



The Role of Payment Systems and Services in Financial Inclusion

Latin American and Caribbean Perspective

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and Caribbean
Perspective

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Keywords: payment systems, electronic money, financial inclusion, financial services, Latin America and the Caribbean.

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1. Executive Summary

Electronic retail payment systems and services (ERPS) consist of different systems and platforms, payment products and services that allow firms, individuals, government and other economic agents to transfer money on a daily basis without having to use cash.¹

ERPS are becoming increasingly more prevalent in today's economy, thanks to the dynamism digital innovation has brought with new mobile and online payment solutions and products. Meanwhile, international efforts continue to appear for promoting universal access to and use of financial services in an attempt to reduce poverty and improve opportunities and living standards for people that do not use such services.

As a result of this interaction between an intensive agenda focused on promoting financial inclusion and the greater presence and participation of ERPS in economic activity, the latter represent a highly potential instrument for fostering financial inclusion as individuals and firms interact in the economy via the payments they make to each other through different instruments and channels.

Latin American and Caribbean countries are at a particularly important situation in this matter. On the one hand, the degree of bankarization still needs to deepen in most countries. On the other, payment systems and services infrastructure has made significant progress, posing different questions as regards how to move forward with financial inclusion through payments.

Central banks have an important role to play in this area given their responsibility to preserve the smooth functioning of payment systems and, more recently, to support efforts for achieving greater financial inclusion.

¹ Or any other paper-based payment instrument, including cheques, bank drafts and over-the-counter payment instructions.

Thus, under the framework of the Working Group on Payment System Issues of Latin America and the Caribbean² (WGPS-LAC) a subgroup of five central banks, entitled Subgroup for Payments and Financial Inclusion³ (S-PAFI), was created in April 2014 with the purpose of analyzing with more detailed information the interaction of payment systems and services with financial inclusion.

To that end, the S-PAFI conducted a survey among the central banks of Latin American and Caribbean countries, the results of which are presented here. In particular, the survey dealt with the following aspects: Definition of financial inclusion, a general framework of what ERPS consist of, the role performed by different components of ERPS in financial inclusion strategies implemented in the region, legal and operational aspects of ERPS that influence financial inclusion and the role of payment industry innovations in inclusion.

The report is important because the approach of the survey provides a multidimensional perspective on different ERPS interactions with financial inclusion in Latin American and Caribbean countries. The conclusions offer a set of observations and possible actions central banks could adopt as a basis for moving forward with national and regional agendas on electronic retail payments for promoting financial inclusion and access.

² Between 1999 and 2001, a regional committee was set up consisting of those in charge of payments systems in Latin American and Caribbean central banks. Entitled Working Group on Payment Systems Issues of Latin America and the Caribbean (WGPS-LAC), its purpose is to study important issues of common interest related to progress on the planning, operation, regulation and oversight of payment systems (and services), diffusing knowledge and experiences in this matter, as well as promoting regional and international cooperation.

³ Ecuador, El Salvador, Paraguay, Peru and Uruguay.

2. Abbreviations

| | |
|-----------------|--|
| ACH | Automated clearing house |
| ATM | Automated teller machine |
| CPMI-WB | Committee on Payments and Market Infrastructures, World Bank Group |
| ECT | Electronic credit transfer |
| EMI | Electronic money issuer |
| EMS | Electronic money systems |
| ERPS | Electronic retail payment systems |
| G20 | Group of 20 |
| ICT | Information and communications technologies |
| NBFI | Nonbank financial institutions |
| NFIS | National financial inclusion strategies |
| POS | Point of sale |
| PSP | Payment service providers |
| RTGS | Real time gross settlement |
| S-PAFI | Subgroup on Payments and Financial Inclusion |
| Telcos | Telecommunications companies |
| WGPS-LAC | Working Group on Payment Systems Issues |

3. Introduction

In April 2014, the Working Group on Payment System Issues of Latin America and the Caribbean (WGPS-LAC) created the Subgroup on Payments and Financial Inclusion (S-PAFI), consisting of CEMLA⁴ and the central banks of Ecuador, El Salvador,

⁴ Secretariat of the Subgroup.

Paraguay, Peru⁵ and Uruguay, with the aim of identifying areas where central banks of the region can improve the institutional framework in order to promote financial inclusion through access to and use of electronic retail payment systems and services (ERPS⁶).

The above effort has as a precedent the working agenda and international coordination of the G20, which in 2009 formally established a commitment to improving access to financial services for the unbanked population.⁷ This therefore recognized the important role the population excluded from the financial sector could play in poverty reduction and more balanced economic growth.

From 2011 to 2014, the number of people in the world excluded from the financial system was reduced by 20%.⁸ Particular progress was made in Latin America and the Caribbean, where the percentage of the adult population (over 15 years of age) with accounts in financial institutions increased from 39% to 51% in said period. Nonetheless, it is also important to recognize the need to delve deeper into the use of these accounts and other financial services. For instance, access to credit rose from 8% to 11% during the same period.

The importance of developing and using ERPS as a mechanism for promoting financial inclusion is related to the following aspects:

- ▶ ERPS allow an economic agent (payee) to use different methods to cover their obligations with another

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⁵ Coordinator of the Subgroup.

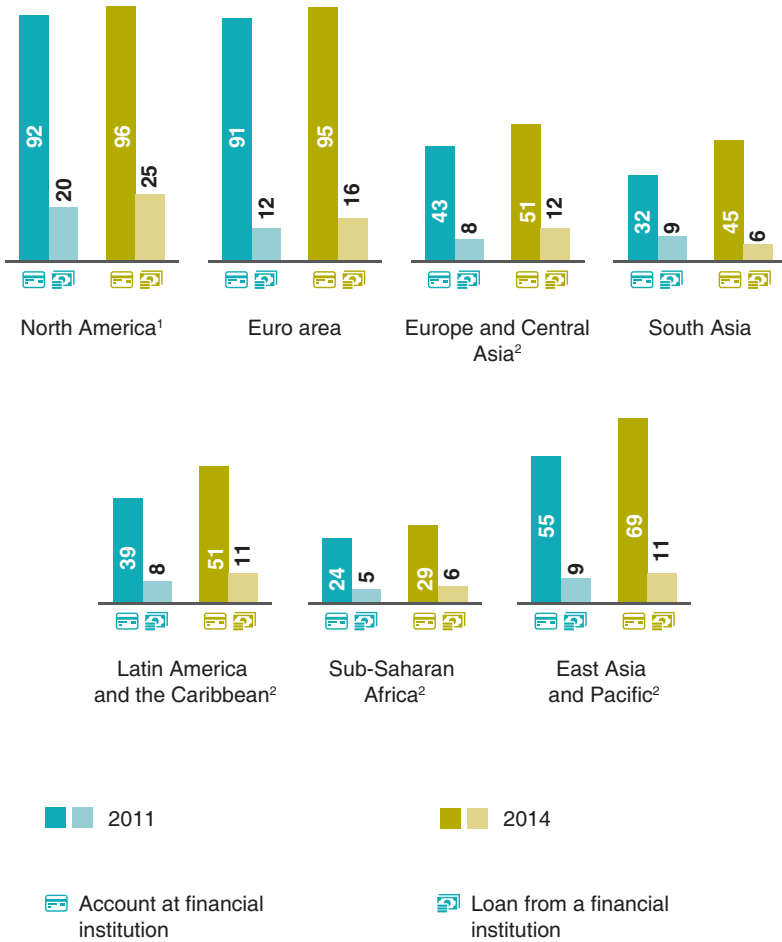
⁶ See the definition in section 5 of this paper.

⁷ Refers to the population without access to an account in a formal financial institution or payment services provider that allows them to save money or receive or make payments (Global Findex database, 2014). According to recent calculations, two billion people do not have access to a financial bank services.

⁸ With data from Global Findex (2014).

FIGURE 1

WORLD: ACCESS TO FINANCIAL SERVICES, 2011 AND 2014
(percentages)



¹ United States of America and Canada. ² Only developed countries.
Source: Authors' elaboration from Global Findex, 2014, database.

(beneficiary) without the need to do so in person, which reduces transaction costs and thereby improves the dynamism of economic activity.

- ▶ Incorporation of advances in information and communications technologies have converted ERPS into ideal channels for promoting financial inclusion as the electronic and digital mediums available at present have eliminated barriers limiting the unbanked population's access to payment services.
- ▶ ERPS offer the possibility for people to reduce the costs and risks implicit in using cash, thanks to the fact that they are available instantaneously anywhere. This makes them more convenient and easier to use for carrying out transactions on a daily basis, generating incentives to adopt them for various transactions that are generally made in cash.
- ▶ Greater use of ERPS by the population would lay the foundations for the adoption of new infrastructures, instruments and channels that would favor more efficient and secure payments, leading to economies of scale that would reduce the average costs of payment services.

These specific aspects of ERPS have increasingly greater influence on the formulation and implementation of national financial inclusion strategies (NFIS), while at the same time favor progress in the payment services industry. Said influence is observed in aspects related to the legal and regulatory framework, payment and settlement infrastructures and platforms, new operational arrangements and new participants (payment service providers), as well as changes in dynamics and market forces.

The above highlights how this is a decisive moment for central banks and other relevant financial authorities in the field of ERPS, given that the responsibilities of most of the region's central banks include guaranteeing the secure and efficient functioning of payment and settlement systems. Moreover, in light of the importance of promoting financial inclusion, central banks have directly participated in planning and overseeing NFIS. This has led to them acquiring new responsibilities associated with boosting access to and use of ERPS, in some cases along with financial education and consumer protection.

This study therefore offers an overview of ERPS in the region and their role in financial inclusion based on information provided by Latin American and Caribbean central banks. In this regard, the majority of such institutions stated that ERPS have an important role to play in accelerating access and usage of financial services. They also consider innovation as a key factor in aspects such as electronic money, prepaid cards, mobile phones and the participation of nonfinancial institutions.

This study is organized as follows. Section 4 shows the methodology used for the study. Section 5 presents some key concepts of ERPS and the dimensions of financial inclusion (access and usage). Section 6 describes and analyzes the main results of the study, and finally, Section 7 gives the conclusions, as well as the principal recommendations and actions for continuing to improve financial inclusion in Latin America and the Caribbean from a payment systems perspective.

4. Methodology

This study uses information provided by central banks of the region in the Survey⁹ The Role of Payments Systems and Services in Financial Inclusion in Latin America (hereon the Survey)¹⁰ conducted during the first half of 2015.

The Survey contained a total of 30 questions grouped into sections: 1) definitions and general aspects, 2) the legal and regulatory framework for payment services and financial inclusion, 3) payment infrastructures, 4) standardization and risk management aspects, and 5) competition and consumer protection aspects. The model of the Survey is presented in Annex 1.

The results of the Survey were compiled and processed by the S-PAFI, counting up the number of central banks that coincided on certain answers in order to obtain a regional overview of the situation for each thematic area of the Survey. It is important to mention the difficulty the Survey faced as regards the diversity of viewpoints for topics central banks had to give an opinion on.

5. Dimensions and Key Concepts in ERPS and Financial Inclusion

Unlike large-value payment systems focused on meeting the needs of financial institutions and large corporations in different

⁹ The Survey was distributed among 30 CEMLA member central banks, 60% of which took part. The central banks that participated were those of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Curaçao and Sint Maarten, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Paraguay, Peru and Uruguay.

¹⁰ The Survey was elaborated by the S-PAFI and CEMLA, with comments from the Secretariat of the CPMI-WB Task Force for Payment Aspects for Financial Inclusion and members of the WGPS-LAC.

financial markets, retail payment systems focus on the needs of each individual for making and receiving payments. However, this difference has been reduced by technological advances, meaning that in the current scenario it is more relevant to refer to whether payments are electronic or not, or more particularly non-cash.¹¹

The significance of electronic retail payments for promoting financial inclusion lies in, among other factors, the fact that the arrival and rapid penetration of information and communication technologies (ICT) in the financial industry, particularly for providing payments services, has led to the emergence of products and services that have adapted more conveniently to the current needs of the population for exchanging value. Among the new ways adopted by ERPS are the use of mobile phones as a device and access channel for making and receiving payments (mobile payments), use of internet on different devices for making purchases (internet payments), use of payment cards in ATM and POS networks and with contactless technology (card payments) and electronic billing (Morales, 2014; CPMI, 2012), as well as the use of systems and platforms, which although planned for making other types of operations, also allow retail payments to be made, such as using RTGS systems for making instant payments.

Although cash has performed a significant role in the modern economy, because it provides a measure of value and means of payment for performing economic activity, nowadays it has become impractical (and even costly) to use it for different transactions, which because of their nature, size or urgency require more flexible methods (in terms of speed, practicality,

¹¹ For instance, different large and retail payment systems and platforms, products and services, facilitate the daily transactions of the population (individuals, firms and government), urgent or not, and regardless of their size. All of the aforementioned can be considered part of the electronic payments universe.

mobility and ubiquity). Thus, development of ERPS, along with the use and application of ICT, has focused on overcoming the limitations of cash in certain types of transactions, while allowing significant progress to be made in the speed, immediacy, security, ubiquity and convenience demanded by economic activity. Moreover, ERPS have become a bridge towards financial inclusion, providing access to the population generally excluded from financial services, thanks to services that allow people to save value, and make and receive payments under more favorable and accessible conditions and requirements.

In this scenario it is also important to underline that although retail payment systems and services have traditionally been generated by banks and other financial institutions, spaces are increasingly being opened for new participants, above all nonbank or nonfinancial institutions acting as operators of platforms for payment system¹² or as payment service providers (PSP). Thus, ERPS benefit the population in terms of financial inclusion, while fostering progress in the economy's financial sector.

Notwithstanding the above, there have been no radical change of trends in global cash usage, except in some economies such as Sweden, where its use is being discouraged. The fact that in Latin America and the Caribbean cash continues to be people's preferred means of payment for certain types of purchases and payments is a matter beyond the scope of this study.

Analysis of this phenomenon involves the overall conditions in the economies –including levels of informal labor, depth of

¹² For instance, besides favoring the entrance of new payment service providers, digital currencies have also led to the appearance of new electronic platforms that have arrangements for clearing and, in some cases, settlement. The same has occurred with electronic money that, besides constituting a payment service, has also involved the establishment and setting in motion of specialized platforms for processing it.

the financial sector, etcetera—, education and the population's payment habits, as well as other idiosyncratic factors —such as people's perception that cash is a very convenient means of payment—, among other factors. It is worth mentioning that electronic retail payment services are superior to cash from the point of view of the safety and efficiency they offer users. Nevertheless, cash continues to be very convenient for users in certain types of retail daily transactions, such as for using public transport, purchasing food in a grocery store, etcetera. This experience is in addition to the lack of favorable conditions for accessing and using ERPS —such as a broad and functional physical and telecommunications infrastructure— that contribute to the continued perception of cash as an ideal payment method for this type of disbursements, hindering any likely transition towards and adoption of electronic payment.

The set of innovations in ERPS that have been applied internationally could help to change the tendency to use cash for certain types of very small value transactions, as long as the population's perception is changed by a more comfortable and convenient experience with more reliable and easy to use payment instruments.

The above is of utmost significance when taking into account that financial access is just as important for achieving effective financial inclusion as making recurrent and periodic use of financial services. In this way, simple and accessible payment services appropriately meeting users' needs have the potential to achieve such inclusion.

5.1 Financial Access

Access to financial services implies the supply of such services meets the minimum conditions to address the needs of households and firms for managing their expenditures and income. Such services should also enable households and firms to face

TABLE 1

CHARACTERISTICS OF CASH AND A ERPS

| <i>Features of payment instruments</i> | | <i>Cash</i> | <i>ERPS</i> |
|--|-------------------------------|-------------|-------------|
| Concept | Payment between third parties | ✓ | ✓ |
| | Retail payment | ✓ | ✓ |
| | Nonurgent payment | – | ✓ |
| Functional characteristics | Convenient | ✓ | ✓ |
| | Affordable (accessible) | ✓ | – |
| | Secure | – | ✓ |
| | Fast | – | ✓ |
| | Reliable | – | ✓ |
| | Traceable/verifiable | – | ✓ |
| | Simple (understandable) | ✓ | – |
| | Commissions (other costs) | – | ✓ |
| | Risky | ✓ | – |

Source: Elaborated by the authors.

unexpected financial shocks (World Bank Development Research Group et al., 2014).

The fact that there are agents (individuals and firms) without access to financial services is the result of market failures (barriers) such as: 1) lack (or asymmetry) of information for assessing the financial capacity of potential users; 2) little or no attention from service providers to certain market niches; and 3) the oligopolistic structure of the market that generates distortions in the coverage and prices of financial services.

The reasons why people are excluded from the financial system¹³ should also be considered, including socioeconomic (low or irregular income, lack of economic and financial education, ethnic-racial discrimination, etc.) or geographic (living in rural zones or outside urban centers) traits, which are by themselves sources of exclusion from financial services.

ERPS are an instrument with great potential for reducing the referred failures or barriers affecting financial inclusion given that electronic and digital methods considerably reduce transaction and information costs for payment service providers and users. All of this represents a driver for progress in the industry. Users can also perceive greater advantages and comfort in cash alternatives, which in the end become options for transforming, or beginning, their financial life. For instance, with the introduction of new channels (e.g. bank agents), services (e.g. payment accounts or electronic money) and types of payment (e.g. wage and social benefit payments, and government payments in general) options for bringing payment services to the generally excluded population have growth, either by democratizing access regardless of gender or other ethnic-social traits, by reducing transaction costs, excessive procedures, long distances to arrive at a service point, etcetera.

It is worth mentioning how promoting financial access through NFIS is closely related to the status of ERPS in each country. This implies that the degree and depth of technology use in electronic and digital payments depends on the infrastructure and platforms available, the structure of the national market and the relation between possible innovations and the regulatory framework in force.

¹³ Exclusion of an individual or firm might be due to exogenous or personal factors (the latter is known as self-exclusion). This study does not cover the phenomenon of self-exclusion among the population that could be based on high levels of informality, distrust in the financial sector and religious factors, among others.

According to Global Findex, in 2014 the percentage of people in Latin America and the Caribbean with debit cards was 40%, while 2% had mobile money accounts, figure similar to that of the East Asia and Pacific region (excluding Japan and Australia), where it was 43% and 0.4%, respectively. Meanwhile, in Sub-Saharan Africa only 18% of people have a debit card and 12% a mobile money account. It should be pointed out that, in Latin America and the Caribbean, out of the total population receiving benefits or social supports, 67% state receiving such transfers through an account, figure slightly above the world average (61%). With respect to wages, 55% of salaried individuals are paid through an account as compared with a worldwide figure of 54 percent.

Another indicator on access to payment services is the number of automated teller machines (ATM) per 100,000 inhabitants, which was 31 globally in 2011. This indicator varies across regions: for instance, North America, 207 ATM; the Euro area, 90; Eastern Europe and Central Asia, 42, and Latin America and the Caribbean, 30; all these figures are higher than those for Sub-Saharan Africa (four ATM).

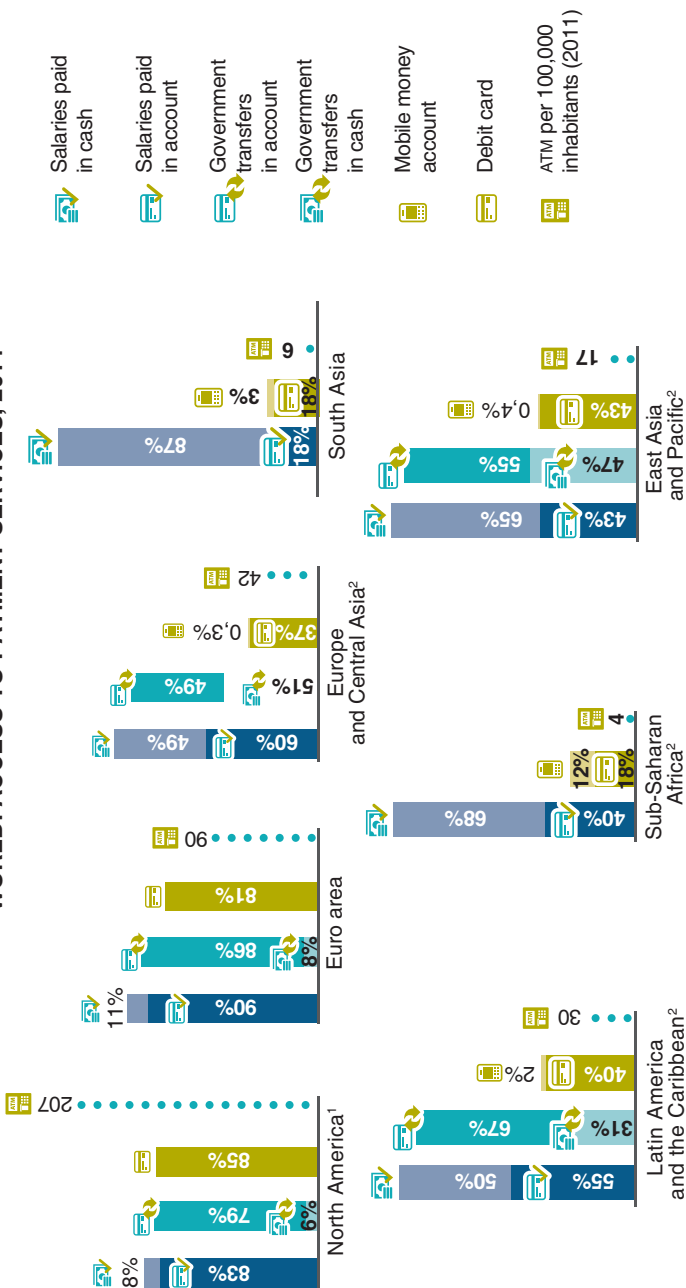
Despite progress made in modernizing and improving the region's ERPS, as reflected in the Survey, data from Global Findex shows low levels of access to ERPS in Latin America and the Caribbean. In other words, it represents opportunities and considerable gaps for the development of ERPS over the following years.

5.2 Use of Payment Services

The second dimension of financial inclusion is the usage of services. The factors that influence the decision, adoption and use of a financial service include: 1) individual habits and preferences, 2) frictions between supply and demand due to the speed with which new financial products are generated and adopted,

FIGURE 2

WORLD: ACCESS TO PAYMENT SERVICES, 2014



¹ United States of America and Canada. ² Only developed countries. Source: Authors' elaboration from Global Findex, 2014, database.

and 3) the degree of adoption and knowledge of ERPS among the population, allowing them to get used to and benefit from the services offered by the market.

The frequency and regularity of use of financial services is the most important dimension of financial inclusion because it requires appropriate levels of access and financial education, i.e., access does not fully guarantee usage. To use the financial services for which access is available, several favorable conditions must be met; among these, that people:

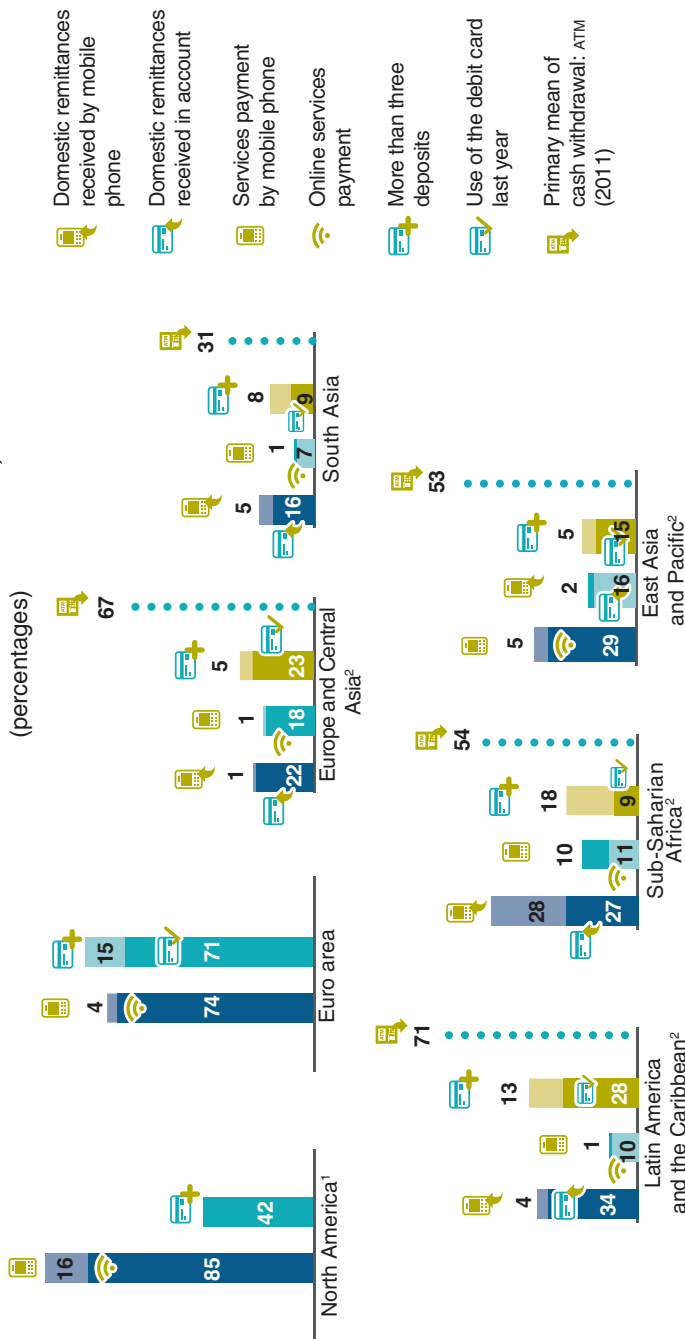
- ▶ have information and learn to use financial services responsibly, i.e., that there is a minimum level of financial education;
- ▶ have a positive perception or, at least, willing to use them;
- ▶ trust the smooth functioning of these services and are familiar with consumer protection legislation;
- ▶ find a match between their needs and the characteristics of available services;
- ▶ can value the convenience and affordability of each service;
- ▶ have transparent access to the costs of the services they require;
- ▶ have several alternative services and financial service providers.

Financial services consist of reception of remittances (as a third-party payment), payment of services, deposits or use of debit cards, among others. In this regard, data from Global Findex 2014 (see Figure 3) show that 17% of people worldwide paid for services online, while only 2% used mobile phones in

FIGURE 3

WORLD: USE OF FINANCIAL SERVICES, 2014

(percentages)



¹ United States of America and Canada. ² Only developed countries. Source: Authors' elaboration from Global Findex, 2014, database.

2014. In Latin America and the Caribbean, payment of services via internet or mobile phone is below the world average, at 10% and 1% respectively. A different panorama is observed for the use of traditional services, which have greater presence (for instance, debit cards and account deposits, with 28% and 13%, respectively). Opportunities therefore exist for improving the use of payment services in the region by, for instance, applying innovations that exploit infrastructures in other sectors regarded as nonfinancial. Such is the case of electronic money linked to high and low-end mobile phones that favors financial inclusion because the majority of the population have such mobile devices even in zones far away from urban centers where there are currently no financial offerings, meaning it has great potential for bringing closer and facilitating the use of financial services.

6. The Role of ERPS in Financial Inclusion in Latin America and the Caribbean: Results of the Survey

NFIS are by nature public policy instruments requiring a multidimensional approach and multiple lines of action including: Financial education, innovation in financial services, reducing cash usage and promoting electronic payments, among others. Moreover, the improved design, functioning and innovation of ERPS has an important place on the agenda of central banks given that they are a fundamental pillar for promoting the public's trust in the financial system and, as has been seen, an instrument with great potential for encouraging access to and use of financial services. In that vein, central banks have participated in elaborating and implementing the strategies, ensuring the efficiency and security of payment systems and services, as well as their access and use.

The results of the Survey conducted among central banks of the region are shown below, making particular reference to aspects related to ERPS and different strategies and policy actions for promoting financial inclusion. The results are presented in six parts: 1) relevant aspects of ERPS in NFIS, 2) provision and use of ERPS, 3) regulatory aspects, 4) risk management, 5) important aspects of payment system infrastructures, and 6) competition and ERPS user protection.

6.1 Important Aspects of ERPS in NFIS in Latin America and the Caribbean

In the case of Latin America and the Caribbean, the Survey shows that 82% of countries have a NFIS, the most recent of which are Peru¹⁴ and El Salvador.¹⁵ Thus, demonstrating their commitment to performing a series of actions within a determined period to promote access to and use of financial services among the population.

The Survey also shows how many NFIS take into account a link with the development and modernization of ERPS.¹⁶ Said linkage varies according to the objectives and priorities each government has for planning their respective financial inclusion strategy.¹⁷

¹⁴ The Supreme Decree establishing the National Financial Inclusion Strategy (NFIS) was signed in July 2015.

¹⁵ In August 2015, a law was passed for facilitating financial inclusion through services such as mobile money (and its providers) and simplified procedure savings accounts.

¹⁶ It should be pointed out that there is no homogenous definition of the concept of retail payments in the region. The most widely accepted one is that of payments between third parties, excluding the financial sector.

¹⁷ It is important to highlight that even in the 18% of countries which do not have a NFIS, the ERPS is used implicitly as a path towards financial inclusion. The following sections therefore present information for both groups of countries.

Thus, as can be seen in Figure 4, the opening of transaction accounts¹⁸ and access for new payment service providers have been pointed out by the majority of central banks as very important for implementing their NFIS (100% and 91% of these, respectively). Central banks consider bank agents, payment cards¹⁹ and electronic money as very important payment channels and instruments for access to and use of payment services among the population. The Survey also reveals the very significant role government payments play in the inclusion process.

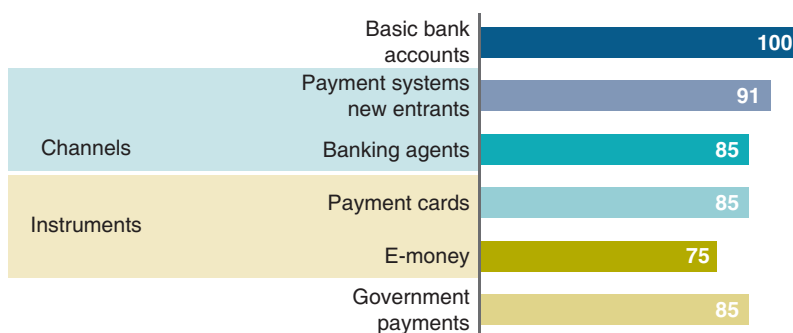
Taking the above items into account, certain aspects of ERPS may have great potential for making an effective contribution to financial inclusion. For this reason, it will be necessary to bolster the strategies in order to deepen progress made over recent years in countries of the region where regulation has allowed the development of transaction accounts, bank agents and electronic money to expand the use of ERPS, mainly among people who can most benefit from new payment channels and instruments by eliminating barriers to access and usage they face at present.

¹⁸ Transaction accounts are generally characterized by having limited functions as compared to traditional deposit accounts. With respect to the opening of transaction accounts as one of the main components of NFIS in the region, further study is necessary to ascertain whether their importance only corresponds to the act of opening an account for an individual who did not previously have access to the financial system or whether this type of account is actually the one most used after they have been opened. In India for instance, the government decreed the opening of 500 million basic accounts in the financial system, leading to an improvement in financial inclusion indicators (on the system access side), but it is still not known whether the incentives for using the account as a platform towards other services really functions or not.

¹⁹ One pending theme on this point is to analyze whether answers reveal debit cards as the most used payment method for collecting social transfers made by the government to vulnerable sections of the population.

FIGURE 4

ERPS RELEVANT ASPECTS OF THE PLANNING OF THE NFIS
(response percentage)



Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

6.2 Provision and Usage of ERPS

The previous section mentioned, in light of the multiple dimensions involved in financial inclusion, the way in which strategies associated to ERPS are implemented can vary considerably from one country to another. One immediate explanation for this is linked to the degree of progress in electronic payments in each of them.

Abad, Vásquez and Vega (2015) suggest a financial inclusion strategy that depends to a greater or lesser extent on ERPS should be drawn up with a long-term vision that promotes its gradual and realistic development, seeking to foster financial inclusion. For this it is necessary to create an ecosystem where payment service providers (PSP), economic agents and government can benefit from making their payments electronically and

using as less cash as possible. Otherwise, it is possible that the potential of ERPS as a bridge for accessing other financial services might be limited. For instance, it is necessary to avoid that social benefit transfers via prepaid cards become an instrument for simply withdrawing cash, and encourage increasing acceptance of electronic money among all types of businesses and services and not just in large establishments or e-commerce.

To illustrate part of the above, Figure 5 shows how people use payment services and who provides them. Banks are the main providers of retail payment services in the region. Nonbank financial institutions (NBFI) play an important role in providing payment cards and direct debits. As regards electronic money, it shows how banks participate more than in other services, while that of NBFI and PSP (specialized and nonspecialized) is similar. The latter reflects the presence of telecommunications companies (Telcos) in the provision of e-money.

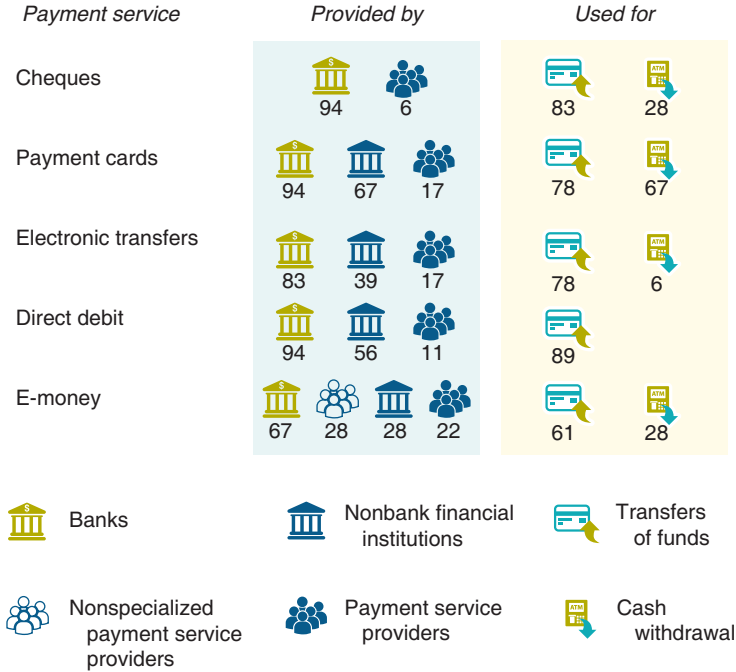
In addition, it can be seen how people use payment cards a lot for withdrawing cash, while e-money is used more as a means for transferring funds electronically. The population also makes little use of electronic transfers and direct debits for withdrawing cash.

It is therefore evident that banks, as a traditional payment services provider, continue performing an important role in supplying ERPS to the population, while other less traditional providers, such as Telcos, have greater presence in supplying innovative payment instruments such as e-money. It can also be seen how even well-established electronic payment instruments like cards are ultimately used to withdraw cash from an ATM.

The way in which the payment system of each country is organized or determined by greater or lesser participation of banks as payment service providers compared with other new PSP, as well as how the population uses each payment instrument, will be fundamental for authorities to adjust their strategies and

FIGURE 5

PROVISION AND USE OF RETAIL PAYMENT SERVICES
(response percentage)



Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

policies aimed at ensuring ERPS are used effectively to achieve greater financial inclusion. Thus, these strategies more oriented towards the use of ERPS as a mechanism for accessing and using financial services should focus on creating the conditions necessary for the ecosystem, platforms, PSP and instruments promoting the goal of making payments electronically.

6.3 Regulatory Aspects of ERPS and NFIS

The legal and regulatory framework is a fundamental pillar for the smooth functioning of ERPS and effective implementation of a NFIS. Not having a solid, balanced and predictable legal framework (that provides certainty to electronic transactions) can exacerbate or create unfavorable conditions for the development of some payment services or hamper actions that promote financial inclusion.²⁰

In this regard, adoption of numerous legal dispositions for ERPS, such as those related to access and user protection, has been encouraged by central banks and financial supervisory bodies. Nevertheless, regulatory components related to other authorities should also be considered. Economy and Finance ministries play a key role, for instance, in channeling and receiving government payments, which promote financial inclusion, through their Treasury offices. Moreover, authorities responsible for competition are influential, and should ensure equal conditions and competition in different areas of the payments system, in both the functioning of the platforms and payment systems and between final payment services providers.

Although central banks perform an important role in generating an efficient and safe environment for the smooth functioning and development of ERPS, not all of them have explicit powers to intervene. Even central banks that do have a mandate may be limited because the powers conferred to them are not broad enough to accommodate ERPS innovations and keep pace with the development of the market (CMPI-WB, 2016).

The legal and regulatory framework that supports ERPS and NFIS in Latin American and the Caribbean is composed of different laws, regulations, standards and other instruments of different legal status. The most important law is that regulating

²⁰ Based on CPMI-WB (2016).

the overall functioning of the financial system and commonly addresses issues related to the authorization and control of different types of financial institutions regulated by the authorities. There are also direct laws and regulations for payment clearing and settlement systems encompassing general rules for participants, mechanisms, agreements, payment services and systems. Laws for social and financial inclusion issued by some countries have also been added recently to said standards.

Figure 6 shows the legal and regulatory framework currently in force in Latin America and the Caribbean with regards to the role of ERPS in the agenda for financial inclusion. It can be seen in the region how low ranking legal standards (e.g., administrative rules, circulars and regulations) are the tools most used for defining the regulatory framework for payment systems and financial inclusion. Moreover, it is evident that not all countries have a body of high-ranking legislation (i.e., laws) covering said aspects.

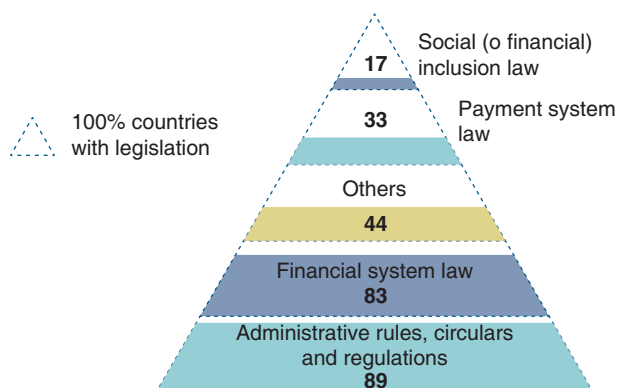
It is worth mentioning that, although transaction accounts, access of new PSP to payments systems and government payments are important components of ERPS for promoting financial inclusion, a majority of countries have still not implemented a regulatory framework for them. The situation is different for traditional payment services such as cheques, debit and credit cards, and electronic transfers, for which a large number of countries have a general legal framework, even including specific regulations for some of them.

The above reveals an opportunity for countries of the region to elaborate, and in some cases strengthen, a complete legal and regulatory framework that facilitates actions aimed at promoting the use of ERPS. The challenge is to generate appropriate legislation that improves safety and efficiency, and guarantees consumer protection, without restricting innovation and the emergence of new services.

FIGURE 6

LEGAL FRAMEWORK FOR RETAIL SYSTEMS AND ELECTRONIC PAYMENT SERVICES AND NATIONAL FINANCIAL INCLUSION STRATEGIES

(response percentage)



Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

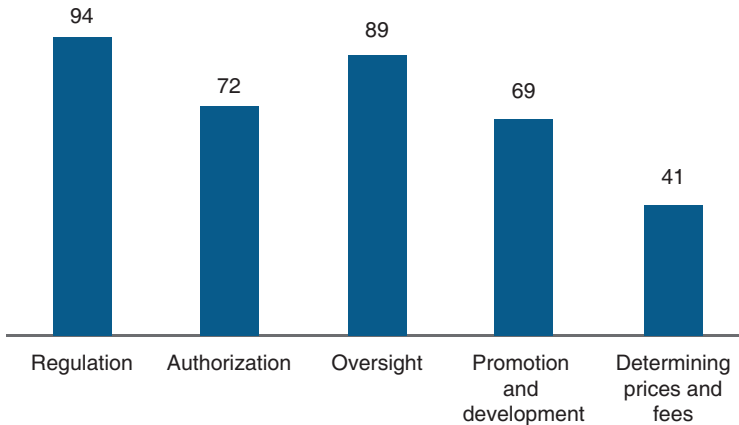
The organic law of a central bank is the legal basis for its different responsibilities as regards the regulation, promotion, oversight and operation of ERPS. In the case of financial inclusion,²¹ the powers conferred by the organic law to a central bank in this area might, in general, be limited considering the active role of such institutions in the different dimensions of inclusion, such as consumer protection, financial education and the smooth functioning of payment systems and services. For this reason, up until now they continue to work with regulations below the legal status of a law, above all in countries that do not have specific legislation for social and financial inclusion.

According to Figure 7, 94% of central banks have powers for regulating ERPS. They also have powers for authorizing payment

²¹ As would be expected, central banks have adopted a much more active posture in ERPS and financial inclusion.

FIGURE 7

POWERS OF CENTRAL BANKS ON RETAIL ELECTRONIC PAYMENT SYSTEMS AND SERVICES
(response percentages)



Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

service providers and payment system administrators²² (72%), oversight (89%), and promotion and development (69%), the latter including financial education topics. It is important to emphasize the role central banks have in determining prices and fees in ERPS, which in the case of the region record a percentage of 41%. This could be a key factor for expanding the use of these payment services among the population excluded by current prices. Central banks also state that their powers in financial inclusion topics are narrower than those related to ERPS, reflecting the multiple dimensions of NFIS.

To establish a solid, predictable and balanced legal framework that favors competition, innovation, safety and efficiency

²² Central banks that do not have the functions of a financial supervisory body might not be linked to operating authorization processes.

in ERPS, communication and cooperation among the authorities and main private sector players is essential. A legal and regulatory approach that encourages dialogue and coordination with all interested parties can solve the absence or ambiguity of powers for the relevant authorities in the functioning of ERPS and the implementation of NFIS. Thus, setting up bodies, such as payment committees or other multidisciplinary or interinstitutional entities can drive better cooperation in retail payment system matters aimed at promoting access and financial inclusion.

Multisector bodies have been set up in 56% of Latin American and the Caribbean countries.²³ These bodies are responsible for working on retail payments or financial inclusion with the participation (in 100% of cases) of the central bank and financial supervisory body. It is important to mention that the Ministry of Finance or the banking sector do not participate in every case. Nevertheless, other types of participants, such as bank associations and payment system administrators, together with PSP and other members of the industry form an important part of the process of dialogue and cooperation for developing ERPS over the long-term (see Table 2).

The more representative participation on such committees becomes, the better regulation and oversight powers of central banks and other authorities regarding aspects of ERPS and NFIS will be fulfilled. The latter might also benefit from improved conditions for proposing and adopting changes necessary in the industry for strengthening safety, efficiency, competition and innovation.

²³ Argentina, Bolivia, Brazil, Chile, El Salvador, Jamaica, Mexico, Paraguay, Peru and Dominican Republic have a multisector committee for financial inclusion.

TABLE 2

**COMPOSITION OF INTERINSTITUTIONAL COMMITTEES
FOR PROMOTING FINANCIAL INCLUSION**

(percentage of countries)

| <i>Participating institution</i> | <i>Presence in total number of Committees</i> |
|---------------------------------------|---|
| Central bank | 100 |
| Financial supervisory body | 90 |
| Ministry of Economy or Finance | 90 |
| Banking sector | 40 |
| Other participants | 90 |

Source: Elaborated with information from the survey The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean.

6.4 Risk Management in ERPS

While risks in large-value payment systems are mainly systemic, in the case of retail payments the sources of risks are predominantly operational. Nevertheless, poor risk management could affect participants and their customers.²⁴ It is therefore important to have a solid legal framework for properly managing each risk in order to ensure, for instance, that actions aimed at promoting financial inclusion do not affect the safety and efficiency of payment systems and overall financial stability.

Given the organization and dynamics of the ERPS industry, there is a delicate balance between the degree of innovation and competition, and the legal framework for risk management that PSP, payment system administrators and other industry

²⁴ As retail payment systems become more important in an economy (as in the case of Latin American and Caribbean countries), poor risk management could lead to systemic risk.

participants must comply with. On the one hand, the authorities should ensure safety and efficiency in the development and functioning of payment systems and services. On the other, an excessive amount of controls and requirements by the authorities can impede competition or discourage innovation, thereby hindering progress in the electronic retail payments market.

Actions geared towards promoting financial inclusion, such as the entrance of new PSP and products to ERPS, can lead to new risks, representing a challenge for maintaining the referred balance. This requires establishing an appropriate framework for promoting proper risk management, which takes into account the nature of payment services and also encourages the correct behavior of PSP, in order to fully protect users of the financial system.²⁵ This protection becomes more important considering the fact that inclusion efforts are aimed at people generally lacking financial experience and knowledge.

In the following years central banks of the region could face different challenges when attempting to ensure the promotion of financial inclusion does not affect risk management in ERPS and PSP or safety and efficiency in the provision of payment services.

With respect to the regulatory framework associated to risk management of instruments and access channels in the region, Figure 8 shows that not all payment instruments have a regulatory framework covering financial risks (credit and liquidity). In this regard, cheques obtained the largest number of answers, while payment cards received the lowest.

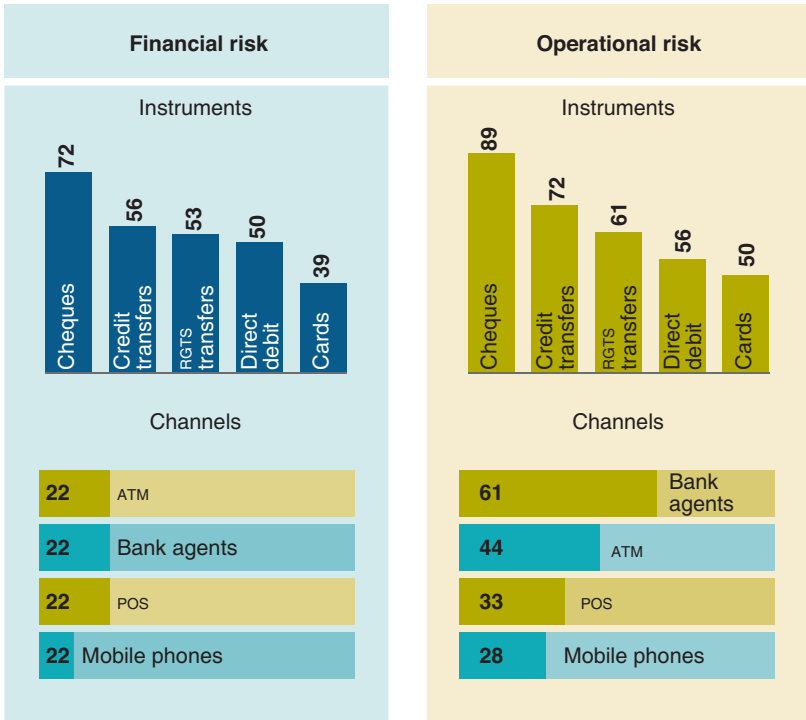
As for access channels, regulations on operational risk management have progressed more in the region, as in the case of the bank agents model, than those related to financial risks, although both are scarce.

²⁵ CPMI-WB (2015).

FIGURE 8

REGULATORY FRAMEWORK FOR MANAGING RISK IN ERPS

(response percentage)



Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

Regarding payment systems and platforms for processing payments, it is important to point out that the majority of countries surveyed have a financial and operational risk management scheme for RTGS and ACH systems, while still only a few countries have them for other platforms (such as card switches and e-money systems).

Although the majority of countries in the region have the foundations for largely managing risks associated to ERPS, for actions included in NFIS it is advantageous to strengthen and complement ERPS components that ensure they operate safely and efficiently for participating institutions and end users, above all when innovations such as e-money are introduced.

6.5 Payment System Infrastructures

Payment systems contribute to economic activity by providing methods for transferring funds that facilitate transactions between economic agents. This role can be performed thanks to the leverage and use of information and communications technologies, making the smooth functioning of the IT and physical infrastructures backing up payment systems and platforms very important. Payment systems can also become more efficient and safe if they have standards and levels of interoperability²⁶ that foster economies of scale and scope.²⁷

Among key payment systems and platforms for promoting financial inclusion are interbank systems for electronic retail fund transfers, including automated clearing houses (ACH) and electronic money systems (EMS), platforms for processing payment cards (also known as card switches), access and service point networks, such as automated teller machines (ATM) and points of sale (POS), as well as the real time gross settlement systems (RTGS), managed by central banks.²⁸

²⁶ This is a multidimensional concept, but mainly refers to the fact that payment orders can be processed independently from the PSP, Telco or platform used.

²⁷ Economies of scale refer to the fact that the average cost of a good or service decreases as its volume of output increases. Economies of scope consist of the average cost decreasing as the production of goods and services becomes more diversified.

²⁸ CPMI-WB (2015).

Having this type of systems and platforms is essential for the smooth functioning of ERPS, but it is equally important for there to be a high degree of interoperability and standardization in and amongst them, especially when they are employed as a mechanism for promoting financial inclusion. Nevertheless, it is necessary that these are framed by broad and organized access for PSPs and are continuously modernized in order to properly handle constant innovation within the industry.

6.5.1 Importance of Access to Platforms and Payment Systems in Financial Inclusion

The importance of ERPS in promoting financial inclusion has been repeated throughout this paper. As a result, retail payment platforms and systems (ACH, EMS, ATM, POS and card switches) acquire a more important role than other systems or platforms (as compared to a cheque clearing house, for instance).

Figure 9 illustrates the importance given to payment platforms and systems in financial inclusion in Latin America and the Caribbean, showing whether PSP have direct access or not.

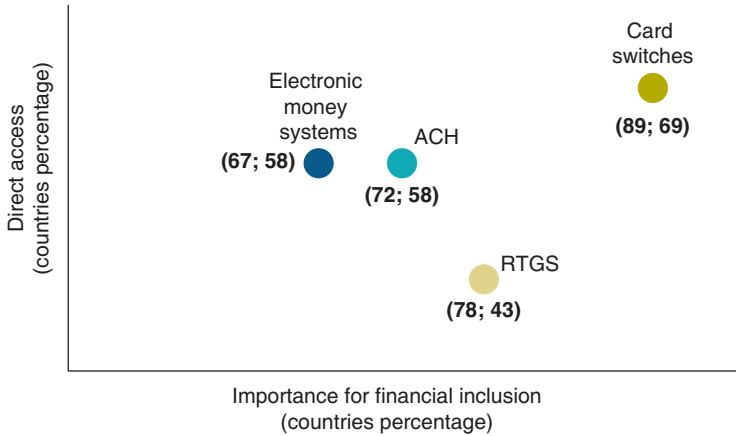
Card switches (89%) are the platform considered most important for fostering financial inclusion, followed by RTGS (78%), ACH (72%) and EMS (67%). Payment platforms and systems perform a key role in strategies by favoring access to and use of ERPS. In some cases, there has been growth, such as in e-money platforms and systems.

It should be emphasized that the type of access (direct or indirect) PSP have to platforms and systems can boost or reduce coverage and accessibility of ERPS for end users, as well as interoperability between PSP. In this context, it is worth mentioning that in only 43% of cases do PSP have access to RTGS systems.²⁹ Payment card switches have direct access in 69%

²⁹ Access to RTGS systems is generally conditional upon certain minimum

FIGURE 9

PAYMENT PLATFORMS AND SYSTEMS: DIRECT ACCESS AND IMPORTANCE FOR FINANCIAL INCLUSION¹



¹ The first figure is the percentage of importance placed on financial inclusion to each platform and operating system of payment in Latin America and the Caribbean; the second indicates which percentage of countries have PSP direct access without intermediaries.

Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

of the countries, while EMS and ACH direct access is guaranteed for PSP in 58% of the countries. In this regard, the authorities should assess the type of access for different PSP, keeping in mind the importance of not compromising security and the smooth functioning of payment platforms and systems. This poses challenges in both regulatory and corporate governance spheres of such platforms and systems.

Greater access for PSP to RTGS systems can lead to increased financial inclusion because these large-value systems

requirements such as holding a current account at the central bank, which can imply significant costs for different PSP (nonbank nonfinancial) that promote financial inclusion.

form the backbone of the financial system. Moreover, said systems can become the sole platform for government payments (as issuer and receiver), making such operations more efficient (payments to providers, tax collection and social transfers).

6.5.2. Interoperability and Standardization of ERPS

The deepening of electronic payment services in Latin America and the Caribbean has increased the need to have interoperable systems and platforms that function under reliable and robust standards. This responds to the fact that interoperability is an essential requirement to ensure safe and efficient fund transfers between platforms processing similar services and those that clear or settle those services.

In addition, interoperability is an important factor for promoting competition among PSP by eliminating the barriers between them. This therefore fosters price competition, while achieving economies of scale due to the larger number of transactions that will lead to lower costs for systems and providers. The latter demonstrates the importance of interoperability in promoting financial inclusion, because gains in safety and efficiency can facilitate access to and use of payment services for end users.

Interoperability inside ERPS also allows for expanding the geographical reach of PSP and payment services without the need for increasing physical infrastructure. For instance, an interoperable e-money model composed of different issuers can help other issuers reach geographic areas serviced by just one issuer, which thereby increases the opportunities for accessing such services and generates competition among PSP.

It is extremely complex to address interoperability issues in the region due to the diversity in the composition and advancement of payment systems, market structure and other institutional and regulatory aspects in each country.

Thus, as can be seen in Figure 10, RTGS systems have the highest degree of interoperability in Latin America and the Caribbean, followed by ACH and payment card switches. With respect to the main restrictions for achieving greater interoperability, those related to problems in the industry (fees, exclusivity, among others) and the lack of a usage scale in the cases of RTGS and ACH.

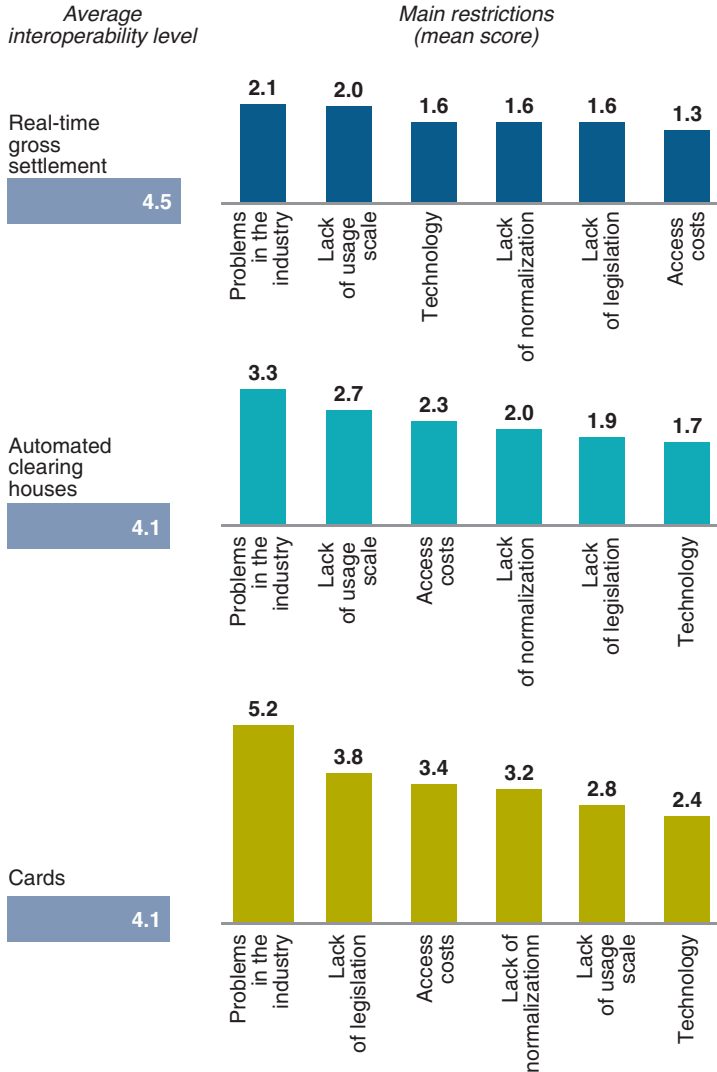
In addition to systems and platforms being interoperable, another topic of utmost importance for the development of ERPS is a proper set of operating rules and standards for their functioning. Standardization, technological innovation and, particularly, the establishment of technical and business continuity standards are very important for improving operation processing, while they also facilitate interoperability among PSP and payment systems.

In the case of payment products and services offered by PSP to end users, standardization can help improve their operation, acceptance and gradual adoption, as well as foster more open competition among the different PSP. It is therefore essential to encourage collaboration and communication between authorities, industry and end-user representatives in the definition and general adoption of all these standards.

Figure 11 shows information on whether current standards demand some type of standardization from systems, instruments and access channels in Latin American and Caribbean countries. In this regard, legislation in force in countries of the region mostly demands standardization from RTGS systems (in 88% of cases) and from ACH (76% of cases). As for instruments, standardization demands mostly apply to cheques and fund transfers channeled through the RTGS. Less requirements are imposed on other instruments. As for access channels, 22% of countries have a legal framework for standardizing service point and operation networks (ATM, POS or agent banking model).

FIGURE 10

**INTEROPERABILITY IN PAYMENT SYSTEMS AND SERVICES
IN LATIN AMERICA AND THE CARIBBEAN:
LEVEL AND RESTRICTIONS**

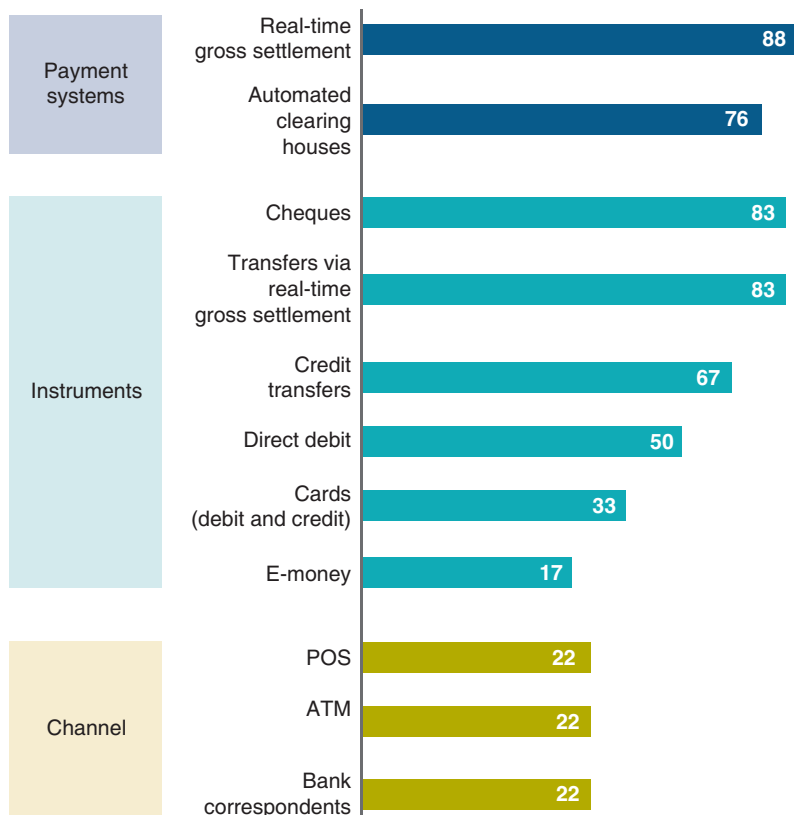


Score: Level of interoperability from 0 to 5; restrictions from 0 to 6.

Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

FIGURE 11

**CASES WHERE REGULATION REQUIRES
SOME LEVEL OF STANDARDIZATION**
(response percentages)



Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

It is important to highlight that there are no standardized rules for the operation of mobile phones as a channel for accessing ERPS, even though this is currently considered very important for promoting financial access.

The results show many areas for improving the standardization of ERPS components in the region, which would foster their development and financial inclusion. When constructing a long-term strategy aimed at the deepening and adoption of electronic payment services, lack of proper standardization could considerably affect the positive impact and viability of new products. It might even imply highly significant economic costs for PSP, systems and platforms, and the industry in general, and therefore for end users, particularly when the innovations must be generally accepted and adopted by the target population it is desired to include in the financial system.

Finally, in the same way as the interoperability of ERPS, standardization requires that the legal framework and the authorities in charge of their regulation and oversight take into account innovations and developments in the payments industry, for instance in the cases of e-money and access channels that are directly related to mobile phones. Nevertheless, for such cases it is essential to work jointly with many different types of payment industry authorities and participants such as, for instance, telecommunication services authorities.

6.6 Competition and User Protection in ERPS

The final point in this section concerns competition and user protection in ERPS. Some of the issues in this field are: 1) inappropriate behavior by PSP, payment system administrators and platforms; 2) low levels of financial education in end users and consequent inappropriate use of the services; 3) lack of transparency regarding fees and commissions charged, or 4) a poor institutional framework that lacks mechanisms for

protection and handling complaints. Considering that the target population for financial inclusion strategies generally tends to be the most vulnerable to this type of problems due to their lack of knowledge, inexperience or lack of familiarity with financial products, the authorities and industry itself face a significant challenge for ensuring they provide the minimum conditions for correcting deficiencies that can lead users to make inappropriate decisions or become the victims of abuse.

6.6.1 Payment Services User Protection

A core aspect in the functioning of the financial sector is microprudential regulation aimed at fostering appropriate behavior by institutions providing financial services, as well as user protection. The latter provides security and generates certainty by handling complaints and conflicts related to the use of said services.

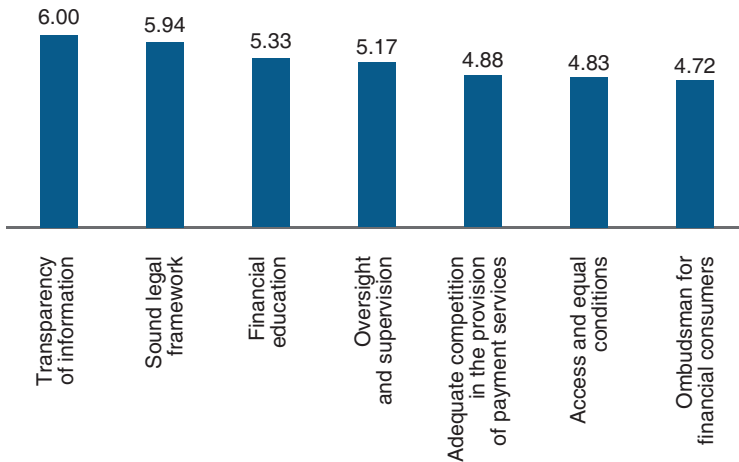
If a user does not know about the characteristics, obligations and functioning of payments services, or has little information or knowledge on how to use them, they might be exposed to conflicts, which, at worse, might lead them to stop using such services. It is therefore necessary to have a regulatory framework that promotes user protection while being oriented towards strengthening and encouraging continuous access to and use of financial services.

It is important to take into account that the appearance of new payment services, participation of new PSP or frequent changes in the way services are delivered could affect construction of a legal framework oriented towards protecting users, particularly those who are just starting to use payment services.

A financial inclusion program based on ERPS should include some minimum user protection components: 1) a legal and institutional framework for protecting users and efficiently handling conflict resolution; 2) measures promoting transparency

FIGURE 12

**ERPS: RELEVANT ASPECTS
FOR CONSUMER PROTECTION**



Note: Average value of 1 to 7, the latter being the most important.

Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

of information from PSP on prices and commissions related to each payment service; 3) strategies for increasing financial education among the population, and 4) arrangements and rules for ensuring the protection of users' personal data.

Thus, for central banks and other authorities responsible for ensuring the smooth functioning of ERPS, the presence of the aforementioned items (or at least some of them) can be of vital importance for promoting financial inclusion.

As shown in Figure 12, the three main requirements for a proper framework for protecting users of payment services in the region are: 1) transparency of information related to the functioning of payment services, 2) the soundness of laws and regulations focused on improving user protection, and 3)

appropriate levels of financial education among the population. Other important aspects are oversight and supervision, adequate competition in the provision of payment services and having specialized institutions that support users of financial services, for instance, an ombudsman for financial consumers.

It is evident that the priority of each of these requirements can vary across countries in accordance with the current status of their legal and institutional framework, as well as the main problems identified by the authorities, industry and other players involved, and the effectiveness of actions that promote financial inclusion through electronic retail payments systems. The authorities should therefore either pay more attention to the components of ERPS that, as part of a financial inclusion strategy, require a sound consumer protection framework, or harmonize the development of ERPS taking end-users more into account.

6.6.2 Market Competition and Financial Access

Economic theory indicates that an environment of free competition with appropriate regulation favors the reduction of prices (allocative efficiency), increases efficiency among providers (productive efficiency), fosters innovation in markets (dynamic efficiency), and, among other possible effects, guarantees better quality in the services offered.

In retail payment systems, economies of scale and scope, along with network externalities, can generate less than optimal conditions for competition.³⁰ Said factors can lead to providers

³⁰ Given the nature of payment systems (a market with two demands: payment platforms and payment services), they are generally modelled in the literature as two-sided markets (Rochet and Tirole, 2003, 2004; Armstrong, 2006; Evans, 2002; Guthrie and Wright, 2007; Economides, 2008). Being the vehicles for transferring value, payment services use a specific platform for making said transfer between users. This platform is key to the behavior of these markets and a defining factor for analyzing

or payment platforms and systems gaining market power. For instance, in any structure it is best for society to have just one supplier of a service or set of payments services (natural monopoly), as in the case of a single ACH.

The competitive conditions faced by PSP, systems and platforms in providing payment systems directly influence end-users' access to them, and therefore financial inclusion. Thus, it is of utmost importance to have an environment that favors equal conditions and fair competition.

In the new landscape for ERPS in Latin America and the Caribbean, services and providers increasingly appear and contribute to financial inclusion, such as bank agents or e-money systems. Given this new scenario, the need to establish and safeguard competitive conditions that take such changes into account without compromising levels of safety and efficiency in ERPS is unquestionable.

In this regard, central banks of the region consider very influential in achieving an appropriate competitive environment: 1) preserving equal conditions of access to the different systems and platforms, 2) having a transparent pricing policy, and 3) eliminating exclusivity agreements for PSP or the systems themselves, and inappropriate clauses in contracts forming part of product or payment service design. It is important to

them through the network theory given that it fosters externalities on both sides of demand. The presence of economies of scale (Kemppainen, 2003) and economies of scope (Rochet and Tirole, 2003) are the externalities on the supply side of payment systems (e.g., by establishing standards). The main consequence of these externalities is the possible merging of these providers. In this context, it can be seen how in this type of markets there is an interconnection between competition and cooperation, which produces the need for a third agent that establishes appropriate regulation, i.e., that allows system providers to use externalities without detriment to a competitive market. Thus, the interconnection of demands (system and service providers) becomes significant because proper regulation in payment systems can lead to a more competitive market.

TABLE 3

IMPORTANCE OF PSP AND CHANNELS IN ACCESS AND USAGE

| <i>Provider</i> | <i>Geographic coverage</i> | <i>Supply and variety of services</i> | <i>Usability of payment services</i> |
|----------------------------------|--------------------------------|---|--|
| Commercial banks | 9 | 2 | 12 |
| Specialized firm | 5 | 6 | 5 |
| Microfinance institutions | 7 | 10 | 5 |
| <i>Channels</i> | | | |
| Bank agent | 13 | 7 | 12 |
| Bank counter | 7 | 4 | 7 |
| ATM | 7 | 0 | 10 |
| Mobile banking | 4 | 4 | 8 |
| POS | 4 | 1 | 10 |

Note: Figures represent the number of answers.

Source: Survey on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean.

mention that moving forward with different financial inclusion actions may require analyzing aspects related to conditions of competition in the payments market.

In addition to the competitive environment that must be guaranteed for ERPS, it is necessary to promote access to and usage of them. In this regard, Table 3 shows the following important dimensions for access and usage of payment services: 1) geographic coverage of PSP, 2) the supply and variety of payment products and services, and 3) their ease of use.

The majority of countries in the region consider that commercial banks have an important role to play in achieving access in rural and poor zones, as well as facilitating the use of payment

services. Microfinance institutions are important for providing a variety of payment products and services.

As for access channels, it can be seen how the use of the agent banking model is very significant in those three dimensions of access and usage in countries of the region, while POS contribute slightly to geographic coverage and the supply of new products. It is worth pointing out that the agent banking model is also important to support other access channels (e.g., mobile telephony) for fund deposit and withdrawal operations, thereby increasing its relevance in inclusion strategies.

6.6.3 The Role of Nonfinancial Institutions in ERPS

Throughout this study it has been found that new PSP often bring with them new questions for the authorities concerning the impact they might have on the safety and efficiency of electronic payment systems and services.

In this regard, telecommunications companies (Telcos) and electronic money issuers (EMI) provide payment services focused on the unbanked population.

Telecommunications companies have recently adopted the figure of PSP getting a closer relationship with end users, even managing their funds without holding the position of financial intermediary or actually performing any investment operations (see Figure 13).³¹ Moreover, Telcos and EMI have entered niches generally neglected by traditional PSP (e.g., banks), mainly as a result of their comparative advantage (e.g., coverage or geographic reach).

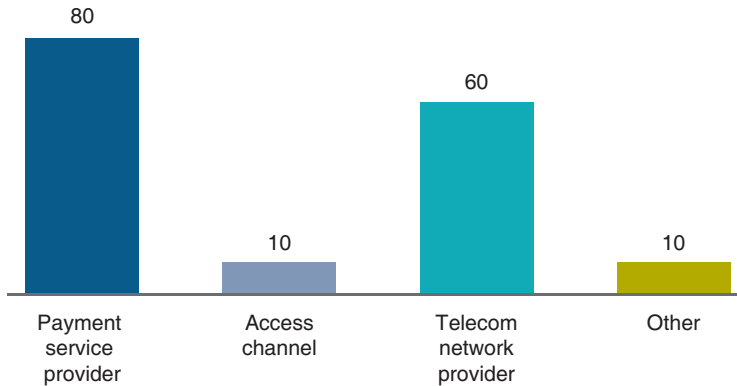
The direct involvement of nonfinancial PSP in providing payment services poses considerable challenges for the regulation and oversight of ERPS, and consequently, for central banks,

³¹ The natural role for telecommunications companies in providing different communication services (fiber optic cable, mobile telephony, etcetera) is essential for the functioning of systems, platforms, access channels and payment services in general.

FIGURE 13

**INVOLVEMENT AND ROLE OF TELECOMMUNICATIONS
COMPANIES IN ERPS**

(percentage of countries where Telcos
are involved in payment services)



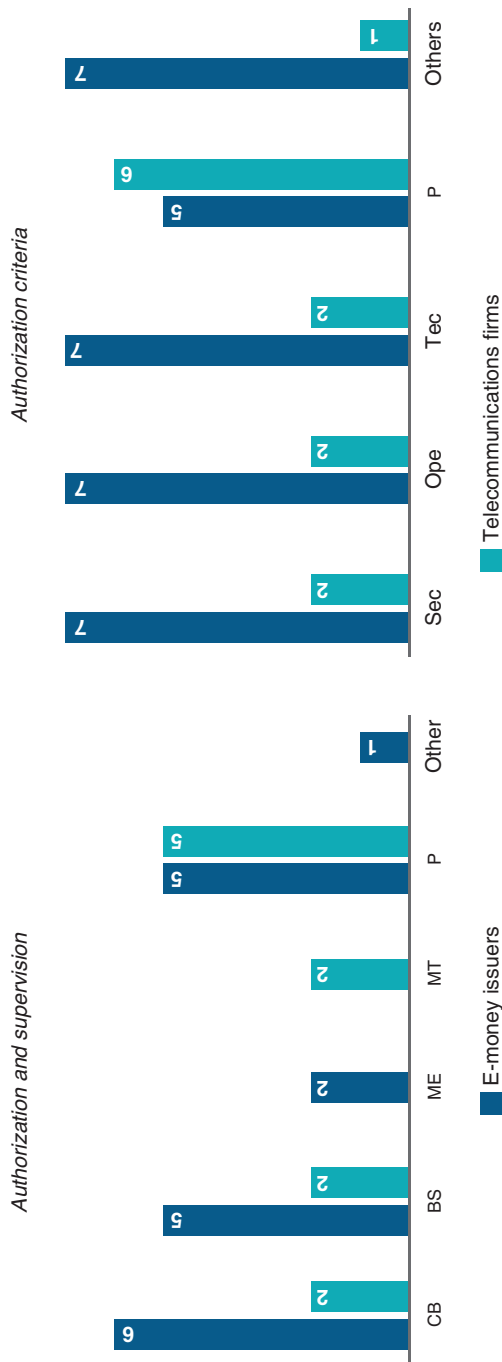
Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

which to address them must coordinate with other authorities and stakeholders linked to such companies in order to continue ensuring the safety and efficiency of payment services and proper protection for users and their funds.

Figure 14 shows the institutions responsible for authorizing and supervising nontraditional PSP in ERPS, as well as criteria employed in the region. In the majority of cases a procedure for the authorization and operation of Telcos and PSP is neither planned nor pending legislation. Moreover, in cases where it is planned, it is the responsibility of the telecommunications authority, while central banks and financial supervisory bodies have a less important role, reinforcing the need for greater interinstitutional cooperation in order to ensure these firms fulfill their function inside the ERPS.

FIGURE 14

ENTITIES RESPONSIBLE FOR THE AUTHORIZATION AND SUPERVISION OF PROVIDERS OF NONTRADITIONAL PAYMENT SERVICE PROVIDERS IN RETAIL ELECTRONIC PAYMENT SERVICES AND SYSTEMS



Note: The number indicates number of countries.
 Abbreviations: CB: central bank; BS: banking superintendency; ME: Ministry of Economy / Finance; MT: Ministry of Telecommunications;
 P: is not intended / pending legislation. Sec: security criteria; Ope: operational criteria; Tec: technological criteria.
 Source: Author's elaboration based on The Role of Payment Systems and Services in Financial Inclusion in Latin America and the Caribbean survey information.

Meanwhile, granting operating licenses for EMI is a task mainly assigned to central banks and financial supervisory bodies. The criteria for said authorizations mainly concern security, operation and technology.

Although the regulatory and oversight framework for Telcos operating as PSP is very complex, in some cases there are no dispositions for preserving the efficiency and safety of their operation. As for e-money systems (EMS) in the region, there is a better defined regulatory environment given that central banks and financial supervisory bodies are very involved in regulating, authorizing and overseeing electronic money issuing firms. Moreover, during the authorization process the authorities assess issues related to the operation of such firms.

However, it is important to point out that traditional PSP have still not incorporated the needs of the people outside the system into their financial products, which has led to the emergence of new players in ERPS. Thus, in this new environment it will be desirable for the authorities to acquire institutional capacities allowing them to ensure proper growth of this new niche in ERPS, which, as has been seen in this paper, influences the promotion of access to and use of financial services.

7. Conclusions and Central Bank Actions in Latin America and the Caribbean for Promoting Financial Inclusion through ERPS

This paper is part of a joint effort by members of the S-PAFI (as a working group of the WGPS-LAC) and CEMLA for studying the interplay of retail payment systems and financial inclusion, using this to identify points of attention to allow authorities of the region to foster financial inclusion through ERPS.

Throughout this study it has been shown how a large number of Latin American and Caribbean countries have defined financial inclusion strategies where ERPS play a dominant role. Under this framework, central banks participate in bodies or interdisciplinary commissions established through high-level legal standards (known as financial inclusion strategies) that are aimed at defining and implementing actions oriented towards the population having access to and making intensive use of quality financial services. Such participation is of crucial importance given that central banks are generally responsible for guaranteeing the efficient and safe operation of retail payment systems and services.

This paper has gathered together information provided by 18 countries of the region in response to the questions in the Survey. The latter confirms that although there is a high level of homogeneity between the different payment systems –such as for instance in real time gross settlement systems (or RTGS) as a result of applying international principles and standards–, there is a large degree of diversity in the development, regulation and interoperability of most other systems, platforms and services. Nevertheless, central banks coincide on pointing at the importance of certain electronic payment systems and

access channels in financial inclusion. In this regard, they also mention the role of microfinance firms and even telecommunications companies (in e-money, for instance) in achieving greater scope for facilitating access in remote areas or those neglected by the traditional financial system.

Most central banks also agree that financial inclusion strategies should be mainly oriented towards facilitating people's access to bank or transaction accounts (including e-money accounts). This represents the first step in the effective use of ERPS such as e-payments, debit cards, among others.

In addition, given the diversity of approaches and strategies, the authorities and most important players can benefit from adopting a strategy within an environment of dialogue and co-operation. The latter implies, for instance, making efforts so EMI and Telcos develop in close coordination with the authorities responsible for their authorization, regulation, operation and oversight, as well as with the industry. In sum, interinstitutional bodies and forums should be established as a vehicle for coordinating and implementing new measures that allow ERPS to drive financial inclusion. The aforementioned will constitute an extremely important asset going forward.

It is important to highlight that efforts for promoting financial inclusion have taken place in the absence of rules or guidelines for the effective participation of ERPS in financial inclusion, a gap that the framework of reference recently proposed³² by the Committee on Payments and Market Infrastructures (CPMI) of the Bank for International Settlements (BIS) and the World Bank seeks to fill through guiding principles and key actions to advance access to and promote the use of payment services adapted to the needs of the population.

³² In April 2016, the CPMI-WB Task Force on Payment Aspects for Financial Inclusion published a report containing a working framework proposing actions and principles for ensuring financial inclusion benefits from the operation and use of electronic payment systems and services.

Said framework of reference can serve as a basis for the central bank and other authorities, and important players in this field. To achieve this, it will be essential to follow the referred guidelines in order to leverage available resources and efforts already made, as well as, very importantly, to address the real needs of the population. Moreover, it will be important to share criteria and experiences inside the region, defining concepts and establishing common conceptual frameworks for the development of electronic payments.

The S-PAFI has also identified the need to continue encouraging reflection and debate on the role of central banks in developing and leveraging ERPS for financial inclusion. This is in addition to actions central banks have adopted for reducing the cost of transactions between economic agents, for instance, by promoting electronic payments and reducing the use of cash, as well as fostering greater interoperability and standardization in systems and platforms that facilitate the clearing and settlement of electronic payments.

For the above reasons, this paper represents a contribution of the WGPS-LAC to the type of orientation required for focusing the actions of central banks seeking to support financial inclusion strategies with payment systems and services. The WGPS-LAC has proved to be an effective space in such efforts, while the S-PAFI in particular has become a supporting body that could facilitate and structure a space for reflection and debate under the umbrella of CEMLA.³³

On this path, the S-PAFI will continue driving the permanent dialogue and exchange that takes place under the framework of the WGPS-LAC and CEMLA in order to leverage the experience

³³ A similar situation can be seen with the Committee on Payments and Market Infrastructures which together with the World Bank set up the Retail Payments Forum that has allowed for identifying joint working topics for central banks belonging to the CPMI.

and knowledge of the region's central banks in elaborating common guidelines that provide orientation and reference, in this case in the field of electronic retail payment systems and financial inclusion.

In conclusion, the S-PAFI will continue with its mandate to support central banks of the region in building/adapting an institutional framework that fosters ERPS access and usage. For this reason, the S-PAFI should, among other tasks, establish a methodological framework allowing it to use the guidelines of the CPMI-BM Task Force on Payment Aspects of Financial Inclusion for assessing the current situation in Latin America and the Caribbean. This will enable identification of the steps that should be taken for implementing the guidelines in the region.

Annex 1

Survey on the Role of Payment Systems and Services in Financial Inclusion

| | |
|------------------|--|
| Institution | |
| Name | |
| Position | |
| E-mail | |
| Telephone number | |

General Aspects

1. Is there a financial inclusion strategy in your country?

| | |
|-----|----|
| Yes | No |
| | |

2. If yes, state the importance of the following items for developing the financial inclusion strategy in your country.
(Scale 1: not very important, 5: very important).

| | | |
|-------------|--------------------------|------------|
| | | Importance |
| Instruments | Cheques | |
| | Cards (dedit and credit) | |
| | Credit transfers | |
| | Direct debit | |
| | E-money | |
| | | |
| Channels | Mobile banking | |
| | Bank correspondents | |
| | ATM | |
| | POS | |

| | | |
|---------------------|---|--|
| Payment type | Government payments to individuals and firms | |
| | Payments by individuals and firms to the government | |
| <hr/> | | |
| Others | Basic accounts | |
| | Access of new participants to payment systems | |
| | Others | |

3. Complete the following table accordingly.

| | <i>Principal use</i> | | | | <i>Provider of the service to the final customer</i> | | |
|--------------------------|----------------------|--|---|----------------------|--|---------------------------------|---------------------------------------|
| | Cash withdrawal | Fund transfers (payments, remittances, etc.) | Cash withdrawal as a percentage of total operations | Banking institutions | Nonbank financial institutions | Specialized providers (specify) | Nonspecialized providers (e.g. Telco) |
| Cheques | | | | | | | |
| Cards (debit and credit) | | | | | | | |
| Credit transfers | | | | | | | |
| Direct debit | | | | | | | |
| Electronic money | | | | | | | |
| Others | | | | | | | |

4. Complete the following table accordingly (tick “C” for clearance and “S” for settlement).

| | <i>ACH</i> | | <i>RTGS</i> | | <i>Card switch</i> | | <i>Other</i> | |
|-----------------------------|------------|---|-------------|---|--------------------|---|--------------|---|
| | C | S | C | S | C | S | C | S |
| Cheques | | | | | | | | |
| Cards (debit and credit) | | | | | | | | |
| Credit transfers | | | | | | | | |
| Direct debit | | | | | | | | |
| Electronic money | | | | | | | | |
| Others | | | | | | | | |

5. Indicate which definition of retail payments best describes your national environment and specify their role in financial inclusion (high, medium or low importance).

| | |
|--|--|
| | Payments between third parties, excluding the financial sector (individuals, firms and government) |
| | Payments smaller than a determined amount |
| | Nonurgent payments |
| | Others |

Legal and Regulatory Framework

6. Indicate whether the following laws or regulatory dispositions exist in your jurisdiction and whether they establish a role for payment systems and services in the national agenda for financial inclusion.

- ☐ Payment systems law
- ☐ Financial system law
- ☐ Organic law of the central bank
- ☐ Social (or financial) inclusion law
- ☐ Resolution, circular or regulation (lower-ranking standards)
- ☐ Others

7. Indicate the powers your central bank has in the retail payments segment in the table below.

| | Yes | No | What payment services does it include? |
|----------------------------|--------------------------|--------------------------|--|
| Regulation | <input type="checkbox"/> | <input type="checkbox"/> | |
| Authorization | <input type="checkbox"/> | <input type="checkbox"/> | |
| Oversight | <input type="checkbox"/> | <input type="checkbox"/> | |
| Promotion and development | <input type="checkbox"/> | <input type="checkbox"/> | |
| Setting prices and tariffs | <input type="checkbox"/> | <input type="checkbox"/> | |
| Others | <input type="checkbox"/> | <input type="checkbox"/> | |

8. Indicate the powers your central bank has in promoting financial inclusion in the table below.

| | Yes | No | What aspects does it include? |
|---------------------------|--------------------------|--------------------------|-------------------------------|
| Regulation | <input type="checkbox"/> | <input type="checkbox"/> | |
| Authorization | <input type="checkbox"/> | <input type="checkbox"/> | |
| Oversight | <input type="checkbox"/> | <input type="checkbox"/> | |
| Promotion and development | <input type="checkbox"/> | <input type="checkbox"/> | |
| Others | <input type="checkbox"/> | <input type="checkbox"/> | |

9. Indicate whether in there is a specific regulatory framework in your country for:

| Instruments | | Name of the regulation |
|-----------------------------|--------------------------|------------------------|
| Cheques | <input type="checkbox"/> | |
| Cards (debit and credit) | <input type="checkbox"/> | |
| Credit transfers | <input type="checkbox"/> | |
| Direct debit | <input type="checkbox"/> | |
| Electronic money | <input type="checkbox"/> | |

| | | | |
|--------------------------|---|--|-------|
| Channels | Mobile banking |  | ..... |
| | Bank correspondents |  | ..... |
| | ATM |  | ..... |
| | POS |  | ..... |
| Types of payments | Government payments to individuals and firms |  | ..... |
| | Payments by individuals and firms to the government |  | ..... |
| | | | |
| Others | Basic bank accounts |  | ..... |
| | Access of new participants to payment systems |  | ..... |
| | Telcos as payment service providers |  | ..... |
| | Others |  | ..... |

10. Indicate the presence and role of a committee/body for coordination between institutions on moving forward with the topic of financial inclusion.

| | Yes | No | What is its role? |
|--|-----|----|-------------------|
| Is there a formal interinstitutional committee? | | | |
| Does the central bank participate? | | | |
| Does the bank supervisor participate? | | | |
| Does the Ministry of Economy or Finance participate? | | | |
| Does the banking sector participate? | | | |
| Other participants | | | |

Infrastructure, Interoperability
and Access to Payment Systems

11. Indicate which payment systems or services are important for promoting financial inclusion in your country.

| | Access criteria (direct, indirect, without access) |
|---------------|---|
| RTGS | <div></div> |
| ACH | <div></div> |
| Payment cards | <div></div> |
| E-money | <div></div> |
| Others | <div></div> |

12. In your opinion, what level of interoperability do payment systems or services have in your country? (1: very low, 5: very high).

| | Interoperability |
|---------------|------------------|
| RTGS | <div></div> |
| ACH | <div></div> |
| Payment cards | <div></div> |
| POS | <div></div> |
| Issuer | <div></div> |
| Purchaser | <div></div> |
| E-money | <div></div> |
| Others | <div></div> |

13. Indicate which are the main problems for interoperability in your country (Scale: 1= least important, 6= most important).

| | RTGS | ACH | Other |
|--|------|-----|-------|
| Access costs for system participants | | | |
| Technological capacity of the systems | | | |
| Lack of scale in payment service usage | | | |
| Problems in the industry (commissions, exclusivity, etc.) | | | |
| Lack of standardization | | | |
| Lack of regulation | | | |
| Others | | | |

- 14.** In connection with the previous question, is there any important difference between national and international operability?

- 15.** How are remittances disbursed by the payment systems and services in your country?

- 16.** Does the regulatory and operational framework on payment systems and services contain any provision that allows for demanding operability?

17. Can telecommunications companies offer payment services to end customers?

| | |
|-----|----|
| Yes | No |
| | |

18. If the answer was yes to question 17, what role can telecommunications companies (or their subsidiaries) play in payment services?

| | |
|--|-------|
| | Roles |
| Payment service provider* | |
| It is just an access channel (such as a bank agent) | |
| It only provides the telecommunications network | |
| Other | |

* If yes, what instruments can they issue?

19. If telecommunications companies (or their subsidiaries) are direct payment service providers, please indicate how they clear and settle their payments. Please do the same for e-money companies.

| | | |
|--|-----------------|----------------------------|
| | E-money company | Telecommunications company |
| In central bank administered systems (as direct participants) | | |
| In central bank administered systems (as indirect participants) | | |
| Systems administered by private entities | | |

| | | |
|-------------|--|--|
| Do not know | | |
| Other | | |

20. Who authorizes and supervises these entities as payment service providers?

| | E-money company | Telecommunications company |
|--------------------------------|-----------------|----------------------------|
| Central bank | | |
| Bank superintendent | | |
| Ministry of Economy/Finance | | |
| Ministry of Telecommunications | | |
| No legislation planned/pending | | |
| Other | | |

21. What criteria are used for granting the corresponding authorization?

| | E-money company | Telecommunications company |
|--|-----------------|----------------------------|
| Security | | |
| Operational | | |
| Technological | | |
| Without regulation/ pending legislation | | |
| Others | | |

Standardization, Security Systems and Risk Management

22. In your own words, what does standardization in payment systems and channels mean?

23. Indicate in which cases regulation demands some type of standardization.

| | | | What aspects should be standardized? |
|----------------------|--------------------------|--|--------------------------------------|
| Systems and services | RTGS | | |
| | ACH | | |
| | Others | | |
| Instruments | Cheques | | |
| | Cards (debit and credit) | | |
| | Direct debit | | |
| | Credit transfers | | |
| | Transfers via RTGS | | |
| | E-money | | |
| | | | |
| Channels | Mobile banking | | |
| | Bank correspondents | | |
| | ATM | | |
| | POS | | |

24. Which of the following risks are regulated by the current legal framework?

| | | Liquidity | Credit | Operational | Others |
|-----------------------------|--------------------------|-----------|--------|-------------|--------|
| Systems and services | RTGS | | | | |
| | ACH | | | | |
| | Others | | | | |
| Instruments | Cheques | | | | |
| | Cards (debit and credit) | | | | |
| | Direct debit | | | | |
| | Credit transfers | | | | |
| | Transfers via RTGS | | | | |
| Channels | Mobile banking | | | | |
| | Bank correspondents | | | | |
| | ATM | | | | |
| | POS | | | | |
| Others | Basic bank accounts | | | | |
| | Others | | | | |

Competition and Consumer Protection

25. Indicate which aspects of competition and consumer protection are important for promoting financial inclusion in your jurisdiction.

- Access and equal conditions for participating in payment clearing/ settlement systems
- Favorable tax treatment for electronic transactions
- Absence of exclusivity agreements in the market
- Transparency of information (commissions, exchange rate, etc.)
- Pricing and fee policy at end-user level
- User data protección
- Other

| |
|--|
| |
| |
| |
| |
| |
| |
| |

26. What authority(ies) is(are) responsible for competition and user protection in payment systems and services?

27. Indicate the fields in which the principal payment service providers are most active/important in the table below.

| | Commercial bank | Authorized specialist firm | Microfinance company | Others |
|---|-----------------|----------------------------|----------------------|--------|
| Coverage of rural and marginalized urban zones | | | | |
| Offer convenient products for the unbanked population | | | | |
| Facilitate the usage of payment services (universalization) | | | | |
| Others | | | | |

28. Indicate the field in which the principal points of access are most active/important in the table below.

| | Bank counter | Mobile banking | Bank correspondent | ATM | POS | Others |
|---|--------------|----------------|--------------------|-----|-----|--------|
| Coverage of rural and marginalized urban zones | | | | | | |
| Offer convenient products for the unbanked population | | | | | | |

| | | | | | | |
|--|--|--|--|--|--|--|
| Facilitate the usage of payment services | | | | | | |
| Others | | | | | | |

29. Indicate what stage consumer protection, data protection and transparency on pricing and commissions (interbank) for payment services are at in your country.

| | Consumer protection | Data protection | Transparency of pricing and commissions |
|---|---------------------|-----------------|---|
| Legal and regulatory framework in force and implemented | | | |
| Application of legal/regulatory provisions | | | |
| Legal and regulatory framework under development or about to be applied | | | |
| Monitoring and oversight framework | | | |
| Authority in charge | | | |

30. In the interests of appropriate consumer protection, rate the following aspects in order of priority according to the situation in your country. (Scale: 1 = least important, 7 = most important).

| | |
|--|--|
| Transparency of information | |
| Solid legal framework | |
| Financial education | |
| Oversight and supervision | |
| Figure of financial consumer ombudsman | |
| Access and equal conditions | |
| No exclusivity or monopolistic practices | |
| Others | |

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