Special Section: Private Credit Bureaus in Pakistan – Enhancing Credit Penetration by Addressing Information Asymmetries[1]

Information asymmetries in credit markets prevent efficient allocation of finance and restrict overall credit penetration in an economy. This is particularly disadvantageous for low-income individuals and micro, small and medium enterprises who lack adequate collateral and sufficient credit history. In Pakistan, too, inadequate attention to such impediments in the past has been among the major factors that led to low credit penetration, even as evidence from both advanced and emerging economies reveals a noticeable increase in credit offtake due to effective functioning of private credit bureaus. In recognition of these problems, the government and the SBP have taken steps to facilitate the development of credit reporting system. These include the introduction of the Credit Bureaus Act 2015 along with its necessary regulations, and the issuance of official licenses to two private credit bureaus. However, the country's credit reporting system continues to face multiple legal, operational and policy level challenges that are preventing credit bureaus from adequately addressing the challenge of information asymmetries. This section sheds light on the specific problems and potential solutions, drawing on the experience of other developing economies that faced similar challenges in nascent stages of credit reporting systems, as well as innovative trends in the fintech space.

S1.1   Introduction

Formal credit to the private sector in Pakistan has declined both in absolute and relative terms over the past few decades, and is currently one of the lowest among emerging market and developing economies (EMDEs) (**Figure S1.1**). This is despite multiple reforms aimed at deregulation and liberalization of the financial sector since the 1990s, in a bid to reverse the impact of nationalization of banks in the 1970s.

Various factors have contributed to low level of formal credit in Pakistan, as highlighted in the SBP's FY20 Annual Report on the State of Pakistan's Economy.[2] The reforms aimed to increase access to finance by implementing measures to improve governance, supervision, and risk management of the financial institutions. However, while banking profitability improved as a result of these reforms, the presence of market failures in the form of information asymmetries made commercial banks generally averse to lending to underserved segments such as housing, agriculture, and small and medium enterprises (SMEs).
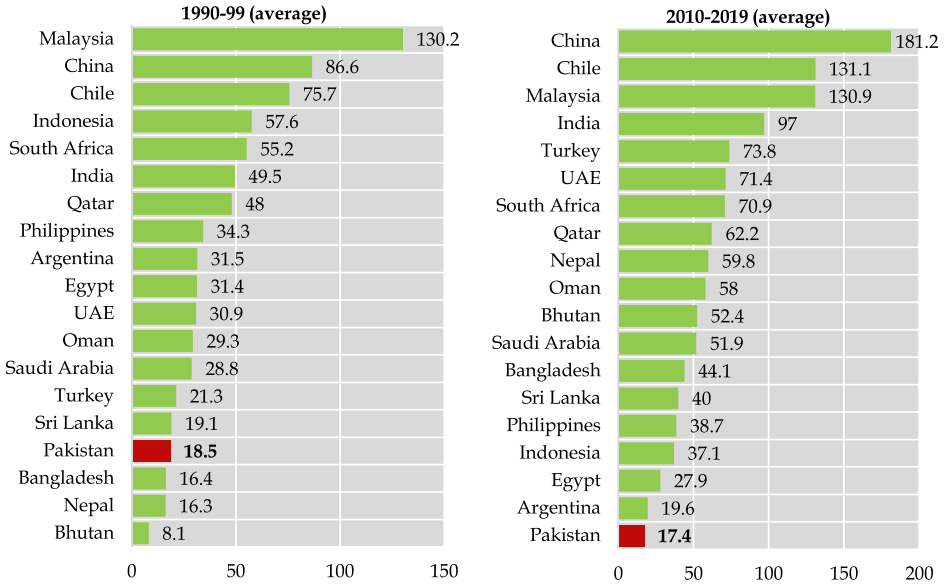
This behavior was further fueled by the presence of a dominant borrower in the form of the government sector, whose debt

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[1] This section benefited from conversations with local and international players in the credit reporting services industry, including the licensed credit bureaus operating in Pakistan; commercial banks; various microfinance banks and institutions; Ministry of Energy (Power Division); utility companies; and Pakistan Telecommunication Authority.

[2] For an extensive discussion on the factors constraining credit penetration in Pakistan, see Chapter 7, titled "*Understanding Low Private Credit Penetration in Pakistan- Contextualizing Recent Policy Reforms*" in the SBP's FY20 Annual Report on the State of Pakistan's Economy.

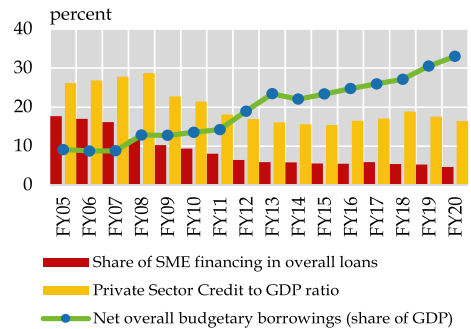**Relative Standing in Private Sector Credit to GDP Ratio (percent) among selected EMDEs** **Figure S1.1**

1990-99 (average)

Malaysia	130.2
China	86.6
Chile	75.7
Indonesia	57.6
South Africa	55.2
India	49.5
Qatar	48
Philippines	34.3
Argentina	31.5
Egypt	31.4
UAE	30.9
Oman	29.3
Saudi Arabia	28.8
Turkey	21.3
Sri Lanka	19.1
Pakistan	**18.5**
Bangladesh	16.4
Nepal	16.3
Bhutan	8.1

2010-2019 (average)

China	181.2
Chile	131.1
Malaysia	130.9
India	97
Turkey	73.8
UAE	71.4
South Africa	70.9
Qatar	62.2
Nepal	59.8
Oman	58
Bhutan	52.4
Saudi Arabia	51.9
Bangladesh	44.1
Sri Lanka	40
Philippines	38.7
Indonesia	37.1
Egypt	27.9
Argentina	19.6
Pakistan	**17.4**

Source: World Bank

requirements increased significantly (**Figure S1.2**).[3] Meanwhile, challenges such as high informality in the economy, faith-based considerations, and low financial and digital literacy continued to keep the demand of formal credit low in the country.

While tackling all these issues is of paramount importance, the scope of this special section is confined to the challenges of information asymmetries prevailing in Pakistan's credit markets,[4] both on the adverse selection and moral hazard fronts, and how these may be addressed to help expand access to credit in the country.

Net Budgetary Borrowings and Private Sector Credit in Pakistan **Figure S1.2**

- Share of SME financing in overall loans
- Private Sector Credit to GDP ratio
- Net overall budgetary borrowings (share of GDP)

Source: SBP

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[3] Lack of suitable product development by specialized institutions, and particularly the eventual phase-out of Development Finance Institutions (DFIs), also contributed to this outcome.
[4] The term "credit market" is being used in this special section to describe private sector credit obtained from banks and non-bank financial institutions.

Within this context, the special section will first briefly shed light on the role of credit bureaus, how they function and the type of services they provide (Section S1.2). Section S1.3 will then provide evidence of how the presence of a developed credit bureau market has benefited various economies in comparison to those where credit bureaus do not exist or are not adequately developed. Section S1.4 will evaluate and contextualize the development of such institutions in Pakistan, and Section S1.5 will highlight the key legal and operational challenges to the development of the credit bureau market in the country. Section S1.6 will offer policy recommendations in light of global best practices to make private bureaus more effective in Pakistan going forward, followed by concluding remarks in Section S1.7.

S1.2   Evolution and Functions of Credit Bureaus

In comparison to the high level of credit penetration in developed countries, access to formal lending remains elusive for a large share of the population in developing countries. In these economies, formal lending institutions place greater emphasis on serving the well-off and already well-served segments of the society, and shy away from lending to low-income individuals and SMEs.

Even when such segments are extended loans, financial institutions charge higher rates to price in their risk, which negatively impacts demand for formal borrowing. This, in turn, hampers credit offtake, and ultimately proves detrimental to economic growth and development.

From the supply side, banks/non-bank financial institutions find it difficult to serve the marginalized segments of society given borrowers' inability to meet the collateral requirement and provide a sufficient set of information that may help lenders get a better sense of repayment capacity of borrowers.[5] In the agriculture sector too, given limited past banking history and cumbersome procedures with regards to loan appraisals, banks have a limited incentive to increase their lending portfolio.[6] Recently in the case of Pakistan, the State Bank of Pakistan carried out a financing project in

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[5] Banks need collateral to guarantee the amount of credit. In most developing countries, however, there exists a mismatch between the composition of assets held by firms and the ones accepted as collateral by the financial institutions. According to the World Bank Enterprise Surveys, 78 percent of assets owned by firms in such countries consist of machinery and accounts receivables, while the share of fixed assets such as land and buildings is just 22 percent. In stark contrast, however, the composition of collateral from firms accepted by banks reveals that fixed assets have a share of 73 percent, and the share of machinery and accounts receivable is only 27 percent. (Source: Safavian, M., Fleisig, H., and S. Jevgenijs (2006)) *Unlocking Dead Capital: How Reforming Collateral Laws Improves Access to Finance.* Public Policy for the Private Sector Viewpoint Note No. 307. Washington, DC: World Bank.

[6] For instance, a 2014 trader-agent intermediation lending (TRAIL) case study conducted by the SBP found that it took on average about 52 working days in total for a single agriculture-based lending transaction to be completed (after taking into account factors such as interactions with treasury and revenue departments, inadequate availability of public transport, and law and order situation, etc.). Reference: Baluch K. A., and M.A. Choudhary (2014). *Agent Intermediated Lending: The Matiari Case Study.* Occasional Research Papers. Karachi: State Bank of Pakistan.

which collateral-based lending to farmers was replaced with trader-agent-intermediated-lending (TRAIL) – with a third-party guarantor in the form of a sugar mill, facilitating bank-lending to small and medium size farmers against the supply of sugarcane. The project revealed the potential benefits of value-chain financing in overcoming adverse selection and moral hazard problems.[7]

These information asymmetries lead to the problem of adverse selection when lenders find it difficult to differentiate among good and bad borrowers. For example, Choudhary and Jain (2020) find that after the public credit registry of Pakistan stopped releasing group-level information of firms (all firms that shared at least one mutual director), banks that had more private information ("informed banks") about other firms in a borrower's group lent more to that firm than other, less-informed banks. This was the case even for banks having pre-existing relationships with that firm, suggesting that past relationships do not compensate for the information imperfection. The study also revealed that small enterprises were particularly affected by this information asymmetry.[8]

The other side of this phenomenon is that of moral hazard. From the demand side, this may arise if borrowers, for example, rely on weak penalty for non-payment and take on higher risks after obtaining the loan, or default despite having the financial means to repay. From the supply side, if a borrower has a good credit history with one commercial bank, then in the absence of information symmetry, other commercial banks would not be able to offer her attractive rates based on her good history. As a result, the borrower's existing bank may keep on charging higher rates despite her good record, in turn exploiting the information asymmetry to extract "information rents".[9]

The solution to asymmetric information lies in monitoring and evaluation of borrowers' past behavior with a reasonable assumption that future behavior can be predicted on past behavior. However, conducting this exercise for individuals, MSMEs (micro, small and medium enterprises), and big businesses across an economy entails significant resources, which every lender may not have or may not find it feasible to make such investments, especially in case of small and micro loans.
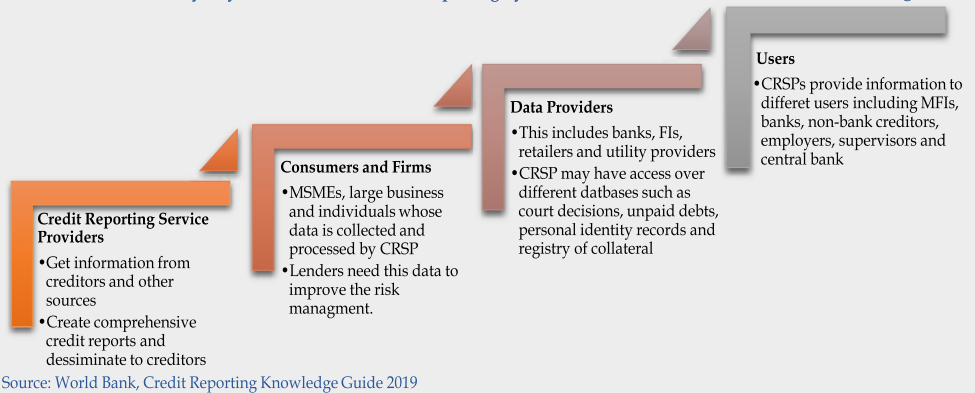
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[7] In pre-contract context, the sugar mill was found to be significantly more willing to lend to farmers than the bank. While the bank focused more on observable characteristics indicative of greater farm wealth (e.g., higher crop sales, large farm sizes, ownership of expensive machinery, etc.), the mill gauged creditworthiness based on factors suggesting deeper relationship between the farmer and the mill (e.g., geographical proximity, and proportion of crop sold to that mill). In terms of post-contract, the project revealed that farmers were less likely to delay their repayment on loans guaranteed by that mill than on direct bank loan since the mill was able to leverage its role in the value-chain in an efficient manner. Reference: M.A. Choudhary., and A. Jain (2020). Why Do Banks Not Lend: An Experiment Testing Contractual Frictions. *Working Paper Presentation*. Lahore: IGC Pakistan Programme

[8] Choudhary, M. A and A.K. Jain (2020). "How Public Information Affects Asymmetrically Informed Lenders: Evidence From a Credit Registry Reform," *Journal of Development Economics*, 143: 102407

[9] Jappelli, T., and M. Pagano (2005). *The Role and Effects of Credit Information Sharing*. CSEF Working Paper No. 136. Fisciano: Center of Studies in Economics and Finance.

Functions Performed by Key Stakeholders in Credit Reporting System   Figure S1.3

Credit Reporting Service Providers
•Get information from creditors and other sources
•Create comprehensive credit reports and dessiminate to creditors

Consumers and Firms
•MSMEs, large business and individuals whose data is collected and processed by CRSP
•Lenders need this data to improve the risk managment.

Data Providers
•This includes banks, FIs, retailers and utility providers
•CRSP may have access over different datbases such as court decisions, unpaid debts, personal identity records and registry of collateral

Users
•CRSPs provide information to differet users including MFIs, banks, non-bank creditors, employers, supervisors and central bank

Source: World Bank, Credit Reporting Knowledge Guide 2019

Overall, therefore, the challenges associated with information asymmetries call for a credit reporting system where information aggregators, such as public credit registries and private sector credit bureaus gather and maintain industry-wide set of financial and non-financial credit information. A well-covered credit reporting system helps improve the efficiency of the credit market by lowering the intermediation cost, increasing the outreach of financial products to a higher number of individuals and MSME borrowers, and enhancing the confidence of lenders.

Key stakeholders

The credit reporting system comprises of the following key players: 1) *credit reporting service providers* (CRSPs) who gather information about borrowers' credit history and share it with data users; 2) *data subjects*, which are firms and individual borrowers; *data providers* and *users*, which include banks/non-bank financial institutions (NBFIs), utility companies, retailers etc.

The CRSPs are of two main types: credit registries and credit bureaus. Credit registries in most countries are governed by the public sector with their role mainly confined to assist the government/central banks in supervising the financial sector to ensure financial soundness. However, in some countries, such as China, credit registries perform the function of credit bureaus as well.

Credit bureaus are privately operated businesses that gather credit related financial and non-financial data from various data providers and cater to the information requirements of lenders or users (**Figure S1.3**). Typically, they also provide various value-added services, whereas credit registries only offer plain vanilla products.

The credit registries and bureaus perform similar functions, i.e., gather borrowers' information and disseminate it to relevant stakeholders. However, the difference is in their primary objectives. Credit registries back the mandate of monitoring banking-wide risk; their coverage is limited to loans above a minimum threshold level and

usually excludes small loans.[10] These registries collect information from supervised institutions including banks/NBFIs, but do not pursue other non-financial institutions such as utility companies, retailers, and telecommunication companies.

Credit bureaus, on the other hand, are specialized in collecting information from financial institutes (banks and NBFIs, MFIs, and other formal lending institutes) and non-financial sources (retail outlets, utility and telecom companies, court decisions and property records etc.).

After gathering data from diverse sources, credit bureaus apply sophisticated data-mining techniques to develop credit scores. They also offer other value-added set of information such as trade experiences, corporate family trees and ownership structure, business registrations, contacts and principals etc. These bureaus may sell their services to banks, NBFIs, MFIs, utility companies, and even to businesses. In other words, credit bureaus are in the business of data where they gather different types of credit related information to make value-

added products that offer insights to lenders about their existing and potential borrowers. **(Box S1.1)** summarizes the main types of data maintained by credit bureaus and a few examples of services offered by them.

S1.3   Importance of Credit Bureaus

Empirical literature documents a noticeable impact of credit bureaus in reducing information asymmetries in both advanced economies and EMDEs. For example, analyzing the trends in private credit in 129 countries, Djankov et al. (2007) found that credit registries and bureaus were associated with higher credit uptake in both poor and rich countries. Taking the analysis further, they showed that credit bureaus that offer a broader range of data and value-added services were associated with "significantly more private credit" than in economies where such services were not available.[11]

Similarly, studying the effect of information sharing on bank lending in 40 countries, Japelli and Pogano (2002) found that bank lending to GDP ratio was 20

Box S1.1: Types of Data Maintained by Credit Bureaus, and their Value-added Services

Credit bureaus serve as an "institutional solution to the problems of information asymmetries and moral hazard in credit markets" (OECD, 2010) to ensure diversified and prudent lending practices in the financial sector. To achieve this objective, credit bureaus rely primarily on information shared with them by financial institutions. The list of variables usually includes detailed identification and demographic data, as well as information regarding the amount of loans availed and/or outstanding, credit card histories, and instances of defaults (if any). In addition, bureaus across the world have also started compiling transactional, payments and savings data, as well as third party information from utility companies and social media, etc., which proves particularly useful in case of individuals and enterprises

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[10] The threshold varies in different countries; for example, in France it is 25,000 Euros; in Germany, 1 million Euros; and in Italy, 30,000 Euros (Source: World Bank, 2019).

[11] Djankov, S., McLiesh, C., and A. Shleifer (2007). "Private Credit in 129 Countries". *Journal of Financial Economics*, 84(2), 299-329.

with limited or no formal credit history. Furthermore, credit bureaus collect data on micro loans from microfinance banks and non-bank microfinance institutions. This also means that the breadth of data on small loans is greater with private credit bureaus as compared to public credit registries, as the latter tend to focus on higher-value loans from a systemic risk perspective.

Overall, the data reporting of credit bureaus can be classified into following key dimensions:
- *Classification of borrowers:* Credit bureaus collect and report data on both firms and individuals
- *Negative and positive data*: Earlier, credit bureaus used to only collect and report information about borrowers' missed payments, defaults, and notices of write-offs or delinquencies, or what is termed as the "negative data". Over time, however, the reporting became more exhaustive in nature and included information on variables such as the type of financing facility availed, date of application, contract conditions regarding installments, financing limit available to the borrower, monthly repayment histories, contact details and addresses, interest rate applied, tax filer status and ID, business registration ID, balance sheet indicators, income statement variables, business group or conglomerate, etc. (Miller, 2003). All these additions in data collection are collectively termed as "positive data" reporting, comprehensive credit reporting, or full-file reporting, and it is particularly useful when financial institutions are looking for additional potential borrowers.
- *Third party or alternate data:* Increasingly, some credit bureaus also collect information about utility services payments, retailer transactions and/or supply chain financing in recent years. These transactional datasets help gauge the creditworthiness of individuals and firms based on their "reputational collateral" (OECD, 2010), especially if they lack permissible physical collateral.
- *Reporting on small sized loans:* In some countries, bureaus collect and report information on loans valued less than 1 percent of per capita national income. Data collection on small loans means that credit bureau coverage in terms of share of adult population is higher (World Bank, 2020).

With the help of digitized databases used for compiling and analyzing all these various types of datasets, credit bureaus are able to offer value-added services to their member financial institutions to assist them in assessing creditworthiness of existing and potential borrowers. These services include, but are not limited to:

(i) *Credit Scoring* – Statistical analysis to develop a scoring spectrum from which to rank different borrowers in terms of their credit worthiness. While commercial banks also perform in-house risk assessment and creditworthiness analysis, those exercises are only based on that specific bank's own portfolio and therefore do not include information on individuals and firms that are borrowing simultaneously or exclusively from other financial institutions.

(ii) *Portfolio Expansion Diagnostics* – The whole portfolio of member financial institutions is compared to the overall market database to identify pockets of potential new borrowers and rank those in terms of creditworthiness.

(iii) *Regional and Demographics-Based Portfolio Scrubbing* – Data scrubbing is used to analyze a certain geographic or demographic segment of member's overall borrower portfolio to flag loans that are vulnerable to default (based on historical trends and model benchmarks), or to identify borrowers with a healthy positive data to help in decisions such as credit limit increases, cross-lending or lower markups.

(iv) ***New Borrowing Alerts*** – The alert system notifies members if a previously marked borrower has gone into default with another financial institution or is an increased risk of doing so. Such alerts are usually provided on a daily basis, sometimes even real-time.

(v) ***Recovery Agency Services*** – If a member institution is facing difficulty in recovering a loaned amount, then credit bureaus, with the help of their database of contact information on borrowers from different financial institutions over the years, can help locate the defaulter and potentially recover the stuck amount.

References:

Miller, M. (2003). *Credit Reporting Systems and the International Economy*. Cambridge: MIT Press.
OECD (2010). *The Economic Consequences of Consumer Credit Information Sharing: Efficiency, Inclusion and Privacy*. Background Paper#2 Joint WPISP-WPIE Roundtable on The Economics of Personal Data and Privacy: 30 Years after the OECD Privacy Guidelines. Paris: Organization for Economic Co-operation and Development.
World Bank (2020). *Doing Business 2020*.Washington DC: World Bank.

percentage points higher in the presence of credit registries and bureaus, and with banks having access to borrowers' data across the financial system, the prevalence of non-performing loans was 1 percentage point lower.[12]

The presence of credit bureaus was also found to be associated with higher availability and lower cost of credit to firms (Brown et al., 2009).[13] In particular, mechanisms of information sharing and credit scoring help expand credit availability for small businesses, especially for riskier firms that tend to pay higher rates to avail credit (Berger et al., 2005),[14] and also reduce the funding gap between small and large enterprises (Galindo and Micco, 2010).[15]

Cross-country data lends support to these findings. There exists a positive correlation between credit bureau coverage and the credit to GDP ratio in EMDEs (**Figure S1.4a**). Furthermore, disaggregated analysis reveals that bureau coverage as well as credit uptake is greater in those EMDEs where depth of credit information, as measured using World Bank Doing Business indicators, is higher.

In particular, the credit to GDP ratio was higher by 21 percentage points in EMDEs where credit bureaus register positive as well as negative information on loans, compared to EMDEs where positive data is not maintained (**Figure S1.4b**). As of 2020, around 90 percent of all credit bureaus collect and record positive information

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[12] Jappelli, T., and M. Pagano (2002). "Information Sharing, Lending and Defaults: Cross-country Evidence." *Journal of Banking & Finance*, 26(10), 2017-2045.
[13] Brown, M., Jappelli, T., and M. Pagano (2009). "Information Sharing and Credit: Firm-level Evidence from Transition Countries." *Journal of Financial intermediation*, 18(2), 151-172.
[14] Berger, A. N., Frame, W. S., and N.H, Miller (2005). "Credit Scoring and the Availability, Price, and Risk of Small Business Credit." *Journal of Money, Credit and Banking*, 191-222.
[15] Galindo, A., and A. Micco (2010). *Information Sharing and Access to Finance of SMEs: Cross Country Evidence from Survey Data*. AF Working Paper No. 2010/06. Caracas: Development Bank of Latin America.

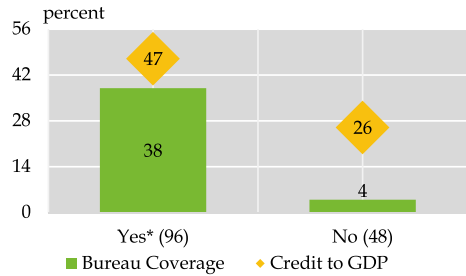**Relationship Between Credit Bureau Coverage and Private Credit Offtake in EMDEs** **Figure S1.4a**

Credit bureau coverage (percent of adults, 2018 or latest)
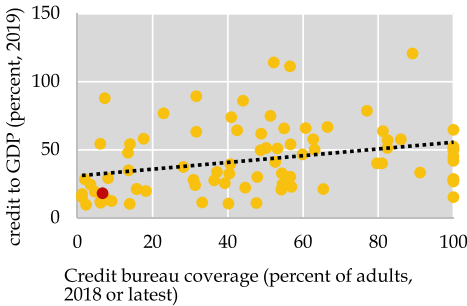
Note: red dot denotes Pakistan
Source: World Bank

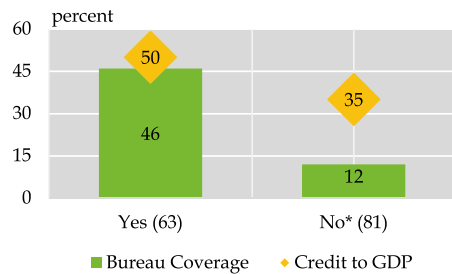**EMDE Credit Bureaus Distributing Positive Information# on Loans** **Figure S1.4b**

#Positive reporting means having a comprehensive record of the financial sector lending portfolio that goes beyond simple default & delinquencies information; also termed as full-file/comprehensive credit reporting.

EMDE Credit Bureaus Distributing Information from Utility Providers and Retailers **Figure S1.4c**

EMDE Credit Bureaus Distributing Data on Loans Below One Percent of Income per Capita **Figure S1.4d**

Note: Bracket values indicate number of EMDEs in each category; * denotes category including Pakistan.
Source: World Bank
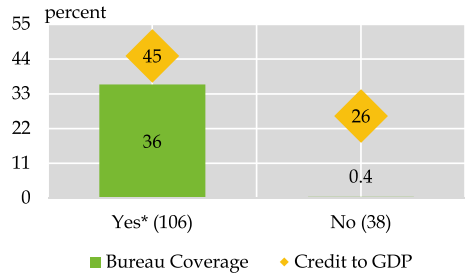
(World Bank, 2020).[16] Positive data reporting has been found to lead to an 88 percent rise in approval rates and a 43 percent decrease in default rates in the US based on a simulation exercise (Barron & Staten, 2003),[17] and a similar study showed that positive data collection led to a 22 percent and 45 percent decline in default rates in Argentina and Brazil, respectively (Powell et al, 2004).[18]

Likewise, credit to GDP ratio is 15 percentage points higher in EMDEs where bureaus use alternate information from utility providers and/or retailers about borrowers compared

[16] World Bank (2020). *Doing Business 2020*. Washington DC: World Bank.
[17] Barron, J. M., and M. Staten (2003). *The Value of Comprehensive Credit Reports: Lessons from the US Experience*. Credit Reporting Systems and the International Economy, 8, 273-310.
[18] Powell, A., Mylenko, N., Miller, M., and G. Majnoni (2004). *Improving Credit Information, Bank Regulation, and Supervision: On the Role and Design of Public Credit Registries*. Policy Research Working Paper No. 3443. Washington, DC: World Bank.

to EMDEs where such data is not used (**Figure S1.4c**). Credit to GDP is also found to be 19 percentage points higher in EMDEs where credit bureaus maintain information on loans below 1 percent of income per capita, compared to EMDEs where such data is not maintained and used for various information needs (**Figure S1.4d**).

Similarly, credit bureau coverage ratio is found to be negatively associated with the incidence of adults in an economy borrowing money from their family or friends, and from an informal savings club (**Figure S1.5a and**

b). There also exists a positive correlation between bureau coverage and proportion of adults borrowing from a financial institution in any economy (**Figure S1.5c**). This indicates that credit bureaus, by gathering and disseminating information, help reduce informal lending and increase effectiveness of the intermediary role of the formal banking channel in terms of reallocation of capital. In particular, higher coverage of bureaus is also negatively correlated with the proportion of financially constrained MSMEs (**Figure S1.5d**).

Figure S1.5a

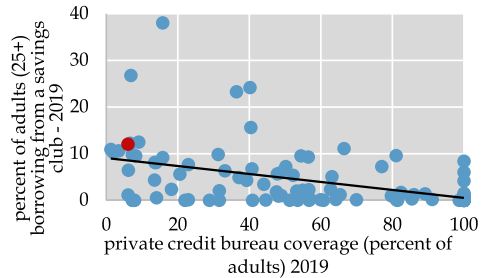**Correlation Between Credit Bureau Coverage and Incidence of Borrowing from Family/Friends**
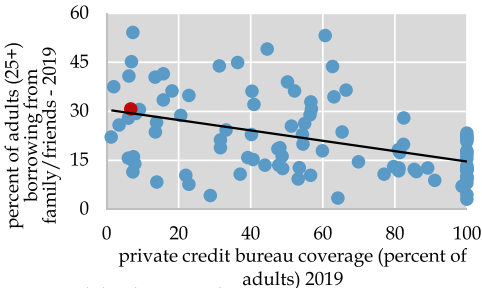
Note: Red dot denotes Pakistan
Source: Global Findex Database

Figure S1.5b

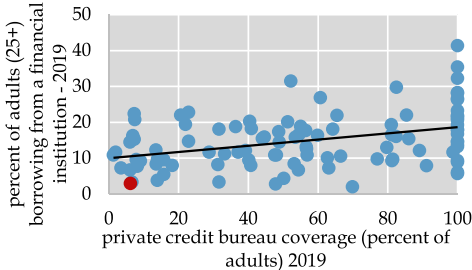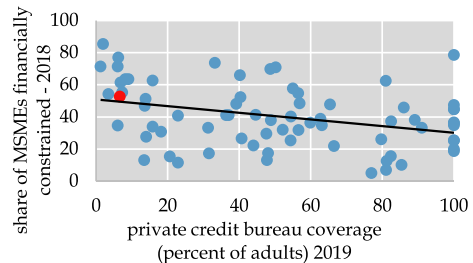**Correlation Between Credit Bureau Coverage and Incidence of Borrowing From a Savings Club**

Note: Red dot denotes Pakistan
Source: Doing Business indicators; Global Findex Database

Figure S1.5c

Correlation Between Credit Bureau Coverage and Incidence of Borrowing from a Financial Institution

Note: Red dot denotes Pakistan
Source: Doing Business indicators; Global Findex Database

Figure S1.5d

Correlation Between Credit Bureau Coverage and the Proportion of Financially Consrained MSMEs

Note: Red dot denotes Pakistan
Source: Doing Business Indicators; International Finance Corporation MSME Finance Gap Database 2018

S1.4   The Structure of the Credit Information Market in Pakistan

In Pakistan, the State Bank of Pakistan established the Credit Information Bureau (CIB) in 1992 (see **Figure S1.6** for timeline of key events), with the objective of utilizing the information for prudent lending and better risk management, in turn improving overall financial stability in the country. Operating under the provisions of Section 25(A) of the Banking Companies Ordinance 1962, the credit registry served as a database of credit history of all consumers of the formal financial sector on loans amounting to Rs 500,000 or greater.[19]

The registry's services were brought online in April-2003 in collaboration with the Pakistan Banks Association (PBA), the data submission and retrieval guidelines were revised accordingly, and the registry came to be known as electronic CIB (eCIB).[20] In December-2004, the eCIB communicated to the financial institutions the intention to remove the Rs 500,000 reporting limit,[21] and in this regard the shift to a new reporting system was made in April-2006.[22] In November-2010, the eCIB also started collecting information on financial institutions' selected investment portfolio in order to increase the overall coverage. Another major decision taken by the eCIB in 2006 was to stop publishing certain group-

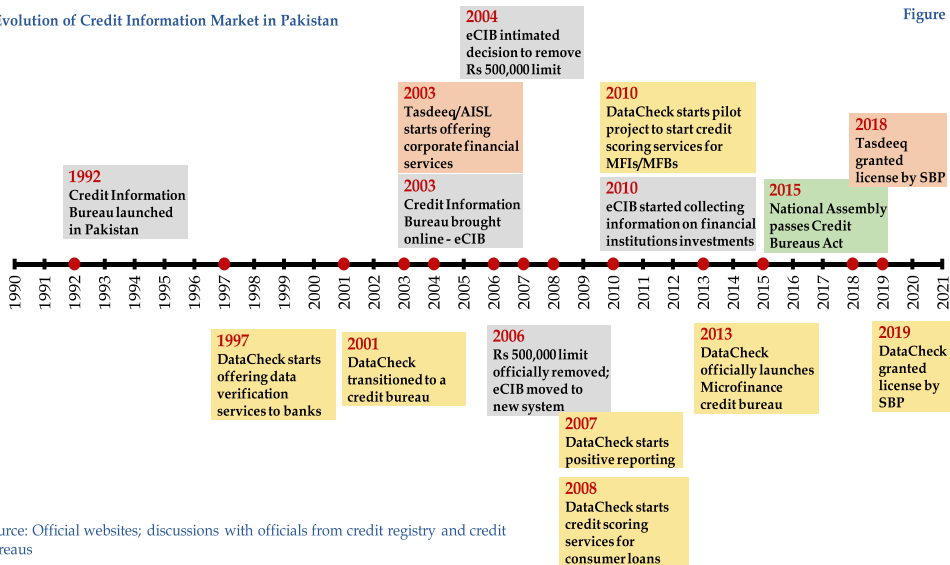
Evolution of Credit Information Market in Pakistan

Figure S1.6

Source: Official websites; discussions with officials from credit registry and credit bureaus

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[19] www.sbp.org.pk/ecib/about.htm

[20] www.sbp.org.pk/ecib/cir/CIB%20ON-LINE.pdf

[21] www.sbp.org.pk/ecib/cir/CIB%20Data%20Reporting%20Limit.pdf

[22] www.sbp.org.pk/ecib/cir/e-CIB%20data%20reporting%20limit.pdf

level firm information (group containing all firms having at least one mutual director), particularly the terms detailing the group's outstanding loans.[23] Overall, the eCIB system has been refurbished five times in the last thirty years to keep up with the technological changes and to incorporate international best practices.

Meanwhile, in late 90s, a few private sector credit bureaus also began operations in Pakistan in the absence of a formal licensing regime. These included DataCheck, ICIL and Credit Chex. Recognizing the need for regulation, the National Assembly passed the Credit Bureaus Act in 2015 "to provide for the incorporation and functioning of credit bureaus" (see **Annexure-I** for key definitions covered in the Credit Bureaus Act 2015, and **Annexure-II** for other important features of the Act).[24]

Following the passing of the Act, the SBP was authorized to grant licenses to and supervise the affairs of the credit bureaus in the private sector. Accordingly, Tasdeeq was granted a license in November-2018,[25] followed by DataCheck in January-2019;[26] these are the only two licensed bureaus in the country at present.

The services currently provided by these two credit bureaus include credit reports, portfolio scrubbing, daily alerts, microfinance credit report, recovery agency, and benchmark comparisons (**Figure S1.7**).

Both the bureaus have been working on credit scoring services as well, with the usage currently confined to consumer and microfinance banks. eCIB, meanwhile, being a supervisory authority, only issues creditworthiness report and does not offer any other value-added services to the members.

At present, eCIB has data on 14.9 million individuals and around 150,000 firms on an overall basis. This equals around 12 percent of adult population. Private bureaus, on the other hand, collectively have information on 8.6 million individuals, or 6.7 percent of the overall adult population in the country (**Figure S1.8**).

S1.5   Challenges faced by Private Credit Bureaus in Pakistan

While credit bureau coverage in Pakistan has grown between 2013 and 2019, the coverage is still only marginally better than the minimum threshold of 5 percent as defined by the World Bank. This is, in part, because five years after the passing of Credit Bureaus Act 2015, credit bureaus, information furnishers and users of credit bureaus' services, i.e., lenders, have been facing various regulatory, legal and administrative problems that are common at the initial stage of development of a credit bureau market.[27] An early recognition of, and solution to these challenges will help the industry realize the potential benefits of an efficient credit bureau

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[23] This development, as stated earlier, exacerbated the information asymmetry issues and hampered financial institutions' ability to conduct due diligence on the firm and groups.

[24] www.na.gov.pk/uploads/documents/1438856508_332.pdf

[25] www.sbp.org.pk/notifications/BCCPD/2018/ntf1.htm

[26] www.sbp.org.pk/notifications/BCCPD/2019/ntf1.htm

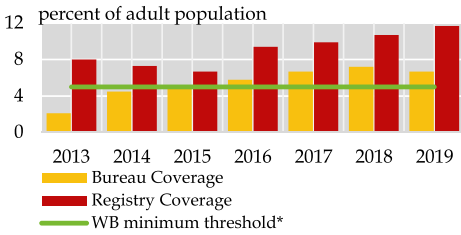[27] World Bank (2019). Credit reporting Knowledge Guide. Washington, DC: World Bank.

Figure S1.7

The Process of Data Collection, Analysis and Dissemination by Credit Registry and Bureaus in Pakistan

Source: Official websites

115
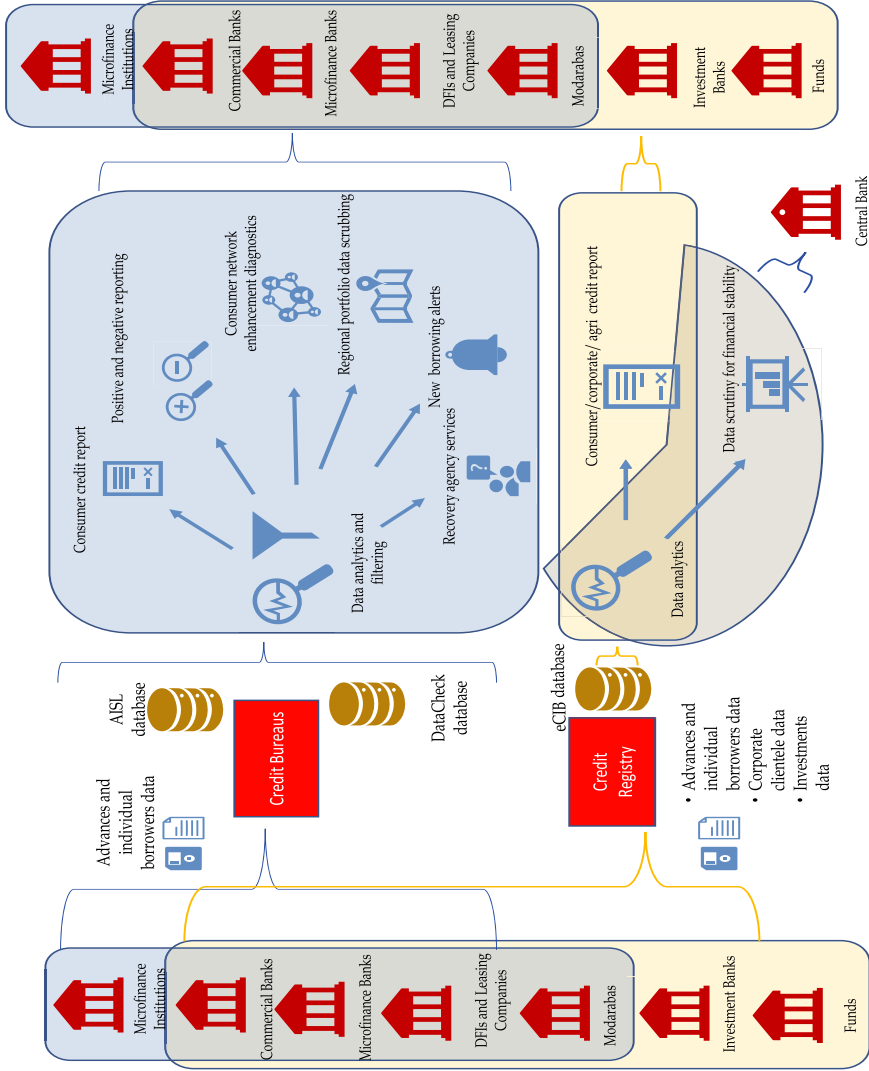
Trend in Credit Registry and Bureau Coverage in Pakistan   **Figure S1.8**

percent of adult population

*If the credit bureau or registry is not operational or covers less than 5% of the adult population, the total score on the depth of credit information index of the Doing Business Score is 0 for that country.
Source: Doing Business indicators, World Bank

market. This section sheds light on the major bottlenecks.

(i)   Limited membership of credit bureau

The Credit Bureaus Act 2015 makes it mandatory for every credit institution to become a member of "at least" one private sector credit bureau in the country. In spirit, this was meant to be a floor and not a ceiling of membership. In comparison to 32 commercial banks, 26 are members of AISL and 25 are members of DataCheck (**Figure S1.9**). Between the 32 banks reporting data to the credit bureaus, 20 are members of both whereas 11 banks are members of only one of the two credit bureaus. This means that both the bureaus do not have full coverage of credit institutions, as a result of which the problem of information asymmetry continues to persist in the country's credit market.

It is pertinent to note here that becoming a member of two or more credit bureaus requires nominal cost, as is evident from the fact that nearly all of the microfinance banks–financial institutions that have fewer resources – already are members of both the bureaus. Bureaus do not charge fees from members who provide data, whereas the data itself is shared by means of computer applications that are both relatively cheap and easy to maintain.[28]

(ii)   Limited coverage of bureaus by borrower type

Currently, the scope of the credit information coverage by both credit bureaus has been confined to individual loans, be it consumer loans, or loans taken by sole proprietorships. Loans taken by corporations and SMEs are yet not covered by the bureaus. This is reflected in the World Bank's Getting Credit Indicator, which shows zero number of firms covered under private credit bureaus in Pakistan.[29]

There are two reasons behind this limited coverage, as per the feedback of various stakeholders. The first reason is path dependency. Before the Credit Bureaus Act 2015, the operations of credit bureaus began and grew on the back of consumer loans. Consumer loans were considered much riskier compared to corporate and SME loans due to multitude of borrowers, and banks wanted to reduce their risks by reducing information asymmetries vis-à-vis individual

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[28] Data sharing is carried out by means of APIs, or Application Programming Interfaces, which are software intermediaries that allow for interactions and data transfers between either same or different software over multiple hardware.
[29] World Bank (2020). *Doing Business 2020: Economy Profile of Pakistan*. Washington, DC: World Bank.

Number of Member Institutions of Private Credit Bureaus in Pakistan*
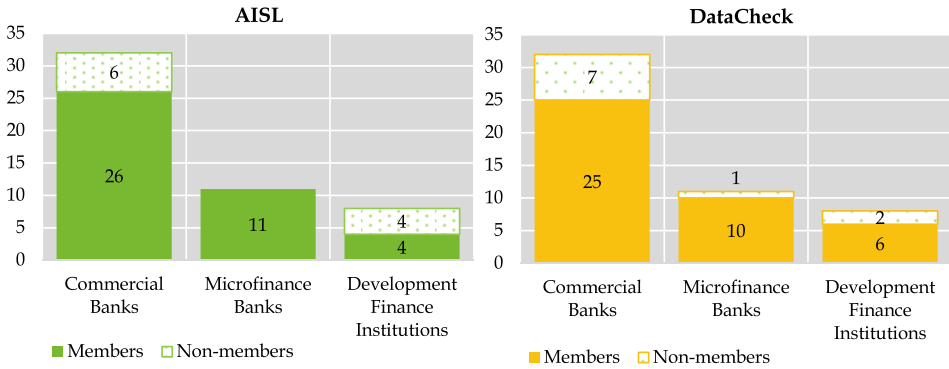
*Data as of 24th June, 2021
Source: Banking Conduct & Consumer Protection Department, SBP

borrowers. In contrast, corporate loans were considered relatively clean portfolio whereas SME lending was mainly relationship based, and banks therefore relied more on relationships and eCIB report than on vanilla products of credit bureaus for these two segments.

From the credit bureaus' perspective, the practice of relying only on consumer loans can also be traced back to 2010, when pilot projects for microfinance loans were launched by DataCheck in collaboration with the SBP.[30] It had focused on building a microfinance exclusive consumer information bureau at Lahore; the success of the pilot program led to the national roll-out of Microfinance-exclusive CIB in 2012. After getting their licenses under the Credit Bureaus Act 2015, both bureaus continued to tap the consumer/individual credit information segment as it offered an easy

and familiar take off point for their respective businesses.

Secondly, the limited segment coverage could be attributed to prevailing role of public credit registry i.e., eCIB. The eCIB has the legal mandate to collect credit information from banks, DFIs and microfinance banks for regulatory and supervisory purposes.[31] However, the eCIB also processes raw information to produce credit information reports, which lenders are legally obligated to use before giving out loans. This implicitly substitutes and even eclipses the role of credit bureaus as credit information providers.

For instance, the credit information report (CIR) generally suffices the basic requirement of banks/DFIs who are legally bound to get eCIB report (of the borrower and its group's) while undertaking any

[30] www.sbp.org.pk/about/speech/Governors/Mr.Yaseen.Anwar/2012/20-Jun-2012-2.pdf
[31] www.sbp.org.pk/ecib/cir/CIB%20Data%20Reporting%20Limit.pdf

exposure (including renewal, enhancement and restructuring) to corporate/commercial loans.[32] For SMEs and consumer financing, banks/DFIs can get the report on their prospective borrowers from eCIB or any credit information bureau licensed and regulated by the SBP.[33] MFBs, on the other hand, are required to obtain credit report from eCIB or any credit information bureau, but if the credit facility exceeds Rs 30,000, MFBs are obliged to obtain CIR from eCIB.[34]

(iii)   Lack of key demo-geographic indicators

As discussed in earlier sections, globally credit bureaus are in the business of data and offering actionable intelligence based on that data to lenders. In this light, the fact that banks and other credit institutions, being primary providers of data and members of credit bureaus, are not collecting and/or reporting certain types of demographic and geographic data puts constraints on the growth and development of credit bureau market in Pakistan.

Information on number of dependents a borrower has, age profile of the borrowers, literacy, and education level are either not reported by the commercial banks to the bureaus, or are not being collected at all. Similarly, in the case of agricultural loans, only the name and amount of loans are being reported, and bureaus have no

disaggregation of sector-wise (crop, livestock, or dairy) and crop-wise lending.

It is important to note that such demo-geographic information has different uses in different regions. For example, while education may be a better indicator of creditworthiness in urban areas, it does not hold as much importance in rural localities where crop harvesting patterns could reveal better insights. Likewise, not having quality demo-geographic data also means that bureaus have difficulty figuring out loans taken out from different microfinance banks/institutions by members of the same family, each showing the same shop or business as their own to different lenders. Anecdotal evidence points towards a high incidence of such cases, especially when it comes to consumer and micro and small business lending.

(iv)   Legal challenges in collection of alternate data

Although formal financial information is an essential part of credit information reporting and helps lenders to avoid high-risk borrowers, it does not help the lender to predict the riskiness of a potential borrower who have never resorted to FIs for his/her credit needs and consequently not maintained credit history with them.

Globally, these shortcomings are mitigated by the use of alternate data sets such as

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[32] Prudential Regulations for Corporate/ Commercial Banking (Revised till January 2015), State Bank of Pakistan
[33] Prudential Regulations for Small & Medium Enterprises Financing, (Updated till April 05, 2021), State Bank of Pakistan and Prudential Regulations for Consumer Financing, (Updated on August 03, 2016), State Bank of Pakistan
[34] Prudential Regulations for Microfinance Banks, (Updated on June 10, 2014), State Bank of Pakistan

telephone bills, utility payments, transactional overheads, rental information, and trade transactions etc. This kind of transactional data becomes a proxy of income and expenditure and is especially important to bring those individuals and businesses into the formal credit market who have no collateral and little to no credit history to show for. In other words, alternate data is critical for growth in financial inclusion in the bottom of the pyramid segment of economy.

In Pakistan, the coverage of alternate data is currently non-existent because the data is not available, even though notifications to the effect have been passed in at least two cases. Under the Credit Bureau Act 2015, the government issued a notification in April-2020 whereby it directed all electricity and gas distribution or transmission companies to be member of credit bureau and advised them to furnish information in accordance with requirement and specification of the Act. However, except for K-Electric, to date no other electricity and gas distribution company is providing the data to credit bureaus.[35]

Even if reported, the utility data set is prone to factual inaccuracies, and therefore unreliable.[36] This is because many consumers of these utilities are not officially registered users of those utilities. For instance, billing meters are in the name of the owner of property rather than the tenant. Or it is often in the name of the parent or grandparent of the current user, and

sometimes even the previous owner of the property. In case of buying the property, the Nepra's Consumer Service Manual (CSM) obligates the new owner to apply to Disco for a change of name accompanied with written consent and/or no objection certificate from previous owners – a stipulation rarely followed. In the case of tenants, there is no such obligation.

Meanwhile, telecom data, which can be a boon for nano-lending as well as microfinance lending, is also not available to credit bureaus yet, despite a 2019 government notification that instructed mobile operators in the country to become members of credit bureaus and furnish telecom users' billing information.

The legal interpretation of what constitutes telecom data is contested, as telecom companies maintain that they are restricted to share consumers' billing data under PTA's Telecommunication Consumer Protection Regulations, 2009. They also maintain that even if (under a relaxed interpretation of the aforementioned law) they could share consumers' billing data, they can only share data of post-paid customers since no credit is being furnished to pre-paid telecom users. This presents a challenge to lenders who might have appetite for giving nano or micro loans based on transactional information, where telecom spending is an important proxy to assess creditworthiness of lower-income households.

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[35] K-Electric (KE) has only started reporting data for commercial/industrial consumers because of availability of CNIC/NTN in KE's system; it has been unable to share residential data on account of reasons discussed above. (Source: Power Division, and K-Electric)

[36] Source: Power Division

Similarly, according to the April-2016 notification by the Ministry of Finance, court judgements relating to debtors shall be included into the public records as credit information for the purpose of Credit Bureaus Act 2015. However, data pertaining to court judgements are not yet available in a format that are easily accessible to credit bureaus for the purpose of credit information reports and credit scores.

(v)   Other operational bottlenecks

Since their inception, the credit bureau industry in Pakistan has seen a host of operational issues, which present a challenge to smooth management of the business, and adds to credit risks of lenders. These operational issues – such as delays in information sharing by credit institutions, and limited historical data, based on which bureaus develop credit scores – are found to be common at initial stage of development of credit bureaus market in several developing economies.[37]

For instance, current regulations in Pakistan require credit institutions to upload monthly update of their borrowers' information by the 10th of each month i.e., the monthly update for June must be updated by July 10. This means if a debtor defaults or goes past due on his payments on 1st of July, it may take 40 days for the system to reflect this information in database of credit bureaus, and consequently on CIR, which reduces the efficacy of credit reports.

Likewise, anecdotal evidence suggests that there have been instances where borrowers have applied for consumer loans

simultaneously in several banks. But since bureaus have limited information of new loan application on daily basis, the lenders are unable to adequately assess the borrowers' future repayment capacity. As a result, borrowers have been able to get loans from several banks simultaneously, beyond their repayment capacity, leading to credit risks that can be avoided by timely data sharing.

Similarly, while commercial banks and other lenders, being members of eCIB and credit bureaus, share their credit information with the former on time, there are often delays in reporting to the latter. This hurts the efficacy of bureaus, as it creates information asymmetry. Furthermore, unlike the eCIB, credit bureaus cannot penalize their members for delaying the sharing of data.

While the retention period for negative information in CIR by private credit bureaus varies from 3 years to 15 years (**Table S1.1**), that for the e-CIB varies from 2 years to 10 years. The latter is in line with the World Bank's Doing Business indicators. However, domestic credit institutions are generally risk averse and demand credit history to be retained in e-CIB's system for longer time period as well.

S1.6   The Way Forward

To address the aforementioned challenges, implementing the following set of recommendations could help Pakistan towards achieving the potential returns on its credit reporting system.

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[37] World Bank (2019). Credit Reporting Knowledge Guide. Washington, DC: World Bank.

Rules Governing Maximum Retention Period of Information in   **Table S1.1**
CIR of Credit Bureaus

|		Retention period	
		Individual borrower	Corporate borrowers
Bankruptcy cases	from the date of decision of the court	5 years	10 years
Default	from the date of repayment or adjustment of default amount	3 years	4 years
Write off or waiver after settlement/recovery	from the date of settlement or recovery	5 years	5 years
Rescheduling and restructuring	from the date of rescheduling and restructuring	3 years	5 years
Write off or waiver -unsettled		15 years	15 years

Source: SRO 73(KE)/2016, Ministry of Finance

Align regulatory framework and create enabling environment

As discussed in previous section, presently both credit bureaus only have partial coverage of the overall financial sector loan portfolio since several banks are yet not members of both credit bureaus (**Figure S1.10**). This requires nudging the remaining commercial banks to become members of all credit bureaus; credit institutions could then choose the bureau(s) of their liking to purchase various value-added services. This would mean that there would be no competition between the bureaus on data accumulation, instead leading to greater competition on value-added services that hold the potential of minimizing information asymmetries in the credit market.

The prevailing regulations that necessitate obtaining mandatory credit report from eCIB and/or credit bureaus for different credit

Coverage of Adult Population in Private Credit Bureaus in Group of Lower Middle Income Economies   **Figure S1.10**
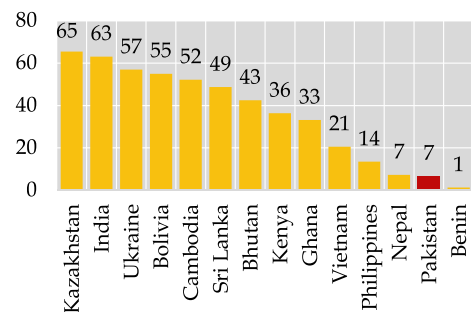
Source: World Bank

segments discourages credit bureaus to commence operations in commercial/SME credit markets. The government therefore needs to notify a sunset clause for eCIB, leaving the market space for private sector credit bureaus to compete on a full spectrum of loan segments and credit information services.[38]

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[38] In this regard, it is pertinent to note that during deliberations on the Credit Bureaus Act in March-2015, the National Assembly Standing Committee on Finance, Revenue, Economic Affairs, Statistics and Privatization mulled over the option of inserting a sunset clause under which the eCIB was to "cease to furnish credit reports to credit institutions on expiry of twelve months from the date of commencement of this Act". However, this provision was not included in the final version of the Act. (Source: Report of the National Assembly Standing Committee on Finance, Revenue, Economic Affairs, Statistics and

Concerted efforts are needed to streamline various aspects of reporting formats, reporting time, data retention, and operational bottlenecks, as did India in nascent stages of its credit bureau market. India's original set of regulations under Credit Information Companies (Regulation) Act 2005 did not offer standardized formats for reporting corporate, consumer and MFI data.[39] To resolve these issues, the RBI formed a committee and, based on its instructions, adopted measures to streamline various aspects of the credit reporting framework, including but not limited to standardized data formats for different credit segments, and the rationalization of the data submission to credit bureaus.[40] These factors contributed towards an increase in the credit information coverage on commercial lending in India from 1 million firms in 2010 to more than 23 million firms in 2019.[41]

Similarly, daily update of credit information vis-à-vis new loan inquiries and approvals can be introduced to reduce the time-lag currently factored in the reporting system.

This would also help bureaus in issuing on-time alerts to their members.

Legal and national level policy reforms to increase availability and use of alternate data

The inclusion of alternate dataset would help unbanked individuals/SMEs to build credit history and increase their access to finance. In addition, it would also offer much needed granularity on SMEs payment behavior that FIs may use to design products and services well-suited to SMEs financial needs. These allied benefits have encouraged CRSPs in many countries to include information on alternative datasets and embraced a positive change in financial inclusion. For example, Guyana had experienced significant increase in financial inclusion (from 2.4 percent in 2015 to 16.4 percent in 2016) after adopting a regulatory provision that obligated utility providers to share data to credit bureaus.[42] Similarly, in Kenya, the number of borrowers increased significantly after mobile lenders were obligated to provide data to credit bureaus.[43]

In India, the World Bank has conducted various interaction programs and

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Privatization on Credit Bureaus Bill, 2014, available at: www.na.gov.pk/uploads/documents/1455174664_465.pdf)

[39] Source: Credit Information Companies (Regulation) Act, 2005, India Code

[40] Another important measure was to require all credit institutions, including NBFIs and cooperative banks, to be a member of all CRSPs and submit data to them including historical information set. (Source: RBI (2015), Membership of Credit Information Companies (CICs), Notification: RBI/2014-15/458 DNBR(PD).CC.No 019/03.10.01/2014-15 and Notification: DBR.No.CID.BC.59/20.16.056/2014-15, available at: www.rbi.org.in/Scripts/NotificationUser.aspx?Id=9555&Mode=0)

[41] Doing Business 2010 India, IFC, available at: www.ihk-krefeld.de/de/media/pdf/international/doing-business/indien-doing-business-in-india-2010.pdf

[42] Source: World Bank Group (2018), Improving Access to Finance for-SMEs.

[43] World Bank (2019). *Disruptive Technologies in the Credit Information Sharing Industry: Developments and Implications.* FinTech Note No. 3. Washington, DC: World Bank

stakeholder meetings under the Commercial Credit Reporting India Project to identify ways to enhance the efficiency of the country's credit reporting market. Responding to a 2015-16 survey under the project, India's financial institutions identified gaps in credit information needed for MSME financing, and highlighted the need for various alternate data for increasing access to finance to MSMEs.[44] These included utility bills data, telecom usage statistics, income tax and VAT returns, and insurance claims, etc. Based on the findings of the study, a pilot project has been launched to include information collected from various MSME associations and e-commerce companies in the credit bureau database, and to provide support in gathering alternate data from utility companies and telecom operators.

In Pakistan, the availability of alternate datasets requires enabling legal environment and regulatory provisions. For example, to increase the usefulness of utility data, the Power Division needs to make amendments in NEPRA's CSM to ensure that electricity users are correctly identified across its consumer segments, and the data for the same is duly recorded and shared with credit bureaus. In this vein, the CSM also needs to obligate tenants to update their name and whereabouts in case of relocation to a new residence.

Similarly, a host of legal and policy changes are required to ensure that telecom billing data is available to credit bureaus, and that sole proprietorships and Association of Persons across the country are assigned

unique identification. Moreover, various other important alternate datasets, such as those pertaining to residential/commercial rental properties and court judgments, first need to be properly recorded and then shared with the credit bureau industry.

For instance, Sindh government has rolled out a Tenancy Registration System,[45] where it records tenant's photo, signature and rental agreement, but does not record whether or not monthly rental payments were made, and made within due date. A step forward in this direction should include recording of monthly rental payments, which in turn is linked to Sindh's land automation database and its planned e-stamping database. Such a rich database will help increase access to credit and financial inclusion vis-à-vis credit bureaus; it will also help reduce tenancy litigations whilst assisting federal and provincial tax authorities to expand their tax net. Similar steps should be taken by other provinces.

To this end, there needs to be a national consensus on data and policy reform aimed at addressing data needs of the country, including for credit bureaus and financial inclusion, whilst ensuring data validity, accuracy, linkages and preservation across various data touchpoints.

Include credit reporting system in focus areas of National Financial Inclusion Strategy

Pakistan's National Financial Inclusion Strategy 2015-2020 (NFIS) highlighted that two of the major factors hindering the uptick of MSME financing in the country were: (i)

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[44] World Bank (2019). *Credit Reporting Knowledge Guide*. Washington, DC: World Bank.
[45] www.trs.sindhpolice.gov.pk/admin/login

lack of adequate regulations to set up legislations for credit bureaus and transactions registry; and (ii) dearth of alternate funding and limited knowledge or lack of use of alternate financing, such as value-chain and cash-flow based financing methodologies.

Both these concerns have been addressed to a large extent with the passing of the Credit Bureaus Act 2015, and the establishment of a Secured Transactions Registry within SECP under NFIS 2023,[46] wherein specific headline targets have been adopted for priority sectors like SME finance, agriculture finance, low-cost housing and Islamic banking. In this regard, further impetus can be provided by incorporating an action plan for credit reporting system by setting up a Working Group on credit information market to improve the coverage, data quality and usage of credit bureaus in the country. Here, it is pertinent to note that at the time of drafting the NFIS 2015-20, the legislative process of Credit Bureaus Act 2015 was under progress; hence, no associated actions were made part of the NFIS action plan.

Lastly, a Financial Innovation Challenge Fund should be launched by the government to encourage: (a) the use of credit scoring models currently being piloted by credit bureaus; and (b) the creation and testing of new credit scoring models, especially those based on alternate data or otherwise aimed at the segment of individuals and businesses that have no collateral and little or no credit history.

Globally, credit scores are fundamental pillars of the entire credit ecosystem. This is not only because credit scores reduce the administration expense of banks, MFBs/MFIs and other lenders, but also because of their disciplinary effect where borrowers of good credit score reap benefits whilst those with bad history are penalized. In Pakistan, however, anecdotal evidence suggests that borrowers' good credit history with one or two lenders only benefits within existing banking relationship but not across banks and MFBs/MFIs. This is where credit scores can benefit.

Meanwhile, it is important to note that access to credit in general and credit bureau coverage in particular cannot increase without a significant rise in financial literacy and an awareness about the potential advantages that bureaus bring to the table. To this end, the National Financial Literacy Program (NFLP) needs to incorporate policies that specifically focus on consumers and banks so that they are able to understand the benefits of the existence of private credit bureaus and of having a positive information database. Major focus areas may include generating greater awareness and understanding about a credit bureau's operations; effective use of its services; and requesting, analyzing and improving ones' credit history as maintained by the bureaus.

For instance, individuals and MSMEs need to be made aware that even a dishonored cheque can negatively affect credit scoring of existing and potential borrowers. Likewise, a delayed rental payment will hurt credit score, whenever rental payment data starts getting recorded. At the same time, training programs may be carried out for financial sector officers involved in reporting and

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[46] www.finance.gov.pk/NFIS.pdf

maintaining data related to credit bureaus to increase their skills, improve their understanding of over-indebtedness and smart borrowing principles, and how and when to graduate borrowers and to cross-sell products based on credit reports and other value-added services.

Digital solutions can prove to be a crucial enabler in this regard going forward

Over the past decade, there has been a substantial increase in the adoption of digital financial services across the world. Proliferation of mobile-wallets, fintech service providers, and e-money institutions has transformed core banking as well as the associated segments of payment systems and information intermediaries. Digitization of such services has also resulted in enhanced accumulation and availability of financial sector data.

With regards to credit information agencies, the potential of utilizing digital avenues is tremendous. Already, credit bureaus around the world are utilizing advancements in computing abilities to record, integrate, store, manage, process, and transfer large information datasets from multiple sources. Similarly, electronic payment systems and digitization of tax records is providing bureaus with new sets of information on which to base their scoring and other value-added services. These datasets include electronic funds transfer data, card-based transaction histories, and other person-to-person (P2P), business-to-consumer (B2C) and business-to-business (B2B) interactions

enabled by e-commerce and digitization of supply chains. Furthermore, the implementation of biometric verification measures is resulting in capturing fraudulent practices swiftly.

Lastly, techniques related to artificial intelligence and machine learning are helping bureaus analyze trends using Big Data. For instance, Equifax has worked with an American tech-based startup Cignify to construct a "Prediction Inclusion Score" in Chile for individuals who either have limited or no formal credit history. Individuals who opt in for the service will have their telecommunications usage patterns analyzed and a credit worthiness score assigned to them, which could be shared with financial institutions to offer them loans.[47] Recent research has shown that even "simple digital footprints", i.e., information that users may leave online by accessing different websites – complement the information content of credit bureaus, and if utilized for credit analysis purposes, increase access to finance and reduce default rates "substantially" (Berg et al., 2020).[48]

When it comes to Pakistan, there has been a similar rise in e-commerce and mobile-payment services. The overall e-commerce transactions sourced from digital payments amounted to Rs 73.7 billion during FY20, rising appreciably from Rs 20.7 billion in FY17. Similarly, the number of active mobile wallet accounts in the country reached 26.7 million at end-June 2020. Meanwhile, the government has made digitization a priority focus area, introducing the Digital Pakistan

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[47] World Bank (2019). *Credit Reporting Knowledge Guide*. Washington, DC: World Bank.
[48] Berg, T., Burg, V., Gombović, A., and M. Puri. (2020). "On the Rise of Fintechs: Credit Scoring Using Digital Footprints." *The Review of Financial Studies*, 33(7), 2845-2897.

Policy in 2018 and later the e-Commerce Policy in 2019. The five focus areas of the policies are access and connectivity, digital infrastructure, e-governance, digital skilling and training, and innovation and entrepreneurship.

The launch of Micro-Payment Gateway and *Raast* Instant Payment System by the SBP to digitize banking transactions and make transfers real-time further hold the potential to significantly enhance the adoption of mobile and internet banking going forward. *Raast* will allow smooth sector-wide interoperability, making digital payments accessible to users of all the financial institutions. Furthermore, by removing transaction costs, providing smoother customer experiences (with APIs allowing funds transfer only based on one variable such as mobile phone numbers), and increased focus on privacy and security, *Raast* would help remove barriers to adoption of digital financial services from the demand-side as well.

Recently, there has been a trend in some countries to adopt an "open banking" framework, wherein real-time data-sharing happens between all regulated financial institutions via standardized APIs. This is a shift from the "classical banking" model, where information is scattered across various financial services providers unless compiled by specialized institutions such as credit bureaus and registries. As open banking is an emerging concept, different forms of data sharing have emerged. In most cases, however, customers authorize cross-sharing

of information from multiple financial accounts across the entire banking ecosystem.

With regards to credit bureaus, this would mean easier collection of borrowing and defaults data, opportunity to analyze banking transactions, including payments indicative of alternate data, such as utility services payments and tax deductions (if performed via the banking channel). From the perspective of customers, this can significantly tackle the issue of "information rents" issue raised earlier, leading to lower mark-ups and less stringent borrowing conditions.[49]

Credit bureaus should aim to utilize this digital stream of data to enhance their coverage and analyze the creditworthiness of the consumers and businesses, even those who may not yet have a credit history. Recently, fintech players in the country, such as Finja, Telenor Microfinance Bank, Mobilink Microfinance Bank, and FINCA Microfinance Bank are already working on issuing nano-loans based on alternate datasets such as telecom spending and digital payment histories.   Meanwhile, start-ups such as Creditbook and DigiKhata aim to digitize personal and small business payments and keep a log of credit transactions (receivables and payables) in their respective online databases. Such information, if available with credit bureaus, can be instrumental in determining the creditworthiness of individuals and enterprises, especially those who lack

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[49] For more information, see Delloite (2017). *How to Flourish in an Uncertain Future: Open Banking*. London: Delloite; and Plaitakis, A. and S. Staschen (2020). *Open Banking: How to Design for Financial Inclusion*. Working Paper October 2020. Washington, DC: Consultive Group to Assist the Poor.

adequate collateral or previous banking history.

Globally, the experience of M-Shwari sheds light on the potential of lending based on alternate information. M-Shwari facility was launched by the Commercial Bank of Africa in 2012 in order to provide deposit-taking and loan-extending facilities using the M-Pesa mobile-wallet platform in Kenya. Those users of M-Shwari who have been active for 6 months become eligible to take a loan. To determine how much customers may borrow, the service considers the average deposit amount kept in the wallet over the past six months, the volume and value of transactions performed through the service, and trends in usage of telecom services such as internet bundles, voice data and M-Pesa. The service then lends an amount derived from these metrics by crediting the funds directly into the M-Shwari account, with the repayment period of 30 days. M-Shwari reports borrowing data to the country's credit bureaus and it has helped increase the coverage of credit bureaus and make credit records for individuals who were mostly borrowing from the informal sector before using M-Shwari.[50]

S1.7   Concluding Remarks

The introduction of Credit Bureaus Act 2015 and the issuance of licenses to two private credit bureaus are foundational steps towards minimizing information asymmetries in the credit information market of Pakistan. However, the operational framework needs to be improved in the light of international best practices, to make the credit reporting system more effective. Streamlining data submission formats and timelines appear as quick wins in this regard. However, enhancing the pool of data to include demo-geographic variables and alternate credit data may prove to be more time- and cost-intensive. This is because of three major reasons. First, our discussions with the stakeholders revealed that most of the financial institutions are not even collecting the key demographic information at their end, using which credit bureaus develop their scoring and portfolio scrubbing services all over the world. Therefore, increasing awareness about the importance of collecting, disseminating, pooling and analyzing more information needs to be prioritized for long term credit information needs of the credit markets.

Second, there are either significant issues when it comes to quality of data currently available with utility companies (for example, gas and electricity bills), or where data is available (such as telcos), there is lack of agreement on the sharing of such data with credit bureaus. Here, the coordination of key stakeholders, especially respective regulators and government divisions/departments, to ensure that such information is available with the credit bureaus can pave way for smooth collection and sharing of data. Sharing of data would be a win-win situation, as utility service providers would also be able to use the

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[50] According to the Bill and Melinda Gates Financial Inclusion Insights Program M-Shwari Survey of 2015, most of the users of M-Shwari were new formal financial sector borrowers, as 52 percent of the users reported not borrowing at all from any other institutions in the past three months, and 33 percent reporting borrowing from family and friends.

analysis provided by credit bureaus to improve recoveries and lower defaults.

Third, high informality means that even when all such data is available with credit bureaus, it may still not reveal correct indebtedness levels of consumers and MSMEs in particular. This is because there is a high incidence of informal borrowing by these segments in Pakistan.

A long-term solution to this end may involve gradually bringing informal lenders, such as grocery retailers and consumer appliances superstores, in the formal sector with the help of fintech. For example, Oraan is a Pakistani startup that enables individuals to group save and group lend through rotating savings and credit associations (ROSCAs), (known as 'committees') via its mobile application. This is an important development, as ROSCAs are a significant part of household savings in Pakistan.[51]

Going forward, credit bureaus may collaborate with alternate credit scoring providers that harness information from varied sources such as social media, telecommunications authorities, mobile phone usage statistics such as messaging content, mobility and browser data, etc. Examples of such alternate scoring companies include the earlier mentioned Cignify, Saudi Arabia's Lenddo, the multi-country operational data-crunching company Tiaxo, and India-based CreditVidya.[52]

With continuous rise in teledensity, internet subscriptions and data usage in the country, similar companies are going to tap into Pakistani credit market as well. However, it is important to mention here that it is the government's responsibility to create an enabling legal and policy environment for collection and sharing of alternate data whilst ensuring data privacy and security.

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[51] Source: Pakistan Financial Inclusion Insights Tracker survey 2017, Bill and Melinda Gates Foundation and Karandaaz
[52] World Bank (2019). *Disruptive Technologies in the Credit Information Sharing Industry: Developments and Implications*. FinTech Note No. 3. Washington, DC: World Bank.