ARE EXPANDING PCRs CROWDING OUT PCBs?

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PERC
RESULTS AND SOLUTIONS

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Executive Summary & Key Findings

Few national policymakers fully appreciate the fact that a nation's credit information sharing (CIS) system is critical financial infrastructure. When optimally structured, it sustainably increases lending to the private sector (both consumer and commercial credit), which in turn increases overall economic activity. When not structured correctly, however, the results can act as a drag on lending and the economy with unnecessary credit rationing, higher priced credit, and increased systemic risk.

Supported both by mainstream economic theory and decades of empirical research from around the world, an optimally structured national CIS system includes **Private Credit Bureaus (PCBs)**. In countries with both PCBs and a government operated **Public Credit Registry (PCR)**, there are examples in which they can co-exist in a complementary relationship and, in general, avoid unnecessary direct competition. In these cases, PCBs facilitate the sharing of credit data to the private sector (helping meet their changing demands, developing solutions, and the like), whereas PCRs gather data for regulatory, supervision, and oversight purposes (and can also act as a regulator).

Recent advances in technology, a growing understanding of the transformative power of data, and a reinforcement of PCRs' roles (e.g. AnaCredit, to be discussed more fully below), have led national policymakers in a growing number of countries around the world to support major adjustments to their CIS systems. A number of countries have enacted or are enacting measures that would expand the role of PCRs and put them in competition with PCBs.

If such measures aimed at improving CIS inadvertently weaken PCBs, harmful consequences may result. This is the case since evidence has clearly shown that PCBs outperform PCRs in certain ways, namely in enabling growth in lending to the private sector. Weakened PCBs can result in a dynamic that ultimately harms borrowers (individuals and MSMEs primarily) and constrains access to credit relative to a market with an optimal CIS system. Instead of promoting potentially harmful competition between PCRs and PCBs, policymakers are encouraged to instead undertake helpful interventions including data sharing and use encouragement and/or mandates where warranted.

To seize the potential of the digital revolution but also address the risks that it poses, both the public and the private efforts are needed, each focusing on the areas for which it is best suited. PCBs for "credit bureau" like credit information sharing functions for the private sector, and PCRs or regulators for regulation, supervision, and oversight functions.

Key Findings from this report include:

Credit Information Sharing System is a Vital Financial Infrastructure: When optimally structured, a nation's CIS system enables lenders to sustainably and responsibly grow lending to the private sector (consumer and commercial loans), while empowering regulators with sufficient data to assess system risks, promote the financial sector's safety and soundness, undertake effective micro- and macro-prudential regulation, and assist with monetary policy. In economies where PCRs exist, an optimal CIS structure involves PCBs acting as complements to a PCR, not as competitors. If not so structured, then lending to the private sector risks being reduced below its potential, credit being priced higher, and economic growth being dampened. However where no PCBs exist, or when market failure obtains, then a PCR may be the only viable path forward for development.

There is a Growing Momentum to Strengthen PCRs: While we laud increased attention from policymakers to this important issue area—especially as most PCRs were ill-equipped to deal with spill-over consequences from the 2008 Global Financial Crisis—enhancing PCR capacity is not the same as expanding PCR responsibilities. Enhancing a PCR's capacity involves providing a PCR with access to broader and deeper financial data, increasing technical staff and budget to use the new data to better perform traditional roles of PCRs. By contrast, expanding the functions of a PCR beyond traditional roles may carry substantial risks that must be considered in light of any perceived benefits. In most cases, the risk of disrupting the financial sector outweighs all perceived benefits.

PCRs Can Starve PCBs of Key Revenue, Weakening CIS System. This can happen if PCRs enter key markets and lines of business of PCBs and, as a result, weaken them by diverting crucial revenue. Given that studies have found that PCRs do not perform as well as PCBs in terms of the role of "credit bureau" supplying credit data to lenders and increasing credit availability, PCRs should be thought of as an imperfect PCB substitute, at best. As such, PCRs crowding out PCBs, everything else constant, should weaken the CIS system. Large banks may have a narrow and vested interest in more expansive PCRs that would provide them with lower cost data and be less likely to innovate, enliven competition, and disrupt dominant market shares. On the other hand, lower-income persons, MSMEs, and smaller lenders would be most harmed by a less dynamic CIS system that would result from PCBs being crowded out.

PCBs are More Efficient, Innovative, and Client-oriented: Owing to their profit imperative, PCBs tend to invest relatively more in innovative new technologies and solutions as their main mission is to meet individual clients´ needs. Not surprisingly, many of the key developments in information sharing were first developed by the private sector (e.g. credit databases, credit scoring, expansion of types of data shared, expansion of data uses, alternative data, Big Data, AI, and Machine Learning).

Lower-Income Persons, MSMEs, and Smaller Lenders Benefit Most from PCBs: In emerging markets and advanced economies alike, most gains in terms of financial inclusion and fair lending are the product of innovations in the private sector around new data and new credit risk models. Whereas PCRs tend to be *more* focused on larger traditional lenders that are systemically important, PCBs have a broader focus that includes smaller lenders (e.g. micro-finance institutions or "MFIs"), non-bank lenders, entities not regulated by the bank regulator such as non-financial service providers (e.g. energy utility firms, telcos). PCBs also build value-added services and data tools that smaller lenders could not do in-house compared to large, entrenched banks.

Introduction

Credit information sharing (CIS) serves two main purposes. First, it supports lenders and other financial and non-financial service providers to assess individual credit risk and capacity. Second, it can support the state´s role as supervisor of financial institutions and helps manage systemic financial risks.

The main focus of this paper is on the former, though the latter is discussed to the extent that policies aimed at the 'supervisor role' may be unduly interfering with the 'lending role'.[1]

Credit information sharing is by no means a new activity. The oldest PCBs began over two centuries ago and involved an exchange of payment data among regional retailers.[2] In Europe, the first recorded group sharing credit information about individuals (founded in 1776 in London) was the "Society of Guardians for the Protection of Trade Against Swindlers and Sharpers." For decades prior, merchants in London had been informally sharing information about deadbeat clients to protect against being swindled. They soon realized the value of more formally sharing this information widely across London.[3]

In the United States (US), the first systemic effort to collect credit information occurred in 1841, with the Mercantile Agency.[4] Later renamed R.G. Dun and Company and merged with Bradstreet on the eve of the American Civil War in 1860, the resultant Dun & Bradstreet pioneered the original alpha-numeric credit score—permutations of which have been in use ever since.[5]

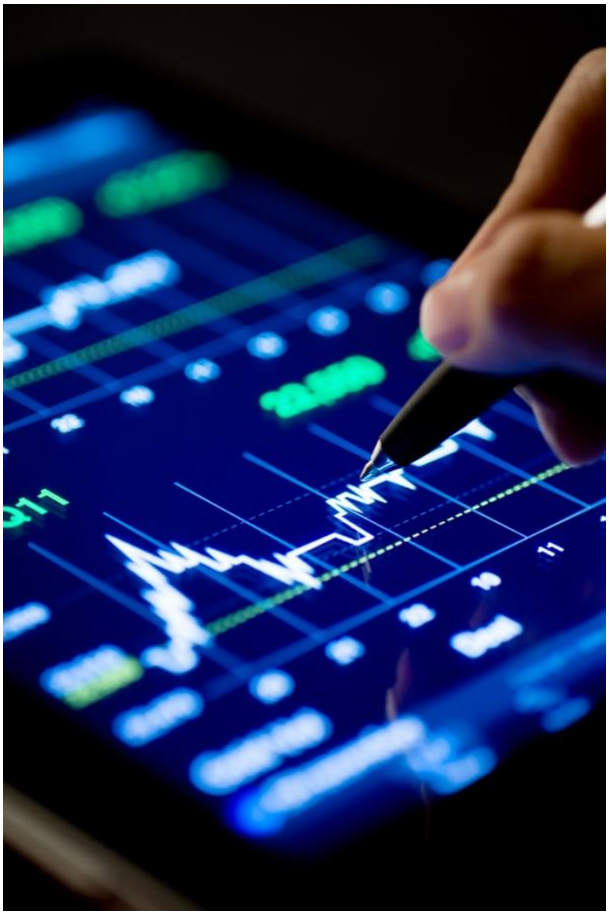
Roughly half a century later, the model used for commercial credit reporting and scoring was expanded to consumer credit reporting in the US, at which point the industry flourished with thousands of small credit bureaus. The US industry began consolidating in the 1980s and today there are three large national PCBs (Equifax, Experian, and TransUnion). In the US, these credit bureaus are referred to as consumer reporting agencies (CRAs). In addition to the largest CRAs, there is a smaller national CRA (Innovis) and several hundred regional or niche/specialty CRAs.[6]

Most countries now have one or more of the institutions of credit information sharing, PCBs and/or PCRs,[7] and most of the world's population is covered to some extent by the information of these entities.[8]

[1] These two purposes are not completely distinct as the lending role of CIS aids lenders in ensuring the safety and soundness of their own consumer and small business lending portfolios. This is a crucial part of ensuring stable national credit markets.

[2] See: www.google.ca/books/edition/A_List_of_the_Members_of_the_Guardians_o/R0BfKsv-3PsC?hl=en&gbpv=1&dq=inauthor:%22Society+of+Guardians+for+the+Protection+of+Trade+against+Swindlers+and+Sharpers%22&printsec=frontcover

Despite being a mature industry in general, most of the world's credit information sharing started only over the last few decades.[9] This development occurred as information technology (IT) advanced and became less expensive, and as lending became digitized and more data-driven. Empirical and theoretical research on the benefits of credit information sharing in lending and financial inclusion have also stoked lender and policymaker interest in credit information sharing. [10] It is increasingly understood that while credit may be the lifeblood of an economy, information is the lifeblood of a nation's credit market. In addition, for regulators, the ability of lenders to use CIS to improve risk management of their own portfolios can act as a crucial part of ensuring stable national credit markets. A good example of why this is so important is if lenders *did not* share data, then they would be unaware what share of a portfolio may include borrowers who are very leveraged with debt from *other* lenders,[11] or maybe some share of borrowers are taking out debt from Bank A to service debt from Bank B.[12] This could result in very fragile bank portfolios that would not be resilient to even a mild economic downturn.



[3] Purtill, Corrine. "Meet the gossipy, 18th-Century dead-beat hunters who accidentally created the credit ratings industry." *Quartz*, 16 February 2017, available at: www.qz.com/911712/meet-the-gossipy-18th-century-deadbeat-hunters-who-accidentally-created-the-credit-ratings-industry/

[4] Trainor, Sean. "The Long Twisted History of Your Credit Score." *Time*, 22 July 2015, available at: time.com/3961676/history-credit-scores/

[5] *Id.*

[6] A description of the consumer reporting agencies that are not regulated under the Fair Credit Reporting Act (FCRA) as national can be found at the Web site for the trade association for the niche and regional CRAs called the National Consumer Reporting Association. See: www.ncrainc.org

[7] Turner, Michael and Walker, Patrick. "The Case for a Public Credit Registry in India: Additional Evidence for Consideration." Chapel Hill: Policy & Economic Research Council (PERC), 2018, p. 23, available at: www.perc.net/wp-content/uploads/2018/03/India_PCR.pdf

[8] "Doing Business 2020." Washington, DC: World Bank, 2020, p. 5, par. 3, DOI:10.1596/978-1-4648-1440-2. License: Creative Commons Attribution CC BY 3.0 IGO.

[9] *Id.* at Chapter 3, pp. 46-47.

[10] Turner, Michael et. al. "The Impacts of Information Sharing on Competition in Lending Markets." *Policy and Economic Research Council (PERC)*, October 2014, available at: www.perc.net/wp-content/uploads/2014/10/FF_Impacts.pdf

[11] Turner, Michael. et. al. "Roadmap for Reform: Lessons from around the world to guide consumer credit reporting reform in Australia." Dun & Bradstreet Australia, October 2008, pp. 24-27, Sec. 3.2, available at: www.perc.net/wp-content/uploads/2013/09/Roadmap_fullreport.pdf

[12] *Id.* at pp. 24-27.

Depending on purpose and ownership, there are four broad categories of the institutions of credit information sharing. These are shown in the following table.

Table 1. *Types of CIS Institutions*

CIS Institution	*Ownership/Control*	*Primary Purpose*	*Potential Secondary Purpose*
Private Credit Bureau (PCB)	Private	Provide predictive credit and other data to lenders and other market actors to aid underwriting credit and access to services and eligibility determination for individuals and to assess loan and other portfolio risk and performance	Provide credit and payment data to regulators, government agencies, and lenders for supervision, oversight, monitoring, compliance, and safety and soundness purposes.
Public Credit Bureau	Public		
Public Credit Registry (PCR)	Public	Provide credit and payment data to regulators, government agencies, and lenders for supervision, oversight, monitoring, compliance, and safety and soundness purposes.	Provide predictive credit and other data to lenders and other market actors to aid underwriting credit and eligibility determination for individuals and to assess loan portfolio risk and performance
Private Credit Registry	Private		

The two primary types of entities are in bold: PCBs and PCRs. These categories are not always clear-cut. For instance, ownership of a PCB may involve *some* government ownership and some private ownership.[13] In addition, some PCRs could have a dual purpose of providing CIS data to both lenders for lending purposes and regulators for regulatory purposes, without a clear indication of the primary and secondary purposes. Nonetheless, for our purposes we will use this simplified taxonomy of distinct types.[14] [15]

[13] The different types of Private Credit Bureau ownership are as follows: independent/third-party, minority data furnisher, association (majority), majority industry/diffuse data furnisher, and majority concentrated data furnisher. **See:** Turner, Michael, Varghese, Robin and Walker, Patrick. "Credit Bureaus in Emerging Markets: Overview of Ownership & Regulatory Frameworks." *Policy and Economic Research Council (PERC)*, 2014, pp. 12-16, available at: www.perc.net/wp-content/uploads/2014/09/EM.pdf.

[14] The IFC's *Credit Reporting Knowledge Guide* notes, "Credit bureaus 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. However, there are instances of bureaus supporting banking supervision and instances of registries making data available to creditors in the market." **See:** International Finance Corporation. "Credit Reporting Knowledge Guide." Washington D.C.: World Bank Group, January 2012 available at documents.worldbank.org/curated/en/873561468320947849/pdf/941600WP0Box380IC00credit0reporting.pdf

[15] Section 2 in the 2019 iteration of the *Credit Reporting Knowledge Guide* states: "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." **See:** World Bank Group. "Credit Reporting

In a number of advanced economies, including the US, UK, Australia and Canada, there are only PCBs. They provide the government with data needed to monitor credit markets and systemic risk across the financial sector and, thus, indirectly provides the information that a PCR would normally supply to regulators and bank supervisors.[16] Brazil has both a PCR focused on data gathered for supervision and regulation purposes, and PCBs focused on sharing data with private lenders for individual loan and portfolio risk assessment. In France, as a consequence of stricter privacy laws, there is exclusively a PCR, operated by the central bank. The French PCR collects and shares only negative payment data (more on this type of data sharing regime later). Such negative-only data is collected and shared with both public and private sector actors (regulators and lenders) for traditional PCR and PCB functions (oversight, regulation, and risk assessment). France's central bank also provides data and value-added services to lenders. As such, this PCR also acts as a public *credit bureau*.

Traditionally, there has been a fairly clear distinction between the roles and functions of PCBs and PCRs. As they historically exhibit a high degree of complementarity, each type of institution has tended to stay in its own lane. Further, the value of complementary institutions is validated by empirical cross-country statistical analysis demonstrated that greater private sector lending was associated with the presence of a PCB and not a PCR.[17] Thus, policymakers concerned with economic growth have respected the separate, non-competing domains of PCRs and PCBs.

Developments over the past decade have resulted in increased calls for the creation of PCRs where there are none, or the expansion of PCR data gathering and activities, including traditional PCB activities. This trend increasingly puts PCRs in direct competition with PCBs despite a lack of evidence that such competition would be economically or socially beneficial. However, despite this absence of supporting evidence, there are explanations for the recent policy impetus to expand the roles of PCRs.

First, following the 2008 Global Financial Crisis, some national markets did not have sufficient credit data sharing to allow regulators and government agencies to carry out effective macro- and micro-prudential regulation and oversight. In particular, the so-called transborder "contagion effect" was not recognized owing to inadequate cross-border data sharing among national regulators. Consequently, regulators were keen to fill this data gap.[18] In response to the 2008 Global Financial Crisis, especially to the observed transborder "contagion effect," the European Central Bank (ECB) launched an initiative called AnaCredit whereby EU member state central banks must share commercial loan payment data for loans valued above 25,000 Euros with the ECB.[19]

Knowledge Guide 2019." World Bank, Washington, DC., 2019, available at: www.openknowledge.worldbank.org/handle/10986/31806 License: CC BY 3.0 IGO.)

[16] This suggests the possibility that PCBs may act a substitute for the data gathering aspects of a PCR, so long as the PCBs gather sufficient data. But this is beyond the scope of this paper.

[17] Djankov, Simeon, McLiesch, Caralee, and Shliefer, Andrei. "Private Credit in 129 Countries." *Journal of Financial Economics*, vol. 84, no. 2, May 2007, pp. 299-329, available at: scholar.harvard.edu/files/shleifer/files/priv_credit_jfe.pdf

[18] European Central Bank. "Eurosystem, A Briefer on ANA Credit." 2020, available at: www.ecb.europa.eu/explainers/tell-me-more/html/anacredit.en.html.

[19] *Id.* It is worth noting that regulators could achieve the same objectives as ANA credit through a network of PCBs. If PCBs were enabled to "migrate" a credit profile across national borders, they would be well placed to fill the data gap and enhance the ability of central banks to detect multi-national credit crises.

This has resulted in some EU member states launching PCRs (Ireland), some EU member states enhancing existing PCRs to participate (Spain, Portugal), and others creating separate data sharing systems (Germany, Italy).[20] [21] While much of the recent observed PCR expansionism has been observed within continental Europe, there are emerging examples elsewhere—though generally less ambitious or concrete with the notable exception of India (detailed in the case section).[22]

"In response to the 2008 Global Financial Crisis…the European Central Bank (ECB) launched an initiative called AnaCredit…"

[20] Belgavi, Vivek. "Public Credit Registries: A Long Road Ahead." *PWC's Financial RegTech Insights*, July 2018, available at: www.pwc.in/consulting/financial-services/fintech/point-of-view/financial-regulatory-technology-insights-newsletters-vinyamak/july-2018.html.

[21] There is a clear trend in the EU of the growth of PCRs. Spain and Italy lowered their thresholds some years ago (and now again Spain). Spain has strongly enhanced its PCR since 2011. Ireland created a new PCR in 2013 as a result of the financial rescue of the country and Finland has recently announced the creation of a new PCR.

[22] We note that South Africa is considering a public register for systematic risk purposes. **See:** www.ncr.org.za/index.php/latest-news/8-latest-news/110-industry-communique-for-issuing-1-febr-2021

Second, as mentioned above, the decades of research showing the importance of data sharing to credit access and credit inclusion meant that policymakers were looking for tools to increase credit data sharing.[23] [24] Theoretical economic literature has demonstrated that sharing credit payment history with lenders reduces information asymmetries regarding a prospective borrower's likelihood of repayment (adverse selection reduction).[25] [26] It also creates reputational collateral, which affects a borrower's decision-making as timely payments are rewarded (lower priced credit, increased availability) and late payments result in credit market consequences of higher priced credit and reduced availability (moral hazard reduction).[27] Similarly, sharing information regarding a prospective borrower's existing obligations, income, and assets reduces information asymmetries between borrowers and lenders regarding a prospective borrower's capacity to manage varying amounts of credits.[28]

The emergence of FinTech[29] with firms using Big Data and/or consumer permissioned data, distributed ledgers (e.g. Blockchain), and artificial intelligence (AI)/machine learning (ML) has created great potential for enhancing existing credit information sharing systems or creating complementary new ones.[30]

And since regulators need to keep pace with the private sector in this area (to be able to properly regulate and monitor this space), so-called "Reg-Tech" is being developed to help regulators improve their operations generally and keep up with fin-tech in the private sector.[31]

Finally, the continued advancements in IT and the further digitization of economies meant that some of the more basic operations of sharing credit data became more surmountable for a broader array of entities, including government or quasi-government agencies. Operations that were prohibitively expensive and technically advanced have now become relatively affordable and less challenging. This meant that developing a PCR with basic public credit bureau functions became a lighter lift. Government entities now *can* clearly perform some credit information functions. The more important questions are: Whether they should? And if so, how they do so?

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[23] Turner, Michael and Lee, Alyssa. "Give Credit Where Credit is Due: Increasing Access to Affordable Mainstream Credit Using Alternative Data." Washington, DC: The Brookings Institution, December 2006, available at: www.perc.net/wp-content/uploads/2013/09/alt_data.pdf

[24] Pagano, Marco and Jappelli, Tullio. "Information Sharing in Credit Markets." *The Journal of Finance*, vol. 48, no. 5, December 1993, pp. 1693-1718, available at: www.jstor.org/stable/2329064.

[25] Akerlof, George. "The Market for "Lemons": Quality Uncertainty and the Market Mechanism." *The Quarterly Journal of Economics*, vol. 84, no. 3, August 1970, pp. 488-500, available at: www.jstor.org/stable/1879431

[26] Joseph Stiglitz & Andrew Weiss, "Credit Rationing in Markets with Imperfect Information." *The American Economic Review*, vol. 71, no. 3, June 1981, pp. 393-410, available at: www.jstor.org/stable/1802787.

[27] Pagano, Marco and Jappelli, Tullio. "Information Sharing in Credit Markets: A Survey." *Center for the Studies in Economics and Finance*, Working Paper No. 36, March 2000, available at: www.researchgate.net/publication/23573893_Information_Sharing_in_Credit_Markets_A_Survey

[28] *Supra* at note 23.

[29] FinTech or Financial Technologies use modern information technologies to improve or create financial services.

[30] Salamina, Luz Maria et al. "Disruptive Technologies in the Credit Information Sharing Industry: Developments and Implications." *World Bank Group*, Fintech Note, no. 3, 2019, available at: documents.worldbank.org/curated/en/587611557814694439/Disruptive-Technologies-in-the-Credit-Information-Sharing-Industry-Developments-and-Implications

[31] To learn more about the emerging field of "Reg-Tech," **see:** finreglab.org/posts/

There may be data collection, sharing, and analysis roles for both the public and private sector within a nation's CIS ecosystem. The question then is what role each will play and how to achieve an optimal balance between the institutions. This topic has received renewed attention given recent policymaker interest in expanding the role of PCRs.[32] As such, now is an ideal time to re-examine the roles of PCRs and PCBs and their relative strengths and weaknesses.

In the next section of this report, we review international best practices regarding PCRs and PCBs, then we examine cross-country statistical analysis of the performance of PCRs versus PCBs in terms of lending outcomes.

Table 2. *Select Examples of Presence/Absence of PCR and/or PCBs*

	PCR	***No PCR***
PCB	Argentina, Austria, Brazil, China, Czech Republic, Ecuador, Indonesia, Italy, Germany, Latvia, Lithuania, Malaysia, Morocco, Nigeria, Pakistan, Peru, Philippines, Portugal, Romania, Slovak Republic, South Korea, Spain, Ukraine, Uruguay, Vietnam	Australia, Canada, Cambodia, Colombia, Denmark, Hungary, India, Japan, Israel, Kenya, Mexico, Myanmar, Netherlands, New Zealand, Norway, Poland, Russia, Saudi Arabia, Serbia, Singapore, South Africa, Sri Lanka, Sweden, Switzerland, Taiwan, Tanzania, Thailand, UK, US
No PCB	Afghanistan, Albania, Algeria, Angola, Bangladesh, Belgium, Bulgaria, France, Iraq, Libya, Mongolia, Oman, Qatar, Slovenia, Tunisia, Turkey, Togo, Yemen	Luxembourg, Palau, South Sudan

**Source*: World Bank, Doing Business. 2020

[32] APEC Business Advisory Council. "2019 Report to APEC Finance Ministers: Achieving Inclusive Growth Through Financial Inclusion, Innovation and Integration." *APEC Meeting Document Database*, 2019, pp. 2-3, available at: mddb.apec.org/Documents/2019/MM/FMM/19_fmm_009b.pdf

International Guides and Best Practices

PCRs as Complements to PCBs, not Substitutes

While early literature on credit information systems suggested that PCRs and PCBs were substitutes,[33] evidence supported the opposite, i.e. the role of PCRs as being complements to, and not perfect substitutes for PCBs.[34] [35] For example, the presence of a PCB in a market is statistically strongly and positively correlated with increased lending to the private sector (consumer and commercial credit), whereas the presence of a PCR is not.[36] Authors of these studies—which have spanned decades and have examined more than 150 countries—point to different incentives confronting PCBs and PCRs. PCBs invest in innovation and tools to service the market needs of lenders and other end-users of credit data. PCBs also emphasize customer service to clients that are directed by market pressures that don't exist with PCRs. Based upon empirical evidence, then, the complementary roles of PCRs and PCBs implies that too-far-reaching PCRs could harm a nation's credit information system. This outcome also has been observed empirically and should serve as a cautionary tale.[37]

To better understand why PCRs and PCBs are complementary to one another within a national financial ecosystem, it is necessary to briefly examine the primary functions assumed by each.

Traditional Role of PCRs

As discussed, PCRs have been identified as a powerful tool for regulators to use for implementing measures designed to improve their prudential regulation following the 2008 Global Financial Crisis.[38] This is particularly important in a rapidly globalizing banking environment where bank failure in one economy can have a contagion effect to some extent on other economies.

In a number of countries, PCRs have been stood up or have expanded the data collected, if data gaps are identified. In India, for example, the Deputy Governor of the Reserve Bank of India identified data gaps as including, "…information on borrowings from banks, non-banking financial companies (NBFCs), corporate bonds or debentures from the market, external commercial borrowings (ECBs), foreign currency convertible bonds (FCCBs), Masala bonds, and inter-corporate borrowings."[39] Part of the emphasis in India was on having all of this data housed in the same place. In contrast, PCB data is typically used by lenders

[33] Pagano, Marco and Jappelli, Tullio. "Information Sharing, Lending, and Defaults: Cross-Country Evidence." *Journal of Banking & Finance*, vol. 26, 2002, pp. 2017-2045, available at: ac.els-cdn.com/S0378426601001856/1-s2.0-S0378426601001856-main.pdf?_tid=9788a4e0-1b49-4691-9d01-359b89d1d86f&acdnat=1534124340_3e37c0ec5f33251864db584f3148b88b

[34] Powell, Andrew et al. "Improving Credit Information, Bank Regulation and Supervision: On the Role and Design of Public Credit Registries." *World Bank Policy Research Working* Paper, no. 3443, Washington D.C.: World Bank Group, 2004, available at: documents.worldbank.org/curated/en/958501468779185412/pdf/WPS3443.pdf

[35] Miller, Margaret. "Credit Reporting Systems Around the Globe: The State of the Art in Public and Private Credit Registries," 25-80, in Margaret M. Miller ed., *Credit Reporting Systems and the International Economy*. Cambridge: The MIT Press. 2003.

[36] *Supra* at note 17.

[37] Makati Business Club (MBC) and Policy and Economic Research Council (PERC). "Upgrading the Philippine Credit Information System." November 2020, available at: www.perc.net/wp-content/uploads/2021/05/Philippine-Credit-Information-Study.pdf

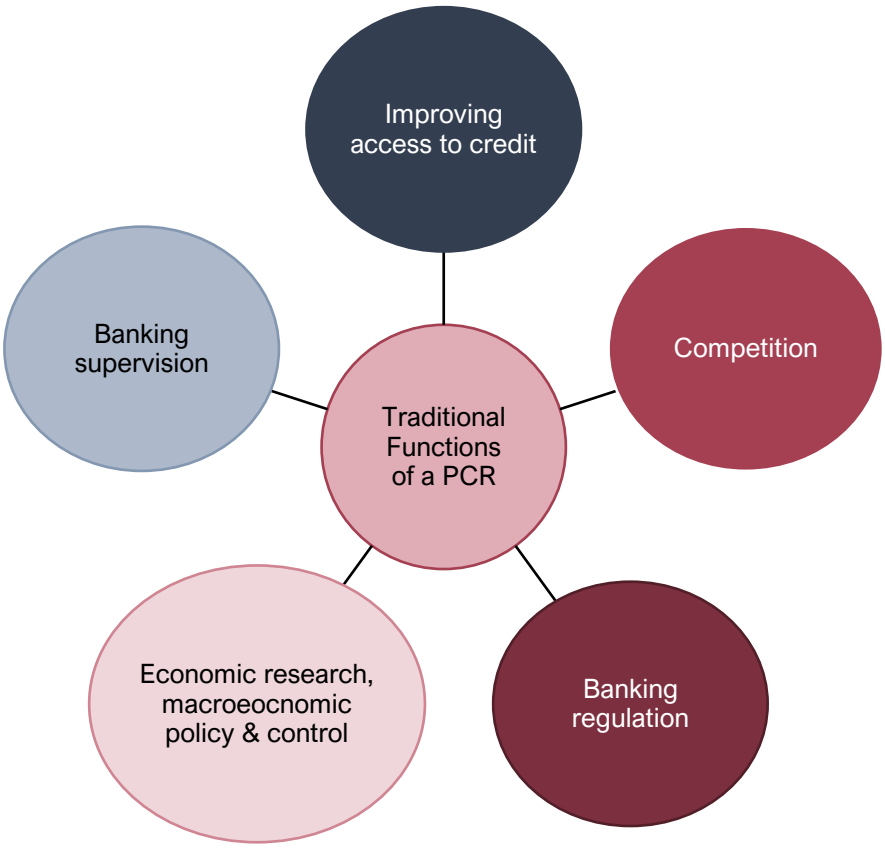
[38] Turner, Michael and Walker, Patrick. "Reply to the HTF Report on Building a PCR in India." *Durham: Policy & Economic Research Council (PERC)*, August 2018, available at www.perc.net/wp-content/uploads/2018/09/india.pdf

[39] *Id.*

to predict the probability of borrower default. Data on commercial credit—including trade credit, movables, secured transactions, receivables, intangibles—is often the domain of a commercial credit bureau (CCB). CCBs are often operated by PCBs such as Experian and Dun & Bradstreet among others.

Beyond expanded data, functions and roles may also be expanded to sharing data with the private sector. This could result in a potential overreach. To understand the consequences of such PCR overreach, we must review the traditional roles and functions of a PCR. Powell et al. identified five (5) functions of a traditional PCR.[40] Please see **Figure 1** below:

Figure 1. *Traditional Functions of a PCR*



[40] *Supra* at note 34.

The World Bank has also published guidelines and principles to follow when designing the optimal credit information system.[41] That document notes,

> *"Credit registries have generally focused on supporting the prudential supervision and risk monitoring of regulated financial institutions."*[42]

According to the World Bank, "Historically credit registries served a different purpose from credit bureaus. 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."[43] PCR data can also be used to better identify risk across financial entities within an economy.

Following the 2008 Global Financial Crisis, a 2010 World Bank publication underscored the value that PCRs could bring in terms of regulation and supervision, particularly in markets without strong private sector information sharing.[44] However, that paper noted, "It is not the purpose of this paper to analyze the role of PCRs in the credit information market or its implications for the dynamics of the (private) credit bureau industry. While the former has been much analyzed in the literature on credit information sharing, the latter is to a large extent an unexplored field…"[45]

Since then, PERC increasingly has been exploring how PCRs and the details of PCRs impact the dynamics of the PCB industry.[46] This report and the cases discussed are meant to broaden and generalize those efforts. This is very timely given the recent push to introduce and expand the roles and functions of PCRs.

[41] *Supra* at note 14.
[42] *Id.*
[43] *Id.*
[44] Girault, Matias Gutierrez and Hwang Jane. "Public Credit Registries as a Tool for Bank Regulation and Supervision." World Bank Policy Research Working Paper 5489, Washington D.C.: World Bank Group, 2010, available at: www.openknowledge.worldbank.org/bitstream/handle/10986/3972/WPS5489.pdf?sequence=1&isAllowed=y
[45] *Id.*
[46] *Supra* at notes 7, 37, and 38.

Measured Impacts of PCRs, PCBs, and Information Sharing on Lending

PCRs and PCBs can operate under different protocols with different incentives, and so may have different impacts on lending for these reasons (among others). Studies have indeed shown distinct lending impacts between a market with a PCB versus one with a PCR. In a study of 129 countries, Djankov, McLiesh and Shleifer found that private bureaus increased annual lending to the private sector by 21 percent of GDP, whereas public bureaus only increased lending by 7 percent.[47] When only lower income economies were used, the same trend surfaced, with private bureaus leading to an increase of 14.5 percent and PCRs only increasing lending by 10.3 percent.[48] A 2007 study by PERC found that 100 percent coverage of credit-eligible adults in a full-file PCB is associated with increased private sector lending by upwards of 60 percent of the given country's GDP.[49] Importantly, a statistically significant relationship between the coverage of *public* credit registries and private sector lending was *not* found.

These findings were re-examined in *The Impacts of Information Sharing on Competition in Lending Markets,* a 2014 PERC study.[50] This study utilized data from 2007 to 2011 and explored a few hypotheses and topics.

The first regression from that report found that the presence of a PCB was associated with an increase in private credit as a share of GDP of about a 39 percentage points, not controlling for any other factors. This relationship was found to be highly statistically significant. On the other hand, the presence of a PCR, surprisingly, is associated with reduced private lending, though this relationship is only marginally statistically significant.

However, it is worth noting the 2007 PERC study also found this same negative relationship, although it was not even marginally statistically significant then.

In the 2014 study a number of regression specifications were produced that included and controlled for other factors, including inflation, size of the economy (GDP), and legal rights. These regressions were structured like those carried out by Djankov, McLiesh, and Shleifer (2005). The coefficient estimating the impact of the presence of PCBs in these regressions drops to 24 or 25 depending on the particular specification. This is close to the estimate of 21 percentage points found by Djankov, McLiesh, and Shleifer. The impact for the presence for a PCR was not found to be significant in either of these regressions, as was the case with Djankov, McLiesh, and Shleifer.

The 2014 PERC study also examined the adult population coverage of the PCRs and PCBs, which can range from 0 to 100. Here, 100 percent coverage by a PCB is associated with a 76-percentage point increase in private credit as a share of GDP. The result is very statistically significant. While 100 percent coverage by a PCR is associated with a 63-percentage point increase in private credit as a share of GDP, but this result is only marginally statistically significant.

[47] *Supra* at note 17.
[48] *Id.*
[49] Turner, Michael and Varghese, Robin. "Economic Impacts of Payment Reporting Participation in Latin America." *Policy and Economic Research Council (PERC)*, May 2007, available at: www.perc.net/wp-content/uploads/2013/09/Latin_America.pdf
[50] *Supra* at note 10.

Further evidence of the mixed performance of PCRs is found in panel regressions from the 2014 PERC study. This analysis accounts for the number of years since a reform to full-file credit sharing occurred. Interestingly, the analysis found the estimated impact of the presence of a PCR is moderately statistically significant, though less so than the coefficient on the presence of a PCB. In addition, the size of the impact for PCR represents only 4.8 percentage points of private sector lending. While the coefficient on PCB was smaller in this regression at 8.9, much of the impact was no doubt captured by the indicator variables for the switch to full-file credit sharing.

The three studies discussed examined different time periods and constructed their datasets independently. Consistent across the studies is that the presence and coverage of PCBs is associated with meaningfully increased private sector lending. On the other hand, across these studies, the association between the presence and coverage of PCRs and private sector lending is weaker and inconsistent.

The usual caveats with these results are necessary. Such cross-national analysis can suffer from problems associated with model specification, data quality, and variable definitions. There is the typical issue of causation versus correlation. Nonetheless, there appears a clear pattern that PCBs, particularly more mature ones that share more data, have been associated with meaningfully more private sector lending. On the other hand, the relationship between private sector lending and PCRs appears to have been less clear and much more marginal.

For the purposes of this paper, another complicating factor is that above data are backward looking as is necessary, and do not take account of or focus on PCRs with expanded roles, like the proposed Super PCR in India. That would likely require different model specifications, such as ones where the presence of a Super PCR could potentially inhibit the efficacy of a PCB.

Table 3. *Study Results Comparing Impact of PCBs and PCRs on Lending to the Private Sector*

	Impacts on Lending to Private Sector as Share of GDP (%)	
Study	PCB	PCR
Djankov, McLiesch, & Shliefer	21*	7
PERC 2007	14.5*	10.3
PERC 2014	39*	Decrease

* Statistically significant.

Other research has analyzed how PCRs and PCBs affect rates of nonperforming loans (NPLs). Studies conducted in Africa and the Middle East found that PCBs were correlated with decreases in NPLs. Ghosh found that NPLs decreased by 10 percent after credit bureau reforms, but credit registries were not as effective.[51] Ghosh suggests this could be because bad loans tend to be small and are not captured by loan thresholds common with PCRs. Kusi et al. looked at groups of both high- and low-income African countries and found that PCBs were associated with reductions in NPLs.[52]

[51] Ghosh, Saibal. "Loan delinquency in banking systems: How effective are credit reporting systems?" *Research in International Business and Finance,* vol. 47, 2019, pp. 220-236, available at: www.sciencedirect.com/science/article/abs/pii/S0275531917304865

[52] Kusi, Baah Aye et al. "Bank credit risk and credit information sharing in Africa: Does credit information sharing institutions and context matter?" *Research in International Business and Finance,* vol. 42, 2017, pp. 1123-1136, available at: www.sciencedirect.com/science/article/abs/pii/S0275531916301325

Credit registries did not have a statistically significant effect on either grouping of high- or low-income countries, although it was statistically significant when all countries were looked at together.

Because these countries' credit information institutions still have low rates of population coverage, more research is needed to assess the applicability of these findings to countries with higher coverage. However, the connection between credit bureaus and lower rates of NPLs is logical. PCRs are focused on supervision and monitoring, and PCBs tend to focus on lowering default rates and improving lending for banks and other lenders.

Why might there be Lending Impact Differences between Private Credit Bureaus and Public Credit Registries?

In theory, an entity owned by the government should be able to collect and distribute data just as a private sector one can. In fact, since the government can compel credit data sharing, government bureaus (PCRs) should have an advantage. However, there are a number of potential explanations as to why it is that the data sharing institutions with the greatest impact on lending are PCBs.

Why PCB are More Innovative and Efficient

While credit reporting may *seem* to be a static economic activity, this is not the case. The types of data captured and disseminated have changed over time. How data is captured, stored, and transmitted also changes. How data is cleaned, analyzed, and turned into solutions changes as well. The growing digital transformation of the economy is accelerating these changes not only regarding the amount and type of the data that can be used, but also the technologies to extract relevant insights from the data.[53] In the US, while there is no PCR, there are a number of areas in which the federal government directly interacts with credit reporting and credit scores. For instance, while private lenders are utilizing newer credit scores and so-called alternative data, government-sponsored enterprises (GSEs) that purchase mortgages—the "GSEs" referred to here are the Federal Home Loan Mortgage Corp. (Freddie Mac) and the Federal National Mortgage Association (Fannie Mae)—are only now looking at updating a crucial credit score that they require of private sector originators. One of these currently required credit scores was built in the mid-1990s with data from the 1980s and 1990s. This government standard, it has been argued, acts to distort the credit risk analytics market in the US. Under the guidance of the Federal Housing Finance Agency (FHFA), the two large GSEs have only recently considered two generic credit scores (instead of one) and are not looking to incorporate more cutting-edge credit scores utilizing newer types of data.[54]

Government regulations have also impacted the collection/acquisition market in the US. Over the past four decades, there have been numerous federal and state regulations that were promulgated at a time when credit reporting of non-financial payment data (this includes energy utility, telecoms, media, and rental payments among others) was primarily negative-only. For this reason, there are much higher barriers to reporting positive, on-time non-financial payment histories than for late or delinquent payments. Partially as a result of these prohibitions or uncertainty in rules, many telecom, rent, and utility late payments or collections wind up in consumer credit reports (and then credit scores),

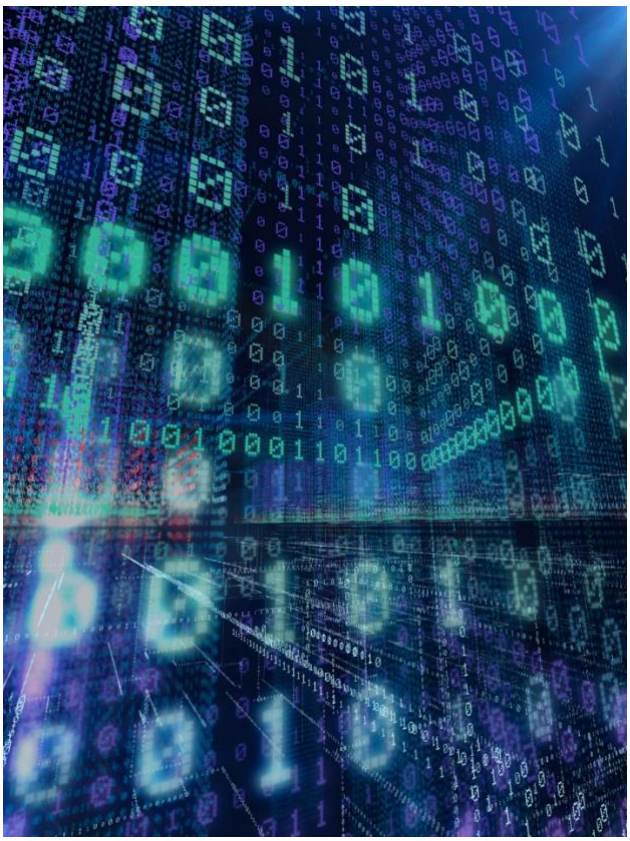
[53] *Supra* at note 30.
[54] "FHFA Issues Request for Input on Fannie Mae and Freddie Mac Credit Score Requirements." *FHFA*, 20 December 2017, available at: www.fhfa.gov/Media/PublicAffairs/Pages/FHFA-Issues-Request-for-Input-on-Fannie-Mae-and-Freddie-Mac-Credit-Score-Requirements.aspx

but few on-time payments do. Some utility and telecom customers, if given the opportunity, would need to specifically authorize their on-time payments to be reported. The same with rental data from government subsidized rental units. But no such permission is typically needed to report late payments/collections.

This hurts the financially excluded population the most,[55] and PERC has steadfastly advocated for over two decades to change this policy.

The nature of government means that the process of change is slow, rules and policies put in place are more difficult to change.[56] And when the US federal government, state and local governments, and other national governments do have valuable data that can be furnished, too often it either does not get furnished or if it does, often in a cumbersome way (there can be hurdles to governments supplying individual-level data). The National Consumer Assistance Plan (NCAP), a major credit reporting reform in the US, had as one of its centerpiece achievements the removal of a good deal of government/court data due to concerns around the data elements that were available for matching and a patchwork of court systems databases ledgers that slowed the collection and updating of data.

Given the breathtaking speed of data growth and IT development, changes in information sharing and the corresponding needs of lenders will likely accelerate. Traditional lenders, data aggregators, value-added service providers, as well as newer entrants, such as FinTech companies, telecoms, and online platforms will need to "discover" and experiment with ways to improve risk assessment with new technology, solutions, and data. While governments typically do not take the lead in such efforts, it is crucial for regulators to monitor these developments and make necessary investments to properly carry out oversight and supervision. Some markets, such as the UK, have recognized the importance of this "leading edge" experimentation and are promoting the so-called "sandbox" approach. Then as technologies, business models, and new solutions begin to emerge and grow beyond the experimental stage, tailored regulations are developed. So while the government agencies are not in the lead, they do need to monitor a fast-evolving market. Once market approaches begin to solidify from experiments to widely adopted practices, government regulations will need to be updated or added. This requires increased regulator understanding and access and use of data and solutions, including new, cutting-edge data and solutions.



[55] *Supra* at note 23.

[56] While governments do have the power to compel reporting, it is usually because of such powers that governments are constrained by bureaucracy that ensures deliberation, transparency, public input, and cautious/risk-averse decisions. For governments and regulators, overall, these constraints are purposeful and are features, not bugs. For private entities, while there is also institutional bureaucracy, it is usually much less cumbersome when one private market actor is voluntarily working with another private actor (such as exchanging data). In addition, there is the check of competition and, more importantly, legal and reputational consequences if the internal private bureaucracies do not work as well as they should.

In summary, the dynamic pace associated with the growth and evolution of credit information sharing and risk analytics in consumer and commercial lending may put PCRs at a disadvantage relative to their private sector peers. Regulators do need to keep pace with the evolution of the market, to enable adequate oversight and regulation, but do not need to lead the evolution. A clear advantage that PCRs do have is their ability to compel reporting, but they need not only require reporting to a PCR they can also compel reporting to PCBs. One could also say that to seize the potential of the digital revolution but also address the risks that it poses both public and the private efforts are needed, each focusing on the areas for which it is best suited. PCBs for "credit bureau" like credit information sharing to the private sector and PCRs for regulation, supervision and oversight—and to overcome market failures such as where predictive data is under-supplied despite a persistent and strong demand for such data.

Private Credit Bureaus are Focused on Providing Value to Individual Lenders

As private, often for-profit, entities, PCBs focus on profitable ways to generate revenue. Since their major customers in most markets are lenders, this often means offering services to lenders.[57] As with many industries, PCBs utilize sales and marketing departments since data and solutions from credit bureau databases will not sell themselves. Despite the bountiful evidence of the value of data/information in risk assessment and underwriting, lenders – given the responsibility they bear – lenders can be conservative and reluctant to adopt new approaches. Lenders, when approached with new solutions are typically not in a crisis situation that requires radical, immediate change. They typically already have detailed, trusted procedures in place that all are comfortable with. They tend to be skeptical of the benefits from changing procedures, fearful the benefits may not materialize as promised while introducing risk. This is not unique to lenders of course, the same could be said of the utilities and many other industries.

Among the benefits of PCBs is that they seek out ways to sell their services to lenders and others by demonstrating the value of their services. In doing so they incorporate feedback, learn what needs lenders and others have, learn what the pain points are, and devise tailored solutions. Often times the details of how data is delivered to data users and integrated into their systems is crucial. PCBs must work with their customers (data users) not only to collect data that they could use, but also to demonstrate that it is valuable, and deliver it to them in an effective manner. In addition, there are a multitude of value-added services that PCBs (and pure-play value-added service providers such as FICO and VantageScore in the US) build on top on this basic relationship with lenders. The PCBs use these relationships to understand their customers' needs and fiercely (particularly where there is competition) look to develop solutions. In this way, solutions get developed faster and can be transmitted to the whole industry more rapidly than if each lender built their own solutions in-house.

Such vigorous and direct interactions with individual data end-users are less typical with PCRs as their role is to provide more generalized solutions in the public interest. Moreover, requirements by the governments, regulators, or PCRs while pursuing laudable policy outcomes (increased data availability to improve lenders´ capacity to assess creditworthiness), may generate unintended consequences. In countries or segments where credit reporting and/or use is mandated, lenders and other furnisher/users may treat mandates as compliance issues and boxes to check. Users may then not have the incentive to explore other (more innovative) alternatives and analyze how data could be used to maximally improve underwriting and business processes. This is where sales, marketing, and client interaction efforts by PCBs are useful.

Therefore, a limitation with *mandates* is that while they may positively impact the macro dynamics (the types and volume of data that is furnished, stored, and accessed), they may be relatively less

[57] It is noteworthy that since the 2004 implementation of the Fair and Accurate Credit Transactions Act in the US, the direct to consumer (DTC) market for the nationwide consumer reporting agencies has enjoyed dramatic growth. It would be inaccurate, therefore, to depict credit bureaus as being concerned exclusively with lenders as customers, while neglecting the important DTC market.

effective on the important micro dynamics of firms (the details of how the data is furnished and used). Put differently—mandates, while powerful, can be a blunt instrument. Ideally then, in markets where there are mandates, there should be a vigorous private sector effort to develop solutions to encourage optimal data use and reporting.

Finally, it is important to note that PCBs also offer valuable direct-to-consumer services which benefit consumers. These include credit consumer-friendly credit reports, credit education, personal financial tools, apps, credit freezes and locks, score simulators, and credit monitoring. Online credit marketplaces often partner with PCBs. The direct-to-consumer market is relatively new in CIS, but it is growing rapidly with the digital revolution. Such services are rarely offered by PCRs. Miller, in her study, notes that PCRs are much less well equipped to deal with consumers.[58] The World Bank's *Credit Reporting Knowledge Guide* also notes the role PCBs play in reaching data subjects (consumers).[59]

[58] *Supra* at note 35.
[59] *Supra* note at 14 and 15.

CASE STUDIES

Spain Case Study

For decades, Spain's underdeveloped national (CIS) system consisted of negative-only data (late credit payment data) reported by lenders to two PCBs (Experian and Equifax), and full-file data on loans of totaling 9,000 Euros or more (timely and late credit payment data) to the Spanish PCR.[60] The PCR in Spain is known as the Risk Information Center of the Bank of Spain or "CIRBE" for the Spanish name Central de Información de Riesgos, Banco de España. On July 24th, 2020, the Bureau of Economics adopted a Ministerial Order (MO) dramatically altering Spain's CIS system.[61]

The reform was driven by a desire to increase data access for regulators, and to improve the capacity of lenders to assess borrower creditworthiness. Lenders are constrained in credit risk assessment efforts owing to the absence of volumes of predictive positive payment data. Such data is largely absent as: (1) lenders are reluctant to share with third-party credit bureaus for fear of competition reducing margins; and (2) compliance concerns harbored by lenders owing to strict data protection laws. This reform was carried out under an expedited legislative process without formal, general public consultation. The Bureau of Economics did consult with select members of the banking community, but not the existing PCBs in Spain.

As per the MO, the key changes to Spain's national credit information system vis the CIRBE include:

- Expanding the type of entities that will report to the CIRBE by having payment services providers (which also offer credit products) report to the CIRBE;
- Lowering the reporting threshold to EUR 1,000 from EUR 9000 for aggregated risk (regardless of the number of loans) that are to be reported to CIRBE; and
- Reducing the frequency CIRBE data will be available to data furnishers (from every 30 days to every 20 days).

On January 30th, 2021, the Bank of Spain published the technical details (a "Circular," a type of administrative regulation) to implement the July 2020 Ministerial Order. For these details there was open public consultation and the trade association for PCBs in the European Union—ACCIS—submitted comments to the Bureau of Economics strongly opposing the measures included in the MO.[62] Their opposition stemmed from serious concerns of several unintended consequences. These included reduced sector-wide competition (e.g. excluding FinTech firms from accessing broader datasets), potential reductions in investments in innovations and possible exit by one or more PCBs currently operating in Spain.

The MO also instructs the Bank of Spain (Spain's central bank) to prepare a report exploring the costs and benefits of a potential future expansion of the CIRBE's credit database. This report is to be submitted to the Ministry of Economy for their consideration. The Ministry of Economy's evaluation of this, in turn, should be completed on or before January 2nd, 2022. The findings could further alter the credit information sharing landscape in Spain, creating a year or more of uncertainty within this market.

[60] Before 2013, the threshold in Spain was 6,000 Euros for an individual loan. Now the threshold is 9,000 Euros worth of accumulated risk per individual or entity.

[61] The Ministerial Order expanding the Spanish PCR (CIRBE) was adopted on 24 July 2020. For a version in Spanish **see:** www.boe.es/eli/es/o/2020/07/24/etd699

[62] Association of Consumer Credit Information Suppliers (ACCIS). "ACCIS White Paper: Complementarity of public and private reporting in Europe to promote responsible lending." 2000, available at: www.accis.eu/wp-content/uploads/2020/12/ACCIS-White-Paper-Complementarity-of-public-and-private-credit-reporting-in-Europe-to-promote-responsible-lending-Dec2020.pdf.

Policy Risks

The credit reporting reforms greatly expands requirements to report credit data to the government (CIRBE). This has the potential to severely impact, or eliminate altogether, the Spanish PCBs if this information is simply returned or fed back to the banks for use in credit risk assessments. This would be especially the case if the data were made available for free or at a government subsidized rate. PCBs would be put at great disadvantage as they cannot compel reporting and cannot simply return data at or even below costs. While PCBs also provide lenders data from other sources (such as telco, utilities) and services, this may be at risk if their core business is undermined. [63]

PCBs in Spain have unsuccessfully tried to convince the banks and lenders to report positive credit payment data. Possibly owing to the emergence of a FinTech sector in Spain, regulated Spanish banks are now supportive of sharing their positive data *but* only via the CIRBE. While this initially may seem like a positive development, in reality this arrangement will exclude non-CIRBE-regulated lenders from being able to access their information, thereby shielding regulated lenders from some degree of competition from FinTechs. Thus, lender support for the CIRBE-centric approach to data sharing may be motivated, to some extent, by a desire to protect market share.

Inasmuch as PCBs rely heavily upon the sale of credit reports as a revenue stream—direct competition from the CIBRE in this market will potentially devastate one or both PCBs currently operating in Spain. This may be fine for the half dozen or so larger banks in Spain, which may be happy to a certain extent using data from the CIRBE along with their own proprietary risk models and credit decisioning tools, but will most likely be a net negative outcome for smaller, newer lenders lacking both the data and the expertise to effectively compete with the well-entrenched larger lenders.[64] Proponents of reform report a "broad

[63] Currently there are two Private Credit Bureaus operating in Spain; Experian and Equifax. Both are publicly listed companies with significant US, UK and European shareholders. On the basis of the legal framework in Spain, over the past years they have developed their activities, invested significantly in Spain, and created hundreds of jobs while contributing to responsible lending. They represent critical financial infrastructure with economy-wide significance.

[64] The consumer lending sector in Spain is highly concentrated. Among the larger lenders, there are three tranches by annual revenue. On one level, there is Banco Santander, which in 2017 earned €48.4 billion. The next tranche includes BBVA (€9.2 billion revenue in 2017), CaixaBank (€8.2 billion in 2017) and Banco de Sabadell (€5.5 billion in 2017). The third tranche is comprised of Bankia, Banco Popular, and BankInter each of which earned between approximately €2 and €3 billion annual revenue in 2017. The revenue fall off thereafter is precipitous. **See:** Corporate

consensus" of support for the MO. The breadth of the consensus is at best contestable, as it entirely excluded PCBs and FinTech firms while seemingly focusing on the regulated banks.

Perversely, reforms that aim to increase the availability of credit could have the unintended consequence of hobbling the private credit data sharing market. If the government entity does not innovate and work to serve the needs of the data users as the private sector would, then this could curtail growth and innovation in credit information sharing in Spain. This could negatively impact lending,[65] [66] lender competition, and overall economic growth[67] relative to the scenario with complementary PCR and PCBs.[68] The ultimate cost of the lending impacts would be borne by consumers / borrowers in Spain in terms of reduced credit access and higher prices.

Ways to Mitigate Risks

While this is a bit of a moving target owing to the fact the report on the costs and benefits of expanding the scope of the CIRBE's purview won't be released until 2022, based upon what we understand today, PERC offers the following as ways to mitigate policy risk:

- First, clarify the role and functions of the CIRBE in a way to ensure a complementary and non-competitive relationship with PCBs given the potential for economic harm resulting from such competition.[69]

- Second, either mandate full-file data sharing by regulated banks to the existing PCBs in Spain. Further require the PCBs to pass along depersonalized payment data for all loans above €1,000 to the Bank of Spain's CIRBE for use in prudential regulation and other traditional functions performed by a PCR; or,

- Require the CIRBE to also share full-file payment data it receives with the licensed PCBs so that they may improve the data quality, sell enhanced credit reports to regulated banks and non-regulated lenders in order to bring the Spanish economy and borrowers the benefits of a competitive financial sector.

Finance Institute. "Overview of Banks in Spain." *Corporate Finance Institute*, available at: corporatefinanceinstitute.com/resources/careers/companies/top-banks-in-spain/

[65] *Supra* at note 17. **See also:** Turner et. al., 2007 and 2014.

[66] *Supra* at note 26 (given information asymmetries, lenders ration credit and raise price. Given higher cost of credit, relatively more borrowers with higher risk/reward business model take credit causing increase in systemic risk level).

[67] *Supra* at notes 7, 37 and 38.

[68] *Id.*

[69] While the primary functions of the CIRBE are defined by an Act of Parliament, which is for the most part clear—the task of providing banks with relevant information may require clarification. Otherwise, the defining law seemingly envisions CIRBE as a traditional public credit registry and not a public credit bureau.

Philippines Case Study

Credit Information Sharing Act (CISA)

The Philippines introduced a PCR (Credit Information Corporation or CIC) under the Credit Information Sharing Act (CISA) in 2008 after a market failure. Before the new law was enacted, there were attempts at a credit data sharing system; entities were permitted but not mandated to report data. Credit data sharing varied and was widely fragmented, and many borrowers faced issues of limited access to credit. CISA was intended to usher in more efficient lending and wider financial inclusion. Although real progress has been made in the credit information system since 2008, CISA is seen as underperforming and not fully achieving its goals.

PERC recently released a comprehensive joint-study with the Makati Business Club (MBC) that evaluated the Filipino credit information system.[70] The study identified several key factors likely constraining the development of a robust credit information sharing ecosystem in the Philippines. First, the Credit Information Center (CIC)—the PCR created by the CISA—is perceived to have a dual role in the credit information system. It acts as a public credit bureau competing with PCBs and as the regulator of the PCBs and submitting entities (data furnishers such as regulated banks). This may be causing business uncertainty and contributing to systemic harm of the credit information sharing market. Credit reporting service providers, known locally as Special Accessing Entities or "SAEs," are unable to compete on a level playing field, and thus may be under-investing in the market and in innovation. Data quality was another identified issue. The problem of data quality and alleged underreporting of data (even though it is mandated) could be contributing to a view that the CIC maintains insufficient data. Unlike in Europe or among advanced economies, a data furnishing mandate in some emerging markets may not be easily enforced. Often times, lenders simply ignore the mandate or employ delaying tactics year after year. Lenders with large borrower databases are not accessing CIC data because they have no need for it, and instead rely upon their own

[70] *Supra* at note 37.

internal data and in some cases data from PCBs such as TransUnion. If, however, more large lenders were to fully report to the CIC—as per the mandate—and the CIC in turn sells credit reports of a comparable or superior quality to those offered by PCBs, then the entire credit information sharing ecosystem could be upset as the PCR would threaten the primary revenue stream of PCBs in such a scenario.

Ramifications

Market distortions from a government agency competing with private sector companies may have resulted in the world's largest PCB (Experian) exiting the market after being accredited as a special accessing entity (SAE). Exit from the market affects the dynamic of competition between PCBs and could result in less innovation dynamism in this sector. Beyond the growth of the credit reporting sector, since credit data is a key input in lending and other financial services, an underperforming credit information sector has important knock-on effects in terms of lending and access to credit. This of course, was the reason for CISA and why there is continued policymaker interest in reforming the CISA and the CIC.

As this report went to press, the CIC issued a circular in which fees for licenses to operate as an SAE more than tripled. In addition, the CIC has formalized their intention to actively sell credit reports to lenders in direct competition with the three licensed SAEs operating in the Philippines. Given the fledgling stage of development of the SAEs, this means the CIC will now erode the primary revenue stream of the SAEs in order to fulfill their revenue generating mandate as per the CISA. Lastly, we understand the CIC is entertaining the issuance of additional licenses to new entrant SAEs in a market that may be unable to sustain the three already licensed SAEs. While competition will invariably be pointed to as the reason for this, it seems more plausible that such decisions are being taken with the narrow objective of growing CIC revenues without any consideration to broader marketplace implications.

Recommendations

The PERC-MBC joint study contained a number of general recommendations, including:

- CIC's role should be focused on traditional PCR functions, including gathering consumer credit payment data for use in micro- and macro-prudential oversight and regulation, generating and publishing statistics, informing monetary policy, helping to ensure the safety and soundness of the Philippine financial sector, in addition to helping close data gaps in the overall information sharing market.
- Currently, data furnishers are only mandated to report data to the CIC, at which point the CIC standardizes the data, improves the data quality, and then reports data back out to the PCBs. Instead, the CIC should mandate the data furnishers fully report account data to the PCBs, essentially outsourcing the function of ensuring data quality to them, which will allow them to innovate and compete further in this space. The CIC should work closely with the PCBs to enforce the data mandate.

India Case Study

In 2017 the Reserve Bank of India (RBI) began discussions of creating a PCR in India.[71] [72] While India has PCBs, a presentation by Dr. Viral V. Acharya, then Deputy Governor of the RBI, put forward a call to create a PCR to provide the RBI with comprehensive and robust data in order to carry out traditional PCR functions, such as collecting data for oversight and supervision purposes. However, the proposed PCR would also collect and distribute data to aid lenders with credit risk assessment, thus competing with PCBs. In addition, the scope of the data that was proposed to be collected is unprecedented: commercial data, traditional consumer credit data, alternative data, government data, and there was even discussion of other, more 'exotic' data, such as satellite data. The "traditional" oversight and supervision roles for the PCR was not controversial, nor was the drive to correct market failures in data collection and otherwise help close data gaps that may be hindering credit access and inclusion. What was controversial was that the proposed PCR would also directly compete with established private consumer and commercial credit bureaus in many types of data collection.

Situation Today

The RBI has selected Tata Consultancy Services (TCS) to develop the PCR to collect both consumer and commercial data.[73] Previously, RBI officers noted that the proposed PCR would showcase Indian technology and software savvy to the rest of the world.[74] But the details of the proposed PCR are still not known beyond the previous documents produced in the run up to creating the PCR, such as the *Report of the High Level Task Force on Public Credit Registry for India.*[75] Recent conversations with executives at PCBs underscores this uncertainty. Consequently, any statements about the impact the proposed PCR will likely have on the Indian financial sector and economy remain conjecture until further credible information becomes available.

Ramifications

Although the proposed PCR in India is not yet operational, the potential scope of the PCR and lack of certainty surrounding its details and its potential to gradually become an unprecedented large-scale database has existed for years. This, no doubt, has been harming business planning and curtailing investment decisions among India's private PCBs. This suboptimal planning and potential underinvestment would not produce an immediate, noticeable shock to the credit sharing market, but rather would likely produce a slow and growing degradation of where the credit sharing market might have been with greater certainty. What makes this particularly problematic is that early discussions of the PCR had it performing many tasks and potentially collecting unprecedented types of data. PCBs would, therefore, not only be unsure of the exact extent of segments the PCR will enter when it is first launched, but also those as it develops.

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[71] Turner, Michael and Walker, Patrick. "The Case for Building a Public Credit Registry in India: Additional Evidence for Consideration." Durham, NC: PERC Press, The Asia-Pacific Credit Coalition, 2018, available at: www.perc.net/wp-content/uploads/2018/03/India_PCR.pdf

[72] *Supra* at note 38.

[73] Tata Consultancy Services. "TCS Demonstrates Operational Resilience While Positioning for Growth Recovery." *Tata Consultancy Services*, 2020, available at: www.tcs.com/content/dam/tcs/investor-relations/financial-statements/2020-21/q1/IFRS/Press%20Release%20-%20USD.pdf

[74] *Supra* note 38.

[75] High-Level Task Force. "Report of the High Level Task Force on Public Credit Registry for India. New Delhi: Reserve Bank of India." June 2018, available at: rbidocs.rbi.org.in/rdocs/PublicationReport/Pdfs/PCRRR09CF7539AC3E48C9B69112AF2A498EFD.PDF.

There are clear risks associated with the PCR. First, if the details of the Indian PCR that eventually emerge are such that the PCR does overreach and take key revenue streams from the private sector, then there will be harm to the private credit reporting system. In this case, the public sector could starve the private bureaus of funds that would be used to develop and evolve credit information sharing. Second, if the government entity underperforms relative to private sector and it turns out to be an imperfect and inadequate substitute for carrying out the credit bureau roles, then this would bring with it additional harm. These harms could significantly impact the development of lending competition and access to credit in India, which, in turn, would have larger economic and financial inclusion impacts. That said, we should underscore that these are risks and are by no means guaranteed. The PCR could work to avoid significant overreach, become more transparent, and perform well.

It is also important to note that the largest lenders may not oppose a hobbled credit information sharing market. Large lenders in India have an already existing large customer base yielding their own large internal databases and internal analytics departments that may do fine with basic data from a PCR. In a number of markets, it is the largest lenders that typically hinder more advanced credit data sharing and third-party value-added services development, as they fear that they have more to lose from increased competitive pressures from such developments than they have to gain, relative to their smaller peers.

Recommendations from PERC Reports

- **Clarify and make more transparent the path the PCR will take over the next decade to reduce market uncertainty.** Otherwise, investment in and planning by PCBs and value-added service providers will be unnecessarily negatively impacted by unneeded uncertainty.
- **Bring PCBs to the table in the PCR implementation and planning.** By including PCBs in the process, and viewing PCBs as complements to a PCR and not substitutes, room may be created for an optimal outcome. Such an engagement would likely yield overall positive results for the Indian credit sector where PCBs help solve some of the problems correctly identified by the HTF and the RBI—including data gaps, different data formats, and insufficient data for the PCR to supervise, oversee, and monitor the financial services sector. Similarly, such collaboration could also help overcome PCB uncertainty and result in a PCR that advances broader interests while protecting those of existing stakeholders.

- **Circumscribe activities the PCR will take on to leave space for the PCBs to carry out tasks for which PCBs are best suited.** This would avoid unnecessarily redirecting revenue from the private sector information sharing space which could hobble its development.
- **Data furnished to the PCR should be made available to PCBs.** Any data collected through the PCR should be made available to the PCBs for use in improving credit risk analysis and expanding financial inclusion. This data can either be mandated to be reported to the PCBs or can be made available via the PCR.

Germany Case Study: PCR After PCBs to Fight Inflation

Evolution of CIS Market In Germany

In 1934, the first and oldest PCR in the world, the Evidenzzentrale für Millionenkredite, was established in Germany in response to the systemic risk exposures and instability of the German financial sector at the time. [76] [77] Germany's central bank (Deutsche Bundesbank) manages the PCR (also referred to as a CCR or Central Credit Register) and uses its data for macroprudential supervision and analysis.[78] Of the 15 EU member states that have a PCR, Germany's has the largest loan reporting threshold at € 1 million;[79] [80] with the implementation of AnaCredit regulations in 2016, however, all credit-granting institutions in Germany are now obligated to report commercial credit loans above € 25, 000 as well.[81] While these thresholds may seem high, Germany's Bundesbank has been unabashed in maintaining the position small loans have "…little impact on system solvency or risk."[82]

Private credit bureaus are also active in this market, some of which predate the PCR (e.g. SCHUFA f.e. in 1927, which is by far the largest PCB and which is commercially owned by financial institutions).[83] According to a survey conducted by the European Credit Information Institute in 2011, PCBs in Germany have a loan reporting threshold of € 300.[84] The World Bank reports coverage by SCHUFA at a low of 84% in 2004 and a high of 100% in 2019. SCHUFA is a full-service and sophisticated PCB offering a wide range of consultative and value-added services to clients including credit risk scoring solutions.

PCR as Complement to PCBs

In most cases, a PCR is created to address a gap or deficiency in an economy's CIS system, and usually as a response to financial crises.[85] For example, in the Philippines, lawmakers took steps to launch a PCR after 20 years of failed efforts by an indigenous PCB (CIBI Information, Inc.). This was clearly a market failure as predictive credit data was massively under-supplied relative to demand and lenders were unwilling to share with the monopoly PCB without government intervention, a reporting mandate, and a restructuring of the market. This is most often the case in emerging markets—usually when no PCB exists and credit data sharing is needed to manage systemic risk and grow lending to the private sector.

In their 1999 paper *Information Sharing, Lending and Defaults: Cross Country Evidence,* Pagano and Japelli suggest that PCRs and PCBs are substitutes of one another; in short, PCRs are created where there is no existing private credit market. However, as succeeding research[86] and this report has shown, there is empirical evidence against this notion.

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[76] Association of Consumer Credit Information Suppliers (ACCIS). "Complementarity of public and private credit reporting in Europe to promote responsible lending." Dec. 2020, p. 8, available at: https://accis.eu/wp-content/uploads/2020/12/ACCIS-White-Paper-Complementarity-of-public-and-private-credit-reporting-in-Europe-to-promote-responsible-lending-Dec2020.pdf

[77] *Supra* at note 34 on p. 18.

[78] Financial Stability Board (FSB). "Peer Review of Germany: Review Report." 29 Jul. 2020, p. 10, available at: www.fsb.org/wp-content/uploads/P270720.pdf

[79] *Supra* at note 76.

[80] van Roy, Patrick et al. "Use of credit registers to monitor financial stability risks: A cross-country application to sectoral risk." *Bank for International Settlements – Irving Fisher Committee on Central Bank Statistics*, May 2017, p. 5, available at: https://www.bis.org/ifc/publ/ifcb46zb.pdf

[81] Deutsche Bundesbank. "Guidelines on credit data statistics (AnaCredit)." 1 Jan. 2020, p. 5, available at: www.bundesbank.de/resource/blob/803824/6f3b80083e8b7aa729a5fe51b4b489de/mL/anacredit-guidelines-data.pdf

[82] *Supra* at note 35 on pp. 12-13.

[83] *Supra* at note 76.

[84] Rothemund, Marc & Gerhardt, Maria. "The European Credit Information Landscape: An analysis of a survey of credit bureaus in Europe." *European Credit Research Institute*, Feb. 2011, p. 16, available at: aei.pitt.edu/33375/1/ACCIS-Survey_FinalReport_withCover.pdf

[85] *Supra* at note 34 on p. 18.

[86] See note 34 and 35.

Several countries (mostly in Africa, Asia, and Latin America),[87] including Germany, established PCRs after their PCBs had already been established and operating for some time. While the reasons for establishing a PCR when there exist properly functioning PCBs may vary across countries, the hyper-inflation of the Weimar Republic in Germany and the subsequent national obsession with controlling inflation through monetary policy goes a long way toward explaining the decision in that country.

CCR and PCBs in Harmony in Germany

Germany is an example of an economy whose PCR and PCBs successfully complement each other — both institution types thrive, because they carry out functions distinct from and complementary to each other. The PCR in Germany serves its purpose of assisting the central bank with banking supervision and in conducting micro- and macroprudential analysis, and providing data for economic policymaking. However, more importantly, the separate and distinct roles and functions of the German PCR and PCBs does not put the PCR in a position of tension with the PCBs' sources of revenue—as is the case in the Philippines and other countries examined in this report. Thus, PCBs confidently invest in innovation for the long-term, giving Germany a robust and stable credit information sharing ecosystem.

[87] *Supra* at note 35.

Italy Case Study: Complementary Coexistence of PCR And PCBs

Evolution of CIS Market in Italy

Established in 1962, the Italian Centrale dei Rischi (CR) is managed and run by Banca d'Italia.[88] It was created to support the central bank in supervising Italy's financial sector.[89] To date, the CR contains data on more than 10 million individuals (approximately 31% of Italy's adult population).[90] Similar to its contemporaries in other EU member states (e.g. in Germany, France, and in Austria), the CR observes a high loan reporting threshold – € 30,000.[91] However, the threshold lowers to € 250 for non-performing loans.[92] The reporting threshold for commercial credit loans complies with the requirements of AnaCredit at € 1,000.

Banks and other types of financial institutions (including foreign branches operating in Italy) are required to furnish data to the CR; in return (and similar to Portugal and other countries), the CR provides them with information aggregated for each debtor in the system (a lender can access all information on its *existing* borrowers) and data on potential borrowers (e.g. a lender can only access 12 months' worth of data for *new* applicants).[93] Furthermore, the CR carries out the traditional functions of a PCR, namely providing micro- and macroprudential supervision of banking activity, monitoring the allocation of credit, and assisting in the conduct of monetary policy.[94] It is considered a "strategic resource" by Banca d'Italia, and, alongside providing information on borrowers, the CR also offers the following: production of aggregate statistics, extraction of specific information flows for the central bank and other supervised entities/data furnishers, consulting services for the public, and other data points.[95]

Harmonious Relationship Between PCR and PCBs

The CR and Italy's PCBs coexist harmoniously.[96] PCBs are now well established in Italy, but struggled to find their identity during their early years. They were initially viewed with skepticism by Italian lenders as their role in relation to an existing PCR was unclear.[97] The first PCB in Italy, the Consorzio per la tutela del Credito (CTC), was established in 1964,[98] and when CRIF, currently the country's largest PCB, began operating in the 1990, large banks were hesitant to share their data for much the same reason.[99]

Eventually, in some measure owing to the fact that the PCR maintained separate and distinct objectives and functions from PCBs in Italy, the PCBs flourished. There is a well-understood and respected balance between how both Italy's PCBs and PCR serve the needs of the credit market and financial sector. For example, as is the case with Germany, the CR observing a higher reporting loan threshold ensures that it won't directly compete with PCBs in providing credit reports to lenders for risk assessment decisioning.

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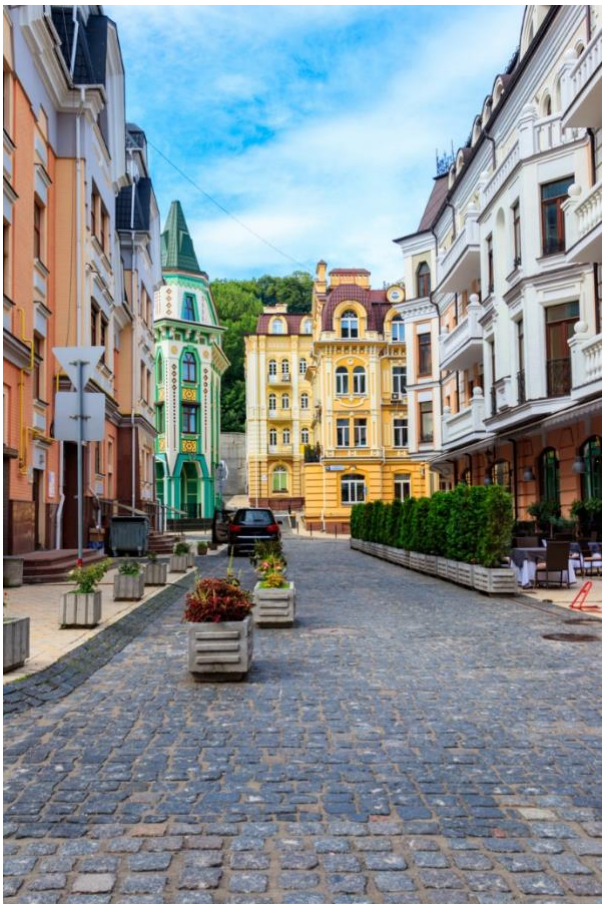
[88] *Supra* at note 76.
[89] *Supra* at note 15 on p. 113.
[90] World Bank Group. "Doing Business 2020 Economy Profile: Italy." *Doing Business*, 24 Oct. 2019, p. 35, available at: www.doingbusiness.org/content/dam/doingBusiness/country/i/italy/ITA.pdf
[91] *Supra* at note 76.
[92] *Id*.
[93] Pagano, Marco and Jappelli, Tullio. "Information Sharing in Credit Markets: The European Experience." *Centre for Studies in Economics and Finance Working Paper No. 35*, Mar. 2000, p. 39, available at: www.researchgate.net/publication/23573892_Information_Sharing_in_Credit_Markets_The_European_Experience
[94] *Id.*
[95] *Supra* at note 14.
[96] *Supra* at note 76.
[97] Pagano, Marco and Jappelli, Tullio. "Information Sharing, Lending and Defaults: Cross-Country Evidence." Oct. 2000, p. 7, available at: entreprises.banque-france.fr/sites/default/files/media/2017/06/21/shar_old_0.pdf
[98] *Supra* at note 76.
[99] *Supra* at note 18 on p. 19.

Ukraine Case Study



The situation in Ukraine is similar to other nations. Following the financial crisis, Ukraine moved to create a PCR to bring more data and insight into banking supervision. A September 2015 press release by the National Bank of Ukraine discussed the creation of the Ukraine credit registry.[100] It noted that PCBs have now existed in Ukraine for many years following 2005 legislation permitting them. The press release made clear that the PCR would operate in "parallel" to the PCBs, with each carrying out its own roles. However, the release did mention that banks would be able to access data on their customers from the PCR. Further, banks would be required to report data to the PCR.

It is clear that the PCR began as a tool focused on banking supervision; in fact, a press release from November 2015 is titled, "The Credit Registry of the National Bank is established solely for the purpose of banking supervision." Nonetheless, it notes, as the earlier one did, that banks would have access to credit registry data on their own customers to reduce risk.[101] However, the PCR only received data on loans that were above a minimum threshold that is the equivalent of more than $22,000 US (or about a hundred times the minimum salary in Ukraine).[102]

In addition, the PCR would also have up to several days to process the data, and does not have an efficient online data portal to return data to the requesting party. This combined with the minimum threshold, helped to maintain a balance between Ukraine's PCR and its PCBs (which, unlike the PCR, could rapidly exchange data with users and did not have minimum thresholds for furnished loan data).

Situation Today

Interviews with executives from PCBs in Ukraine revealed that there is now serious concern in the private credit information sharing sector that this balance is about to be upended. Specifically, the concern surrounds a push by policymakers to eliminate the reporting threshold for the PCR. This push likely stems from a few objectives: the desire for more granular data in supervision and oversight, and the desire to create a more unified and complete credit database in a market where there are multiple bureaus fragmenting credit reporting. In addition, the National Bank now supervises non-banks, and so would need data on lower value lending. Our interviews confirmed that particular lenders may report to just one bureau and not all. An explanation offered in one of the interviews for this behavior was that large lenders in

[100] National Bank of Ukraine. "Establishment of a Credit Registry at the National Bank of Ukraine will help reduce credit risk concentration." 2015, available at: old.bank.gov.ua/control/en/publish/article?art_id=22025071.
[101] National Bank of Ukraine. "The Credit Registry of the National Bank is established solely for the purpose of Banking Supervision." 4 Nov. 2015, available at: www.bank.gov.ua/en/archive-news/all/23509871-the-credit-registry-of-the-national-bank-is-established-solely-for-the-purpose-of-banking-supervision
[102] 112.UA News Agency. "Law on Credit Registry comes into force in Ukraine." 4 Mar. 2018, available at: www.112.international/ukraine-top-news/law-on-credit-registry-comes-into-force-in-ukraine-26236.html

Ukraine are likely fearful of competitors "cherry picking" their better customers. This is a concern seen elsewhere and can act to inhibit credit information sharing.

For the private bureaus, the PCR policy change is seen as an existential threat. The main reason is that while all banks would be required to report to the PCR, they are required to report to at least one private bureau but not all. Banks, in turn, would be able to access the PCR data, which would have greater banking coverage than the private bureaus. Our interviews also revealed that lenders in Ukraine are happy to receive "raw" data and less interested in value added services given Ukraine's strengths in well trained analysts and data scientists. Lenders tended to analyze data "in house." This, combined with it being reported that the overwhelming majority of revenue for the private bureaus comes from basic data and credit reports, underscores the risk to the private sector from the proposed PCR policy change. Executives from the bureaus suggested that lenders would simply view the PCR as a means of cost reduction, even though they will be required to share more data. Larger lenders may view greater data sharing as inevitable and thus support the mechanism whereby they can access the data without going to a PCB.

At the time of the PCB interviews, there was significant uncertainty as to important details of the proposed changes. These include whether data from the PCR database would be shared with the PCBs.

Policy Recommendations

Given that there is a desire to expand data collection in Ukraine and make more data available to a supervisor, this could be a good opportunity to reform credit information sharing more generally. Otherwise, the private credit sharing market would be severely affected, with the potential for negative consequences for Ukraine credit markets.

To achieve optimal policy outcomes, policymakers could empower the private sector by working to make core credit data more available to PCBs. This would help address the problem of suboptimal credit data market fragmentation. The PCR should also refrain from competing head-on on an unlevel playing field with the private sector. Instead, the PCR should focus on collecting data it needs for supervisory purposes on loans above a certain threshold or thresholds.

Lenders and other data users would access data from PCBs and then compete amongst themselves in terms of data quality, customer service, value added services / other services, and the collection of other non-core and non-traditional data elements.

In our interviews it was also noted that PCBs and by extension lending in Ukraine could benefit if PCBs had greater access to non-PCR state registries that already collect and maintain useful data on private individuals and legal entities. This is a relatively easy way for the government to better utilize already collected data. There are many governments globally already doing this (*e.g.* sharing ID information, court information, tax and income information, property records, license information, among other types of information).

The above recommendations would satisfy the needs of the regulators and supervisors and instead of weakening PCBs, reinvigorate credit information sharing. This would enliven credit markets and lender competition and, in turn, would likely have long-term benefits for the economy and consumers of Ukraine.

Moldova Case Study

The Moldovan case is somewhat of a counterexample to Ukraine's case and a little like a case of the dog that "did not bark." While banks are required to report credit data to their PCR, the PCR does not compete with PCBs, of which there are three. Banks are required to share credit data to at least one PCB.

Initially, Moldova suffered from banks underreporting their credit data. Credit reporting, however, improved over the last several years following "patience" by the central bank. Today there is sufficient credit reporting and the market is not fragmented in terms of core bank data.

Beyond the core bank data, credit bureaus are also collecting credit data from nonbank sources and microfinance institutions.

The case of Moldova is instructive in that the regulators used a PCR to collect data for traditional supervisory/regulatory purposes, at the same time appearing to be well aware of the impact their policies could have on PCBs. Even in the face of a slow start to credit reporting to PCBs, the central bank fostered a healthy private sector and given it time to correct the underreporting problem.

Policy Recommendations

We would encourage policymakers in Moldova to stay the course. They are navigating through a delicate period in the growth and evolution of credit information sharing in their country, and have seemingly made a series of correct decisions so far. Of course, constructing the optimal national credit information sharing system places borrower access to affordable credit, competition among lenders, systemic safety and soundness, and growth in lending to the private sector as the principle objectives. These may be antithetical to the pursuit of profit by some stakeholders, who in turn may organize to influence policy in Moldova more to their liking. Moldovan lawmakers and regulators would do well to resist such powerful interests and continue being guided by compelling social and economic principles.

Portugal Case Study

Since 1978, Portugal has had a PCR in place called the Central Credit Register (CCR). The CCR's main objective, since its inception, is to provide useful information to the financial system for the assessment of risk when granting credit. Additionally, the CCR fulfills the roles of a traditional PCR—gathering data for micro- and macro-prudential regulation and oversight, ensuring the safety and soundness of the financial sector, and informing economic and monetary policy. The CCR was assigned to the Banco de Portugal—Portugal's central bank—for management. Since its inception until 1993, the CCR only collected data on legal persons (commercial credit information on businesses), but since then it has also collected data on natural persons (consumers/individual borrowers).

Banks that report data to the CCR every month, in return receive on a contract-by-contract basis, data on loans granted to their customers by the financial system as a whole without the identification of the lenders. Besides the outstanding and the overdue amounts, if applicable, on each contract, other classification variables like type of instrument, inception date, maturity date, and also the amount of regular repayments are provided. These data are related to the last reference month and are sent to all reporting banks automatically approximately three weeks after end of the reference month.

Upon request, banks may access CCR data for potential new clients (new customers/borrowers). The report they obtain has exactly the same type of information as the reports mentioned above. The report includes data for the last reference month only.

According to the legal framework of the CCR, the retention policy is defined as a five-year period, but banks can only access the last available month. Conversely, debtors can access all data stored in their database (related to the last 60 months). If an error or omission is found in the data for that period, banks are required to correct it.

Situation Today

About three years ago (2018), prompted by the development and implementation of AnaCredit within the European Union, significant policy reforms were implemented. Earlier, data provided to the CCR was reported with the debtor as the unit of analysis. With the 2018 reform instead of reporting data around the aggregate debt for an individual or firm, the data is now reported to the CCR on a contract-by-contract or loan-by-loan basis.

The primary impetus, beyond simply adjusting to AnaCredit reporting requirements, was to streamline the data ingestion process at Banco de Portugal with respect to credit and credit risk data, thereby reducing the administrative burden on both the data furnishers and the central bank. CCR accomplishes this efficiency gain while ensuring the data needs of the entire central bank are met—and not just the CCR—though a single point of entry for all data housed within the CCR.

The changes introduced in 2018 were mainly related to the granularity and detail of the information to be reported to the CCR. For example, the number of attributes required to be reported increased from just 30 to 211. Nothing has changed regarding the channels used to interact with the CCR, the scope of the

information to be reported, the typologies of institutions covered or the reporting threshold (which remained at 50 euros). It is noted that a significant portion of the new data that has now been collected by CCR was already being reported by regulated lenders to different departments within Banco de Portugal. This data will continue to be used for internal purposes only.

While the number of attributes now being collected by the CCR far exceeds the requirements of AnaCredit—which only envisions roughly 100 attributes per contract and only for contracts between banks and legal entities where the exposure, per bank, is greater than 25 thousand euros—the CCR is collecting data from regulated banks and all others granting credit for a broader range of purposes including fulfilling traditional roles of a PCR and enabling risk management and risk assessment by lenders. Banco de Portugal shares with lenders data fields they specified as helpful in credit risk assessment and credit underwriting, including timely and late payment information on loans, credit limit and outstanding balance information.

Ramifications

Given the above, the CCR, serves as both a PCR and a public credit bureau—especially to the extent it provides data to lenders for credit risk assessment purposes. This has directly affected the evolution of the PCBs (PCBs) operating in Portugal.[103] The CCR requires all supervised lending institutions and others as deemed necessary to report loan payment data directly to it. The two PCBs in Portugal cannot compel reporting and so are unable to provide as complete a picture of a borrower's credit worthiness as can the CCR. Moreover, the CCR's operating costs related to its main function (the assessment of credit risk by lenders) are financed by the data furnishers mainly through the fees that they are charged whenever they query the CRC for credit reports on prospective customers. The cost is a very small fee (a few cents per report). Data subjects (such as consumers) may also access their credit report at no cost and they request about 200,000 reports per month.

Consequently, to the extent that PCBs collect data in Portugal and try to compete with the CCR, they collect so-called alternative data from non-financial institutions including energy utility companies, wireless telephone service providers, cable- and satellite TV service providers and the like. In other words, the PCBs collect data that is complementary to the data collected by the CCR. PCBs also offer a small range of value-added services including risk scoring models, fraud monitoring and prevention, anti-money laundering and others. The CCR does not offer credit risk scores, mainly because all significant lending institutions have their own proprietary risk models. As a result, PCBs in Portugal only focus on collecting alternative data and offering value-added services. Owing to this data asymmetry, PCBs have little incentive to innovate and invest in providing other solutions in Portugal, as they do in countries where the PCR is complementary to the PCBs.

Policy Recommendations

We would recommend that lawmakers and regulators in Portugal open a dialog with existing PCBs with the goal of collectively building an optimal credit information sharing system that promotes competition among lenders to the benefit of borrowers, the financial sector, and the entire economy. Current practices may constrain growth in lending to the private sector, and also lead to a degree of credit rationing and upward pressure on the price of credit. Movement toward a more complementary PCR-PCB coexistence would likely yield positive social and economic benefits that can be sustained for years into the future.

[103] Private Credit Bureaus in Portugal are so insignificant, that senior officers from the central bank responsible for the CCR could neither definitively provide the number of PCBs licensed in Portugal, nor name any of them with certainty.

Lithuania Case Study

The Bank of Lithuania's (BoL) Loan Risk Database, also known as its Central Credit Register (CCR), was established in 1996, and though initially created for the purpose of assessing the creditworthiness of borrowers, it was later utilized by the central bank to aid in banking supervision and regulation.[104] In 2007, reforms were introduced to improve the quality of data in the CCR's database, resulting in its transfer to the Statistics Department of the BoL, and amendments to definitions and reporting forms. In particular, the reporting threshold of a loan was removed entirely when it was decreased to €0 from a few thousand Euro[105] and credit unions were added to the reporting entities.[106] These reforms, which both took effect in 2012, significantly increased the database's coverage by more than 10 percentage points (from 15% in 2011 to 28.1% in 2013;[107] the CCR coverage as of 2019 is 53.7%).[108] However, they have also put the CCR in a position of competing directly with Lithuania's existing PCBs.

Ramifications

The experiences of other jurisdictions, such as that of Bulgaria, Ecuador, and Morocco, point to the risks that come with dominant PCRs.[109] Bulgaria's PCR lowered the floor for reporting loans such that lenders stopped purchasing credit reports from PCBs, which in effect cut off one of their vital revenue streams.[110]

CreditInfo operates a PCB in Lithuania, collecting both positive and negative data, on consumers and businesses. For consumers, while both negative and positive data are available, there are more restrictions to access to the positive data. The PCB also collects nonfinancial data such as telecom payment data, allowing it to differentiate to some extent from the PCR. While the reporting of positive consumer data to the PCR (CCR) is mandated, such reporting is only voluntary for PCBs.

In addition to traditional PCB functions, CreditInfo also assists financial institutions in Lithuania in their reporting to the government. This seems to demonstrate the comparative advantage that private institutions have in terms of customer service, working with their clients, and implementing solutions on the ground. In addition, it provided many value-added services (and other services) and competes in terms of ease-of-use relative to the government-operated PCR.

While the PCR (CCR) does not provide a credit score, it does have some value-added services. In fact, lenders are required to use some of the value-added services. In addition to the current services, an executive with a PCB who was interviewed for this report believed the CCR was planning to expand their value-added services offerings. The PCR (CCR) is also the regulator of the PCBs in Lithuania. This puts it in an odd position as it is clearly a competitor of PCBs.

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[104] Vaicenavičius, Rimantas Juozas. "Use of credit registers for financial and external statistics in Lithuania." *Bank for International Settlements*, 2012, available at: www.bis.org/ifc/events/2011_dublin_60_04_vaicenavicius.pdf.
[105] Disclosed in a private interview between PERC and an anonymous source on February 25, 2021.
[106] *Supra* at note 1.
[107] Balakrishnan, Karthik and Ertan, Aytekin. "Identifying Information Increases in Public Credit Registries." *SSRN*, 2020, p. 20, available at: papers.ssrn.com/sol3/papers.cfm?abstract_id=3677466.
[108] World Bank Group. "Economy Profile of Lithuania. Doing Business 2020." *World Bank,* 2020, p. 4, available at: *openknowledge.worldbank.org/handle/10986/32910 License: CC BY 3.0 IGO.*
[109] *Supra* at note 7.
[110] *Id.*

Policy Recommendations

This case highlights a number of facets when PCRs and PCBs interact and compete. First, PCRs can have a clear advantage in having credit data furnished to them, as they can mandate it. But, as noted previously, this mandate can be extended to the PCBs or the mandated data can be shared with the PCBs. The second benefit PCRs often enjoy is funding via the central bank of central government budgets. These benefits are not due to efficiencies but simply the power of the government. Though with tight budgets, scarce government funding should not be wasted. The government could use its power to mandate reporting and then utilize the most efficient means to operate the distribution of data and services to the private sector.

In terms of the traditional PCR roles of regulations, supervision and oversight, there is no reason to believe that the government is not best suited to guide or carry this out.

Creditinfo, the PCB, demonstrates the strengths of PCBs in its customer service with users, ways it looks to meet their needs, and otherwise innovates. That is, PCBs have relative strengths in the traditional roles of credit information sharing with the private sector to improve lending and credit access. If, however, revenue is drained from the PCBs by an expanding PCR, then there may be no room left to operate or the functions for which PCBs are best could become underfunded. PCBs rely not on taxpayers but on market income to fund their operations.

The fact that the financial institutions utilize the PCB services to aid them in reporting to the government underscores the private sector's strength in client relationships and services. However, if the PCBs are financially squeezed beyond the breaking point, this resource could be lost, no doubt harming future innovation in the credit reporting space.

Guatemala Case Study

In Guatemala, the PCB is receiving growing competition from the nation's PCR. While the PCB charges its users per credit report, the government (PCR) charges nothing for its data. For this reason, lenders are threatening to switch away from the PCB to the free source of data (according to an executive with the PCB interviewed). As in other markets, reporting is mandated to the PCR but not to PCBs.

The PCB, however, contends that some lenders (and the PCR) underemphasize the value of the PCB's nonfinancial data and the thoroughness with which it cleans and improves the quality of its data. The PCB is also faster in terms of the delivery of data to users. In terms of the value of its nonfinancial data, the PCB added that a sizable share of new account applications (originations) relied on nonfinancial data. This is consistent with other developing markets which have a relatively small but growing share of consumers with traditional credit histories.

The growing competition from the PCR, however, could divert significant revenue from the PCB. If the PCB's operations become unprofitable, then the key roles of the PCB could diminish. This could harm lower-income credit invisible applicants the most.

The PCB also noted that while the largest lenders in Guatemala with large internal databases may be able to utilize the rawer data from the PCR, it is likely that smaller credit unions would be less able to do so.

This case highlights the risks that smaller lenders and lower-income 'credit invisible' applicants face if PCBs are weakened by an overly expansive PCR.

In turn, this points to the possibility if a PCR sufficiently weakens a PCB, it may be forced to do more and more of the activities regularly carried out by a PCB - albeit not being well equipped to do so. These include marketing services, collecting nonfinancial data, innovating, data user's customer service, working with users on solving pain points, data subject (consumer) customer service, and the like. That is, there may be, roughly speaking, two stable equilibriums: Traditional PCRs and PCBs or a Super PCR that does everything. The middle ground in which the PCR is draining a key amount of the private sector revenue may result in an unstable or inefficient outcome of under-resourced efforts. As discussed before, in markets where there is only a PCR, cross-national analysis indicates that they do not perform as well as PCBs. On the other hand, since the traditional PCR/PCB model is proven and works well, this should give pause to policymakers advocating for expanded PCRs that starve PCBs.

Conclusion and Policy Recommendations

For a variety of reasons, as discussed above, the notion that PCRs may act as substitutes for PCBs in various capacities (e.g. the provision of consumer credit reports; the provision of credit risk models; the provision of analytical services) is gaining traction in a growing number of countries. Some of the key drivers include:

- ***Reaction to 2008-2009 global financial crisis***—central banks were largely unprepared for the black swan event (subprime mortgage meltdown in the US) leading to the global financial crisis via a contagion effect. In response to this crisis, central bankers began collecting greater amounts of data to avoid a future similar catastrophe. Central banks within the EU even agreed to share this data with the European Central Bank to mitigate against a future contagion effect. This changed disposition toward data has partially created a milieu conducive to PCR expansionism in both scale and scope.

- ***Dramatic technological changes***—even as recently as 10 years ago, building a sizeable repository and administering the database were considerable undertakings involving a high degree of technical complexity and the outlay of large sums of money. However, recent advances in IT hardware and software have greatly reduced the technological and financial barriers to building and operating large, basic credit information databases. What previously may have required a large IT staff and cost tens or hundreds of millions of dollars to build and operate now may require a handful of technical staffers and may cost just several million dollars. This excludes issues such as data quality and integrity, dispute resolution, customer service, compliance, and other significant costs associated with running a PCB. Still, the barriers have been dramatically lowered and interest in entry is mounting commensurately.

- ***Global proselytizing on value of data***—For the past 20 years or longer, large global consultancies (e.g. McKinsey, Deloitte, IBM) and multilateral development organizations (e.g. World Bank, IFC, and regional development banks) have been preaching to policymakers around the world about the importance of data to inform decision-making. In the Information Age, it was frequently quipped, data is the new oil. Regulators were told to change their mindset from constraining data flows to embracing them. Study after study—including from the authors of this report—demonstrated clear economic and social benefits from closing financial data gaps. It is possible, then, that the emerging trend toward PCR expansion is in part attributable to this frequent messaging.

In most cases there is not a single variable driving this trend, but rather it is a combination of the above and other issues—such as a past reliance on government to collect vast sums of data (e.g. in nations that were part of the former Soviet Union) or the perceived under performance of private data sharing (e.g. a market failure such as in the Philippines). Whatever the root causes may be, a clear trend is emerging and gaining momentum. Owing to well-established findings from decades of empirical research across over a hundred countries of all types, there exists a need to comprehensively react to this development before any given national economy so experimenting travels too far down a wrong path resulting in negative impacts for borrowers, credit markets and risking damaging the financial system.

In economies developing or expanding PCRs, who is promoting the legislative change and why?

In nearly every instance, often with the support of a concentrated banking sector, governments are championing the development of a PCR with an expanded scope of services for a few reasons, most of which are quite valid. For example, when publishing their Ministerial Order, the Spanish Ministry of Economics stated their aim was to improve responsible lending by strengthening the public registry as a tool to help lenders. They also cited a desire to have better data for purposes of analyzing trends to inform policy decisions. As an example, they pointed to a desire to analyze the moratoria which have been granted to those impacted by the COVID-19 crisis. In India, the driving aim is also to improve lending, increase financial inclusion and collect data needed for regulatory and oversight purposes. In addition, one central bank official noted to PERC that the Indian database would also showcase Indian software prowess and know-how when building a Super PCR, the likes of which the world had never seen. In the Philippines, an indigenous private credit bureau attempted unsuccessfully for two decades to exhort credit reporting among lenders. The Philippine government passed the Credit Information Sharing Act in 2008 to overcome this market failure and drive financial inclusion and fair lending through a robust credit sharing mandate via a PCR. There is no shortage of good intentions among lawmakers promoting PCRs as a solution to various challenges within their respective nations' credit information sharing ecosystems.

Another key proponent of expanded PCRs is often regulated lenders in highly concentrated financial services sectors. In such scenarios, lenders may have an incentive to restrict the collection of data upstream, or the use of data downstream, thereby reducing competitive pressures. For example, Spanish banks may be supporting the proposed PCR change to freeze out FinTech firms and reduce overall competition so that oligopolistic margins may be preserved. The largest lenders also have less of a need for third-party data aggregators and value-added service providers since they already have a sizable share of the market and have large internal databases and analytics departments. Entrenched, profitable banks see an interest in *limited* data sharing, typically of negative-only data. Too often, they fear that more robust information sharing with a dynamic data and value-added service sector could stoke competition and reduce margins. On the other hand, for smaller lenders and newer entrants, third-party data and data tools can be crucial. Lenders may also view PCRs as simply a way to lower data costs if the PCRs provide data at little to no cost.

Policymakers should be aware of these interests, as what may be desirable for particular lenders, in the present, may not be for consumers or the credit market over the longer-term. Banks in France support the Bank of France's monopoly control over credit data—an anachronistic negative-only system—for this reason, as did lenders in Australia, Brazil, and New Zealand before those systems were changed from negative only to full-file with a complementary ecosystem that heavily engages PCBs. Lastly, lenders in India were exclusively consulted by the Reserve Bank of India when they began promoting their concept of a super-PCR. To this day, nearly four years on, only banks and interested IT vendors have a seat at the table in meetings with the RBI on the nature of the proposed super-PCR.

What's our position?

In general, PERC supports the established traditional roles played by PCRs—including the collection of commercial and consumer credit payment data for prudential regulation (micro- and macro-), statistics, and economic analysis and policymaking. We further support efforts by governments to enhance the ability of PCRs to perform these functions by enabling access to additional data assets. Though, in the US and some other advanced economies, regulators do not utilize a PCR to collect needed credit data; instead, it is sourced from PCBs. In economies where PCBs do not collect sufficiently robust data for the needs of the regulators, the government can either enact policies to drive a more robust private information sharing sector or establish a PCR.

PERC also support any government's intention to improve lenders´ capacity to assess a borrower's creditworthiness, and thus to improve lending, increase credit access, and help to protect consumers from over-indebtedness or unfair lending practices. To the extent that this can be achieved through actions undertaken by a PCR this is laudable.

However, when possible, a nation's PCR should avoid being in direct competition and on an uneven playing field with existing PCBs. For example, a government has the authority to mandate lenders and other creditors report to a PCR and could then provide data furnishers with free or subsidized access to the same data.

In addition to credit reporting, governments may also mandate the use of a PCR's credit report in eligibility determinations.

PCBs have no such authority to either mandate reporting or use. However, to fund operations they must generate revenue by selling services. Relatively speaking, PCBs stand at a huge competitive disadvantage compared to PCRs.

Direct competition, then, unless severely circumscribed, will inevitably harm PCBs. This carries enormous risks as the PCRs may not be able to carry out traditional credit bureau roles as well as PCBs, as has been shown by cross-national analysis. If they cannot, this will ultimately harm consumers.

Further, it is private bureaus and private entities that have driven innovation in information sharing, not PCRs. And PCRs tend to focus more on traditional credit bureau data from banks or services regulated by bank regulators. Private bureaus tend to also focus on non-traditional data, new solutions, and client services that may offer relatively more benefits to lower income households and smaller lenders. So, if PCBs are harmed, this may have undesirable consequences since PCRs will not act as a perfect substitute for PCBs. A much less risky approach is simply to work to expand credit sharing for government and private use, without unduly harming the private information sharing sector.

Policy Prescriptions

In order to avoid unnecessary risks of damaging a nation's financial sector and broader economy by extension, the authors of this report recommend to policymakers and regulators at central banks that they consider the following alternatives:

1. **Apply the Evidence:** Recognize the applicability of previous generations of theoretical and empirical economic research on the value of credit information sharing and the optimal relationship between PCBs and PCRs. This research includes work done by researchers across different countries, including both academic economists (including Nobel Laurate economists) and economists from the World Bank. In so doing, the complementarity between the two CIS institutions can be enhanced to the benefit of the financial ecosystem and economy;

2. **Undertake Helpful Interventions:** Consider mandating the reporting of positive and negative payment data on all loans. To the extent it is mandated, have it flow either (a) from a PCR to PCBs or (b) from the PCBs to the PCR. If data flows to the PCBs, it should be the raw data furnished to allow the bureaus to compete on and improve data quality and maintain a relationship with the data furnishers. This would enable the PCBs to ensure the integrity and quality of the data (and unburden the PCR/Central Bank from having to do the same), and preserve a vital revenue stream for the PCBs to further ensure they operate optimally within the national credit information sharing ecosystem;

3. **Avoid Direct Competition Between PCRs and PCBs:** The PCR should avoid providing or selling data and value-added services and instead leave that up to the private sector, particularly in markets with a competitive private information sharing sector. In markets with no

PCB, the PCR is a second-best solution, but the development of a private sector should be encouraged where feasible, particularly in markets where there is the perception of insufficient competition. If the PCR does make data and value-added services available to the market, it should be cautious not to set prices too high (which could unduly limit use) or too low (which could hamper or freeze out development in the private sector).

In the European Union, the industry trade group for PCBs ACCIS is also deeply concerned about any PCR that may become overly expanded. Counterpart trade associations in the US (Consumer Data Industry Association or "CDIA") and in Central Europe/Central Asia (Association of Credit Information Providers in Eurasia or "ACIPE") are also advocating for PCRs to complement PCBs and avoid direct competition. Given the evidence from decades of research showing PCBs outperform PCRs in terms of sustained growth in lending to the private sector, given the facts and theory supporting PCRs and PCBs as complements to and not perfect substitutes for one another, given the lack of precedent for a Super PCR, given the vital role played by an optimally structured credit information sharing system in a nation's financial sector and economy, we urge national policymakers to support international best practices by promoting strategic interventions, ensuring PCRs and PCBs don't compete, and recognizing the nation's credit information sharing system as vital financial infrastructure.

A nation's credit information sharing system is critical financial infrastructure. Supported by decades of empirical research from dozens of countries and mainstream economic theory, a financial sector flourishes when Public Credit Registries (PCRs) and Private Credit Bureaus (PCBs) complement one another. Direct competition is to be avoided. Instances of market failures – such as when banks or other non-financial creditors won't credit report customer payment data – represent opportunities for helpful government interventions.

Glossary

Adverse selection — In lending, an effect of information asymmetries in which low-risk applicants are driven out to some extent from the applicant pool if they are indistinguishable from high-risk applicants. This occurs because the low-risk applicants would be required to pay more for loans than their risk level should require (they are being overcharged). High-risk borrowers, on the other hand, are drawn to the pool because they as are being undercharged.

Alternative data — Payment data on consumer habits that come from non-financial sources such as utilities and telecom payments, and rental payment data.

CIS — Credit Information Sharing or otherwise known as Credit Infrastructure is the set of laws and institutions that enables efficient and effective access to finance, financial stability, and socially responsible economic growth through credit reporting, secured transactions and collateral registries; and insolvency and debt resolution.

Collections — Severely delinquent unpaid obligations (for credit or a variety of goods and services). These unpaid accounts may be sold to companies (collections agencies) which specialize in collecting on such accounts. These unpaid "collections' accounts appear in credit reports as collections items.

Comprehensive Reporting — credit information sharing system that includes payment data from banks, non-bank lenders (e.g. retailers), and often non-financial services creditors such as energy utility or telecommunications service providers. This is the antithesis of a "fragmented" system, in which credit information is siloed in specialty credit bureaus according to industry sector (bank, non-bank, credit card, non-financial services, retail, etc.).

CRA – Consumer Reporting Agencies, otherwise known in the US Industry as credit bureaus. When owned by a private sector firm or firms (including trade associations), then frequently referred to as PCB for private credit bureau.

Credit Score —Usually a numerical expression generated by statistical and mathematical analysis of data found in an individual's or business's credit file. It usually represents the likelihood of a future severe delinquency or other derogatory (such as a bankruptcy). As such, it is a measure of personal or business financial risk.

Data Furnishers — Firms that provide customer or borrower account payment information to one or more credit bureaus. Examples include a mortgage lender reporting information on a mortgage holder's account, or a telecommunications provider reporting on an account to a credit bureau.

Data User — The end user of the data, usually (but not necessarily) a financial firm. In finance, the information is used either manually or in automated computer models to allocate and monitor loans. Other data users may include central banks, landlords, cell phone providers, or employers, depending on the society.

Debt — The monetary value of various types of credit and debt outstanding, including mortgages, credit cards, auto loans, etc.

Full-File Reporting — This refers to a credit information sharing system that permits the sharing of negative and positive account information, including payment amounts, outstanding balances, age of debt and other variables that are excluded from a Fair File system.

Negative Data — Adverse payment data on a consumer. It consists of late payments (usually reported when payment is more than 60 or 90 days past due), liens, collections and bankruptcies.

Negative-only Reporting — The reporting of only negative information such as delinquencies, defaults, collection, bankruptcies, and liens. Indeterminate information such as credit applications (but not approvals or rejections) may be included.

NPL — Nonperforming Loans.

Moral hazard — When a party insulated from risk acts differently than if it were fully exposed to risk. For lending in particular, borrowers might spend their money recklessly, and not for what the loan was initially intended.

MSME — Micro, Small and Medium Enterprises.

Positive Data — Information on the timeliness of payments relative to their due date, including whether payment on time, indeterminately late or delinquent. Positive information often includes data on account type, lender, the date the account was opened, inquiries, and amount of outstanding debt, and can also include credit utilization rates, credit limit, and account balance. It stands in contrast to negative-only reporting.

Private Credit Bureau — Privately held Credit Bureaus that 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 used to provide predictive credit and other data to lenders and other market actors to aid underwriting credit and access to services and eligibility determination for individuals and to assess loan and other portfolio risk and performance. Synonymous with credit reporting agency (CRA) as defined above.

Public Credit Bureau — A public credit bureau has mixed ownership where it involves partly government ownership and partly private ownership. It provides the same services to the public as a Private Credit Bureau but has added responsibilities such as providing credit and payment data to regulators, government agencies, and lenders for supervision, oversight, monitoring, compliance, and safety and soundness purposes.

Private Credit Registry – A private credit registry has a mixed public-private ownership and involves a more expansive purpose where it performs its traditional role while also providing predictive credit and other data to lenders and other market actors to aid underwriting credit and eligibility determination for individuals and to assess loan portfolio risk and performance.

Public Credit Registry – 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. Its primary purpose is to provide credit and payment data to regulators, government agencies, and lenders for supervision, oversight, monitoring, compliance, and safety and soundness purposes.

Thick-file — A credit report typically containing information on two or more tradelines or accounts reported either open or closed. While the exact definition differs from system to system, these are files that contain abundant information. The term Deep-File is also used to describe such files.

Thin-file — A credit report typically containing information on less than two (2) tradelines or accounts reported either open or closed. While the exact definition differs from system to system, these are files that contain the least information on a borrower. The term Shallow-File is also used to describe such files.

Tradeline — Account information as included in a consumer credit report. A person with only a mortgage loan, an auto loan, and three credit cards reported to a credit bureau would have five tradelines in their credit report. Tradelines sometimes refer to public record information in a credit report, including judgments, writs, liens, bankruptcies, and other data provided by government agencies. The exact definition of tradeline differs from system to system and can even differ bureau to bureau in a system.

Segmented Reporting — A system of reporting information, whether full-file or negative only, in which only data from one sector, e.g., retail or banking, is contained in reports. In some instances, limited sharing arrangements between lending sectors may exist, but this usually involves incomplete or negative-only data. Japan is an example of a country with a segmented reporting system.

About PERC

Founded in New York City in 2002, PERC is the only non-profit public policy research and development organization exclusively dedicated to the relationship between financial inclusion & access to/use of information and information solutions. Our mission is to stamp out Credit Invisibility worldwide, and drive financial inclusion, through the responsible use of information and information solutions. PERC has undertaken projects in more than 25 countries on 6 continents, including our operations in Canada, which house the Asia-Pacific Credit Coalition. PERC has been retained as consultants to the US Department of Treasury, the US Department of Housing and Urban Development, the World Bank, the International Finance Corporation (IFC), the Inter-American Development Bank (IDB), and the Organization for Economic Cooperation and Development (OECD). PERC CEO & founder Dr. Turner was appointed and served on the inaugural Data Privacy and Integrity Advisory Committee of the US Department of Homeland Security (DHS), and has testified before Congress and in federal courts on numerous occasions. Dr. Turner was also a campaign advisor to Barack Obama. PERC has co-published reports on credit reporting with the OECD, the IFC, and the Brookings Institute among others. To date, our research and outreach has helped change national policy in dozens of countries, and has resulted in helping more than 1 billion people build or rebuild a positive credit history. Launched in 2018, PERC Canada is a wholly owned subsidiary of PERC. PERC Canada's focus is on eradicating credit invisibility within Canada through the use of non-financial payment data, so-called alternative data. PERC Canada undertakes original quantitative economic and social impact research, policymaker education, and external communications in the promotion of their mission. In addition, the Asia-Pacific Credit Coalition is housed within PERC Canada, and is administered by PERC Canada. To learn more about PERC, see www.perc.net and PERC Canada at www.perccanada.ca

About the Asia-Pacific Credit Coalition

Founded in 2007, the APCC have been promoting principles for consumer and commercial credit information sharing among the 21 members of the Asia-Pacific Economic Cooperation (APEC). The APCC have been designated as "Sherpas" for the APEC Business Advisory Council (ABAC), and have worked with ABAC on credit reporting issues since 2007. More recently, the members of the APCC have provided guidance to ABAC for the Asia Pacific Financial Forum (APFF) and the Financial Infrastructure Development Initiative (FIND) concerning credit information sharing policy. To date, working with ABAC & APEC, the APCC have served as a resource on credit information sharing policy to more than half of all APEC member economies (Australia, Canada, Chile, China, Indonesia, Mexico, New Zealand, the Philippines, Singapore, Thailand, the United States, Vietnam). For more about the APCC, visit www.apeccredit.org

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