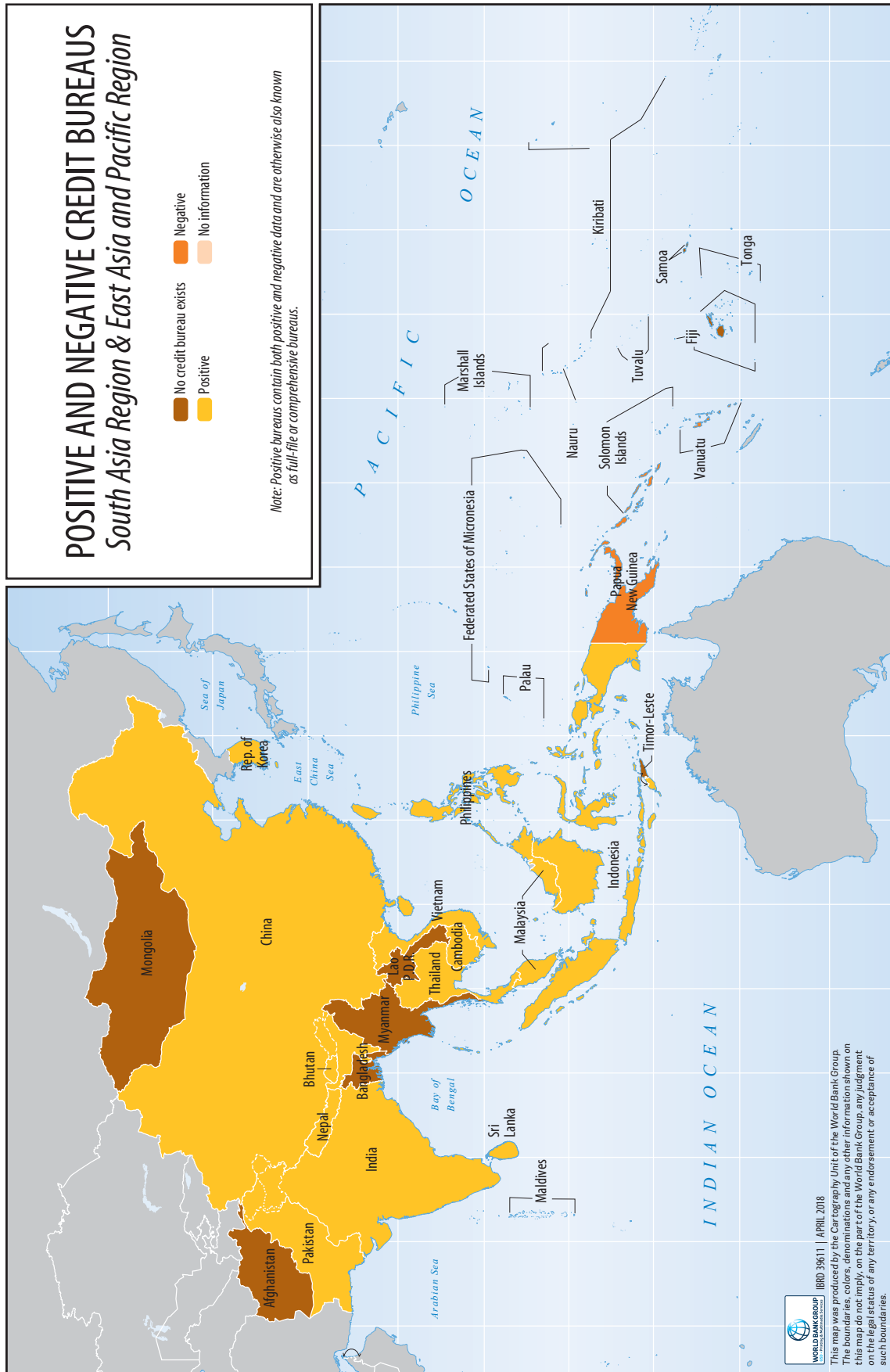
- No credit bureau exists
- Negative
- Positive
- No information

Note: Positive bureaus contain both positive and negative data and are otherwise also known as full-file or comprehensive bureaus.



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 WORLD BANK GROUP
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POSITIVE AND NEGATIVE CREDIT BUREAUS

Latin America and the Caribbean Region



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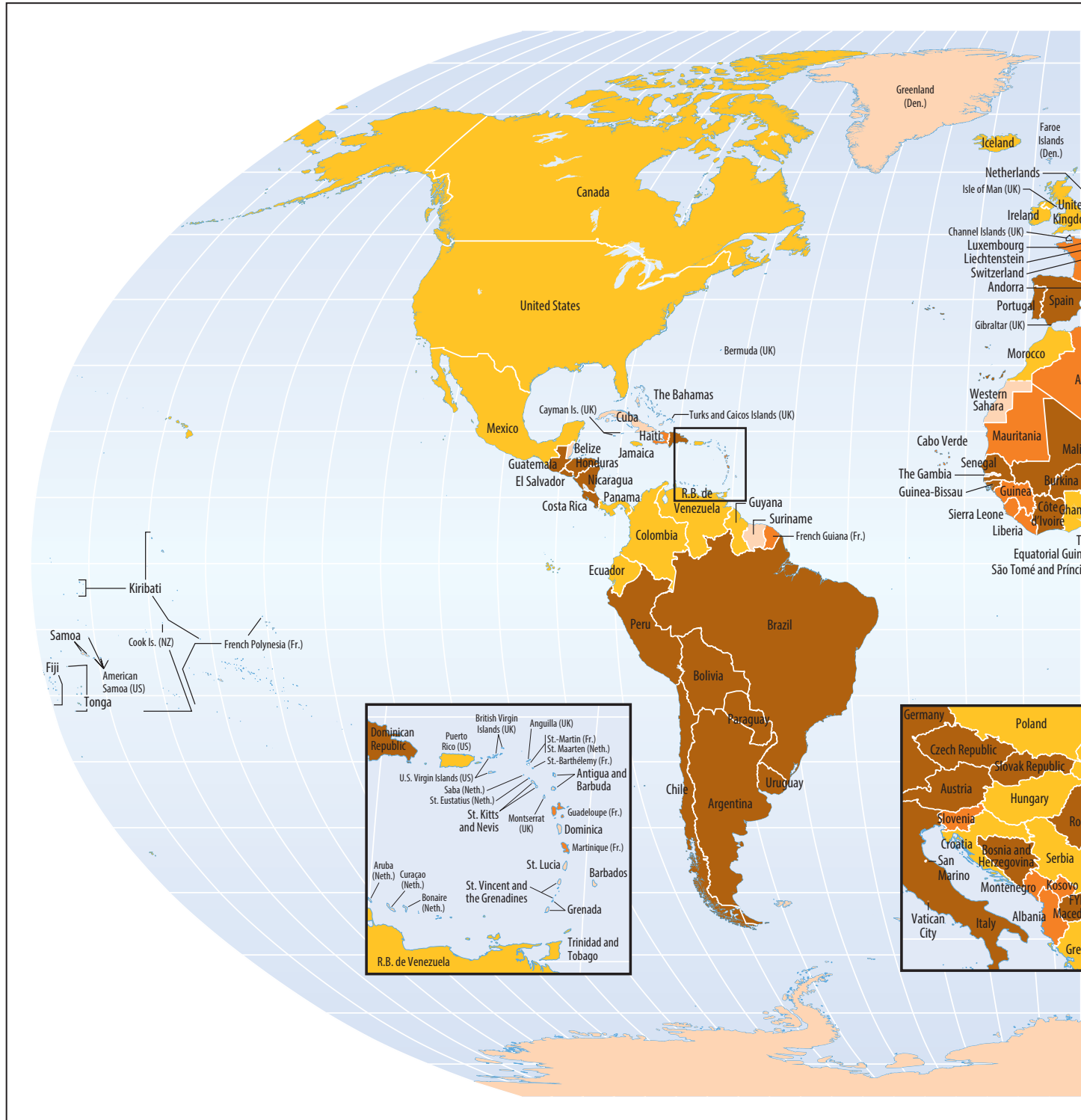
This map was produced by the Cartography Unit of the World Bank Group. The boundaries, colors, denominations and any other information shown on this map do not imply, on the part of the World Bank Group, any judgment on the legal status of any territory, or any endorsement or acceptance of such boundaries.

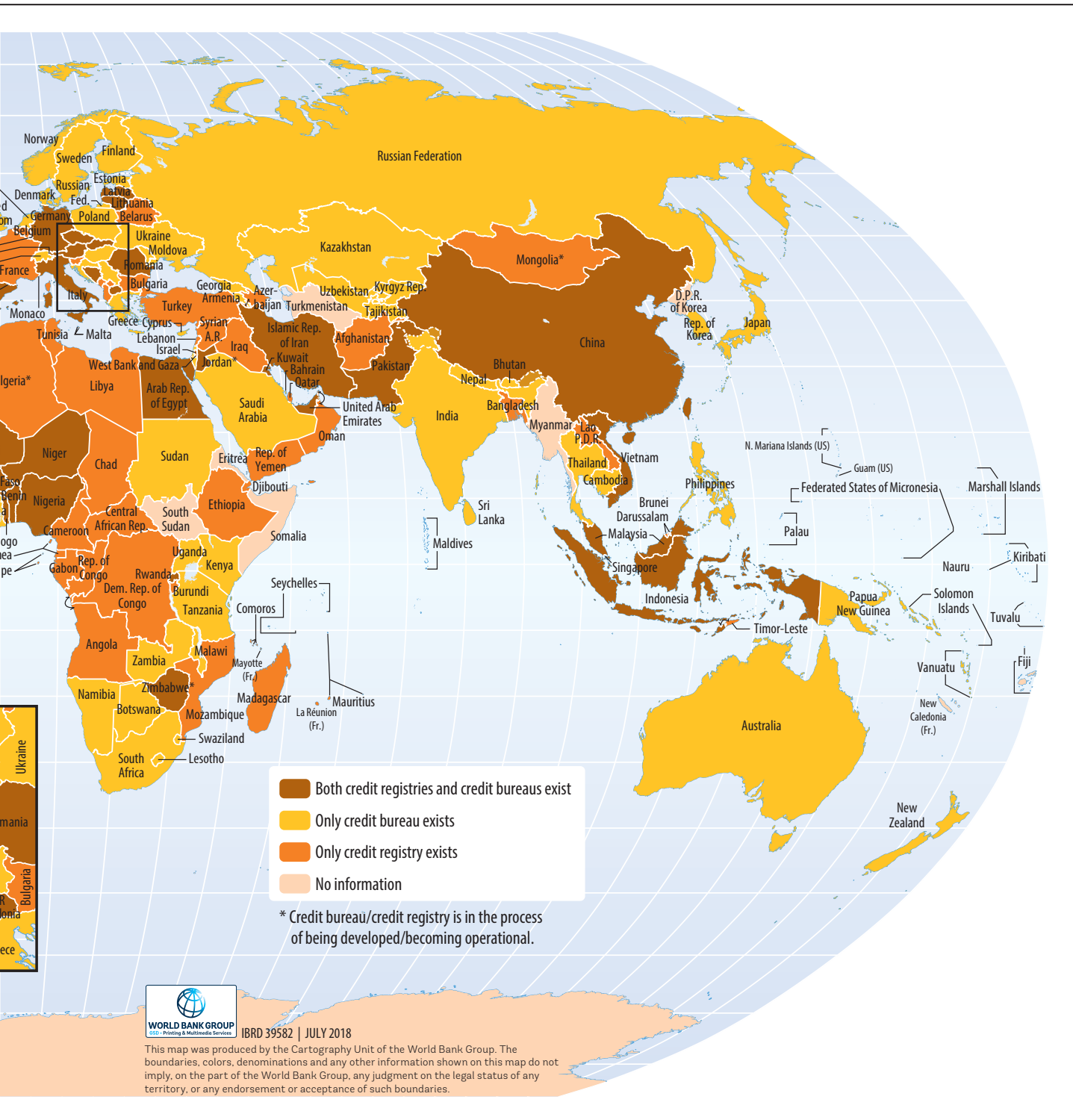
- No credit bureau exists
- Positive
- Negative
- No information

Note: Positive bureaus contain both positive and negative data and are otherwise also known as full-file or comprehensive bureaus.



Overview of Credit Registries and Credit Bureaus Around the World









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