



Bank of Morocco – CEMLA – IFC Satellite Seminar at the ISI World Statistics Congress
on “*Financial Inclusion*”

Marrakech, Morocco, 14 July 2017

The role of payment systems and services in financial inclusion – the Latin American and Caribbean perspective¹

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¹ This paper was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.

The Role of Payment Systems and Services in Financial Inclusion

Latin American and Caribbean Perspective

Raúl Morales Resendiz

Abstract

Retail payment systems and services 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.

Retail payments 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 retail payments 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.

This paper explores the various interactions and dimensions of digital retail payment systems and services that play an important role in the financial inclusion agenda of Latin American and Caribbean countries.

Keywords: digital payments, mobile payments, e-money, financial inclusion.

JEL classification:

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Executive summary¹

Retail payments, in particular those that have been digitized, 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 digital payments (DP) 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.

This paper contributes with a multidimensional perspective on different DP 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 digital retail payments for promoting financial inclusion and access.

1. Introduction

International efforts, especially those launched by the G20 in 2009, to formally established a commitment to improving access to financial services for the unbanked population.² This therefore recognized the important role the population excluded from the financial sector could play in poverty reduction and more balanced economic growth.

¹ This paper is an adapted version of a report resulting from a joint effort led by the Secretariat and members of the Latin American and Caribbean payments committee of CEMLA (namely the Working Group on Payment System Issues of Latin America and the Caribbean – WGPS-LAC) to take stock of the interplay of retail and digital payment systems and financial inclusion in the region. Further information of the original report can be found at: <http://cemla.org/PDF/forodepagos-TheRolePaymentSystems.pdf>.

² 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.

From 2011 to 2014, the number of people in the world excluded from the financial system was reduced by 20%. 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 DP as a mechanism for promoting financial inclusion is related to the following aspects:

- DP allow an economic agent (payee) to use different methods to meet their obligations with another (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 (ICT) have converted DP into ideal channels for promoting financial inclusion as the electronic and digital means available at present have eliminated barriers limiting the unbanked population's access to payment services.
- DP 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 DP 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 DP 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 DP, 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 DP, in some cases along with financial education and consumer protection.

This paper provides an overview of DP 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 DP 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.

2. Dimensions and Key Concepts in DP and Financial Inclusion

Unlike large-value payment systems focused on meeting the needs of financial institutions and large corporations in different 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 can be digital or not, or more particularly non-cash based.³

The significance of digital retail payments for promoting financial inclusion lies in, among other factors, the fact that the arrival and rapid penetration of 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

³ 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

current needs of the population for exchanging value. Among the new ways adopted by DP 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, mobility and ubiquity). Thus, development of DP, 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, DP 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 digital 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 system⁴ or as payment service providers (PSP). Thus, DP 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 India or Sweden, where its use is being discouraged on purpose. 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 paper. However, it can be pointed out that an analysis of this phenomenon involves the overall conditions in the economies –including levels of informal labor, depth of 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 stores, etcetera. This experience is in addition to the lack of favorable conditions for accessing and using DP –such as a broad, functional and

⁴ 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.

interoperable 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. Given this, the set of innovations in DP 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.

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 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 system⁵ 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.

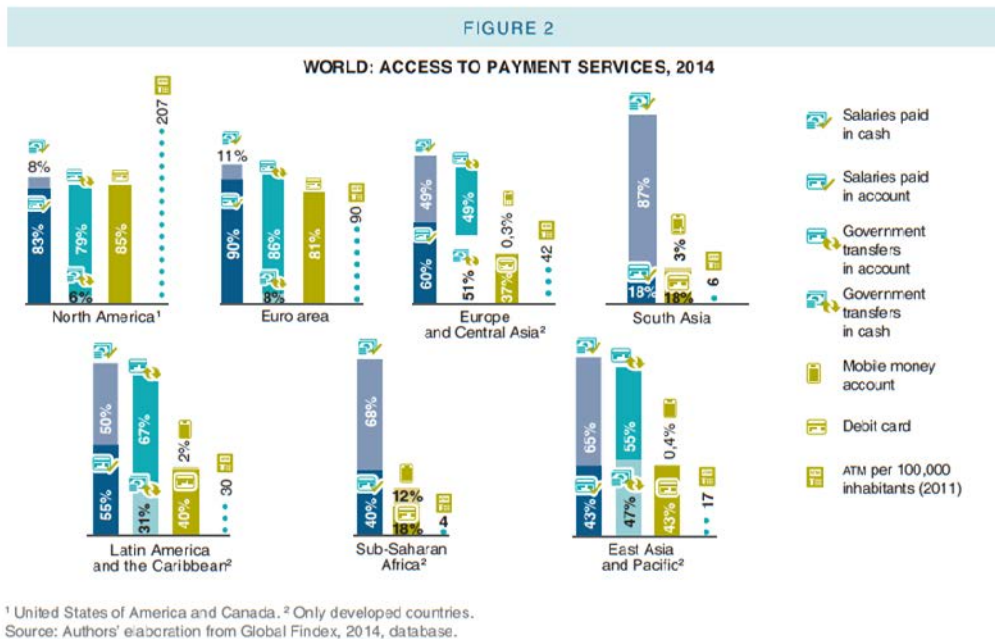
DP are instruments with great potential for reducing the referred failures or barriers affecting financial inclusion given that electronic and digital methods considerably reduce transaction and information costs for payment service providers and users. All of this represents a driver for progress in 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

⁵ 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.

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 DP 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.

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).

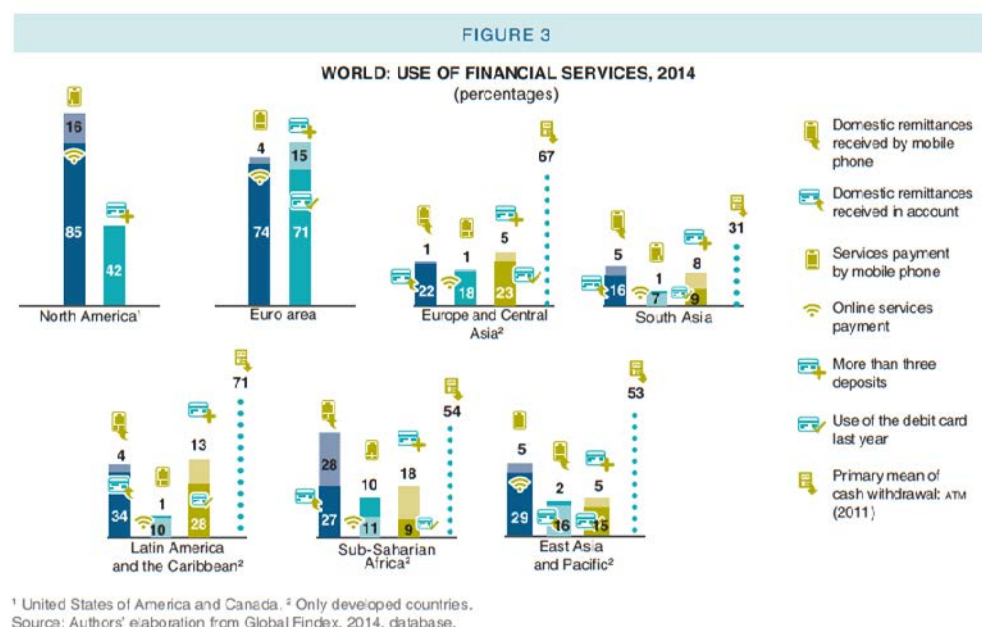
Despite progress made in modernizing and improving the region's DP, data from Global Findex shows low levels of access to DP in Latin America and the Caribbean. In other words, it represents opportunities and considerable gaps for the development of DP over the following years.

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, and 3) the degree of adoption and knowledge of DP 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.

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 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.

3. The Role of DP in FI in Latin America and the Caribbean

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 DP has an important place in 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 safety of payment systems and services, as well as their access and use.

Key DP Aspects for NFIS in Latin America and the Caribbean

In Latin America and the Caribbean, 82% of countries have a NFIS, the most recent of which are Peru and El Salvador.⁶ 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.

NFIS may be linked with the development and modernization of DP to various extents. Said linkages varies according to the objectives and priorities each government has for planning their respective financial inclusion strategy.⁷

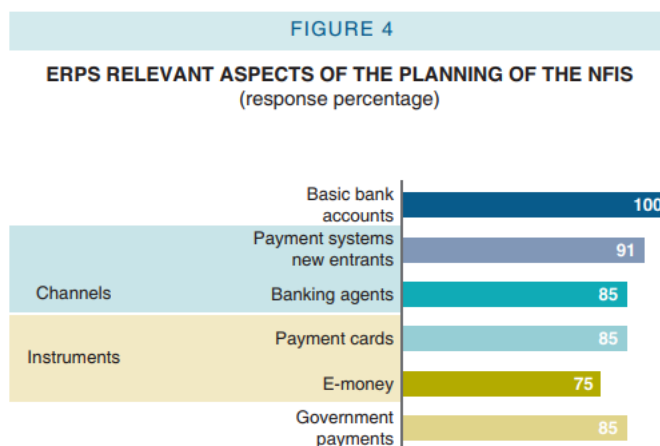
Thus, as can be seen in Figure 4, the opening of transaction accounts⁸ and access for new payment service providers have been pointed out by the majority of central banks as very important for implementing their NFIS (100% and 91% of these, respectively). Central banks consider bank agents, payment cards and electronic money as very important payment channels and instruments for access to and use of

⁶ In Peru, the Supreme Decree establishing the National Financial Inclusion Strategy (NFIS) was signed in July 2015. In El Salvador on August 2015, a law was passed for facilitating financial inclusion through services such as mobile money (and its providers) and simplified procedure savings accounts.

⁷ It is important to highlight that even in the 18% of countries which do not have a NFIS, the DP is used implicitly as a path towards financial inclusion. The following sections therefore present information for both groups of countries

⁸ 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.

payment services among the population. Likewise, the region shown the very significant role government payments play in the inclusion process.



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

Taking the above items into account, certain aspects of DP 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 DP, mainly among people who can most benefit from new payment channels and instruments by eliminating barriers to access and usage they face at present.

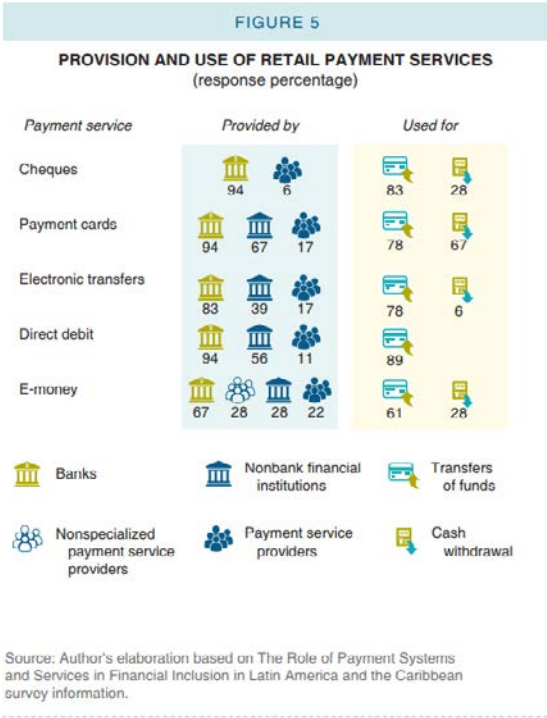
Provision and use of DP

The previous section mentioned, in light of the multiple dimensions involved in financial inclusion, the way in which strategies associated to DP 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.

Financial inclusion strategy that depends to a greater or lesser extent on DP 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 DP 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 digital retail payment services in the region. Nonbank financial institutions (NBFIs) 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 PSP, continue performing an important role in supplying DP to the population, while other less traditional providers, such as telcos, have greater presence in supplying innovative payment instruments such as e-money and others like mobile payments. 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 policies aimed at ensuring DP are used effectively to achieve greater financial inclusion. Thus, these strategies more oriented towards the use of DP 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 digitally.

Regulatory Aspects

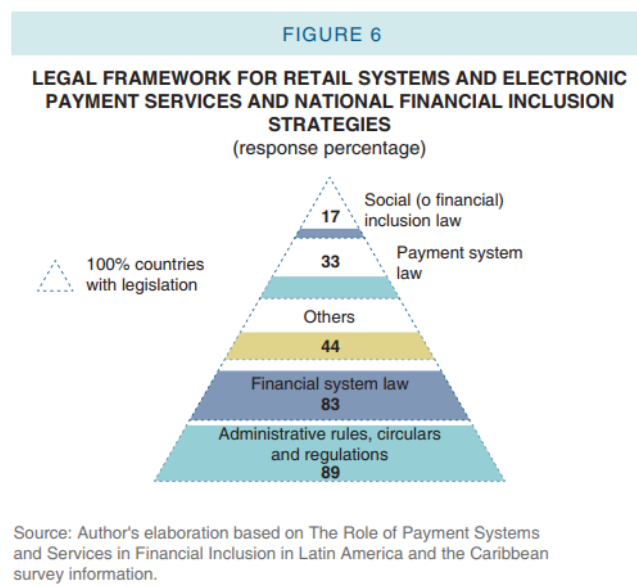
The legal and regulatory framework is a fundamental pillar for the smooth functioning of DP and effective implementation of a NFIS. Not having a solid, balanced and predictable legal framework (that provides certainty to digital and electronic transactions) can exacerbate or create unfavorable conditions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

In this regard, adoption of numerous legal dispositions for DP, 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. 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 DP, 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 innovations and keep pace with the development of the market (CPMI-WB, 2016).

The legal and regulatory framework that supports DP 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 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 DP 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 DP 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.

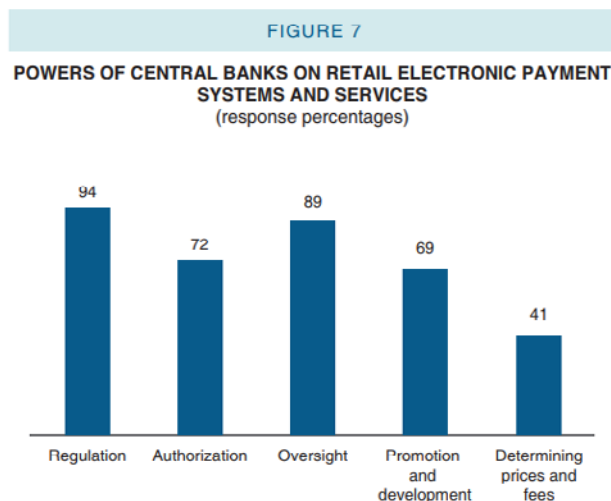
The above reveals an opportunity for countries of the region to elaborate, and in some cases strengthen, a complete legal and regulatory framework that facilitates actions aimed at promoting the use of DP. The challenge is to generate appropriate legislation that improves safety and efficiency, and guarantees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

The organic law of a central bank is the legal basis for its different responsibilities as regards the regulation, promotion, oversight and operation of DP. In the case of financial inclusion, 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.⁹

According to Figure 7, 94% of central banks have powers for regulating DP. They also have powers for authorizing payment 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 DP, which in the case of the region record a percentage of 41%. This could be a key factor for expanding the use of these

⁹ As would be expected, central banks have adopted a much more active posture in DP and financial inclusion

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 DP, reflecting the multiple dimensions of NFIS.



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

To establish a solid, predictable and balanced legal framework that favors competition, innovation, safety and efficiency in DP, 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 DP 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. 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 DP over the long-term.

The more representative participation on such committees becomes, the better regulation and oversight powers of central banks and other authorities regarding aspects of DP 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.

Risk Management

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.¹⁰ 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 DP 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 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 digital retail payments market.

Actions geared towards promoting financial inclusion, such as the entrance of new PSP and products to DP, 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. This protection becomes more important considering the fact that inclusion efforts are aimed at people generally lacking financial experience and knowledge.

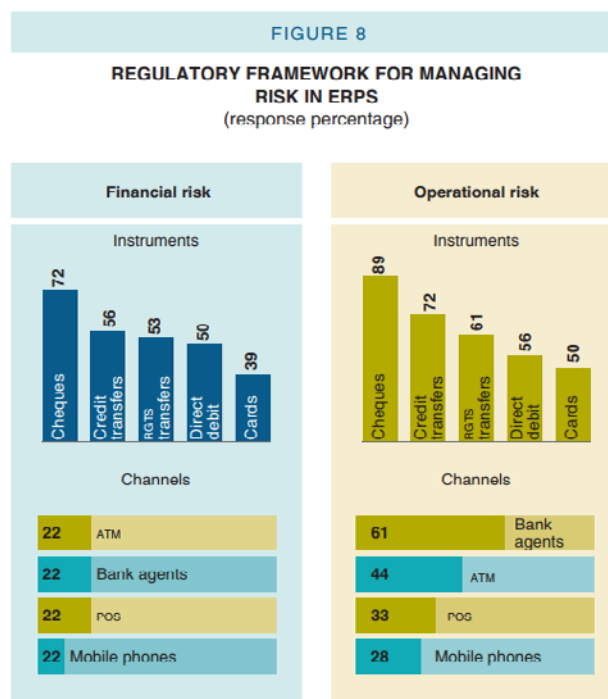
In the following years central banks of the region could face different challenges when attempting to ensure the promotion of financial inclusion does not affect risk management in DP and PSP or safety and efficiency in the provision of payment services.

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.

Regarding payment systems and platforms for processing payments, it is important to point out that the majority of countries 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 processing systems).

¹⁰ 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.



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

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

Platforms and infrastructures for DP

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 interoperability¹¹ that foster economies of scale and scope.¹²

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

¹¹ 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.

¹² 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.

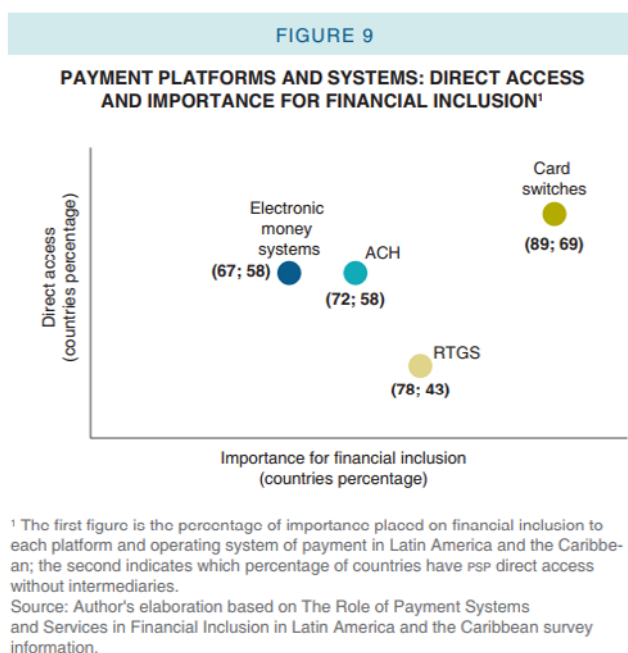
cards (also known as card switches), access and service point networks, such as automated teller machines (ATM) and points of sale (POS) networks, as well as the real time gross settlement systems (RTGS), managed by central banks.

Having this type of systems and platforms is essential for the smooth functioning of DP, but it is equally important for there to be a high degree of interoperability and standardization in and amongst them, especially when they are used 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.

Importance of PSP Access to Platforms and Payment Systems

In terms of financial inclusion efforts, digital 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%).



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 DP 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. Payment card switches have direct access in 69% of the countries, while DPPS 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 safety and the smooth functioning of payment platforms and

systems. This poses challenges in both regulatory and corporate governance spheres of such platforms and systems.¹³

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

Interoperability and Standardization

The deepening of digital retail 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.

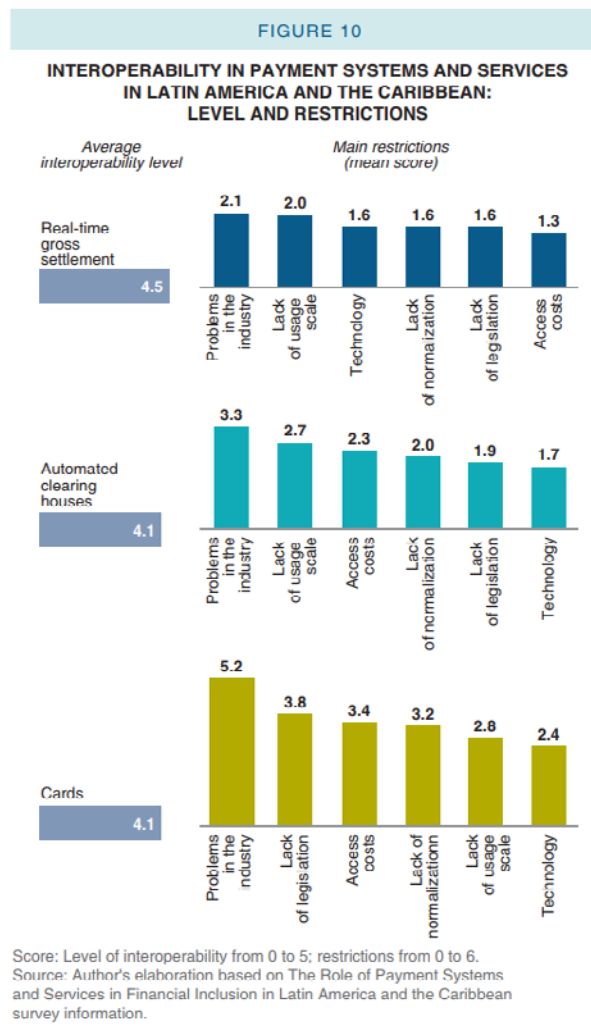
In addition, interoperability is an important factor for promoting competition among PSP by eliminating the barriers between them. This therefore fosters price competition, while achieving economies of scale due to the larger number of transactions that will lead to lower costs for systems and providers. 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 DP 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 DP 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.

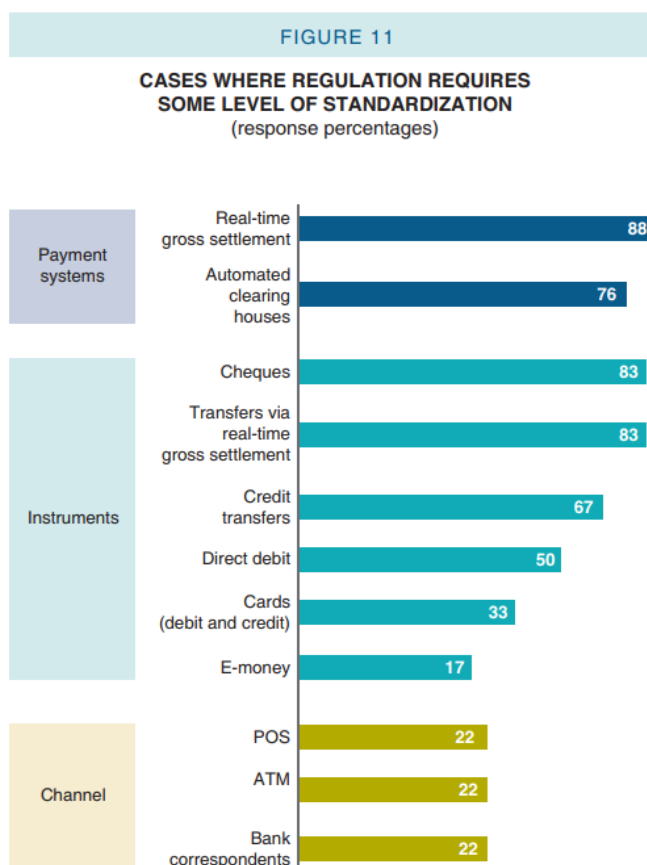
¹³ Access to RTGS systems is generally conditional upon certain minimum requirements such as holding a current account at the central bank, which can imply significant costs for different PSP (nonbank nonfinancial) that promote financial inclusion.



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 oblige 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).

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



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 above show many areas for improving the standardization of DP 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 DP, 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.

Competition and User Protection

Some issues of competition and user protection that are relevant of DP for financial inclusion purposes 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 of instruments and services, 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.

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 safety 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 strategy based on DP 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 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 DP, the presence of the aforementioned items (or at least some of them) can be of vital importance for promoting financial inclusion.

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 DP that, as part of a financial inclusion strategy, require a sound consumer protection framework, or harmonize the development of DP taking end-users more into account.

Market Competition

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 digital retail payment systems, economies of scale and scope, along with network externalities, can generate less than optimal conditions for competition.¹⁴ Said factors can lead to providers 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 DP 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 DP 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 mention that moving forward with different financial inclusion

¹⁴ 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 analysing them through the network theory given that it fosters externalities on both sides of demand. The presence of economies of scale (Kempainen, 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.

actions may require analyzing aspects related to conditions of competition in the payments market.

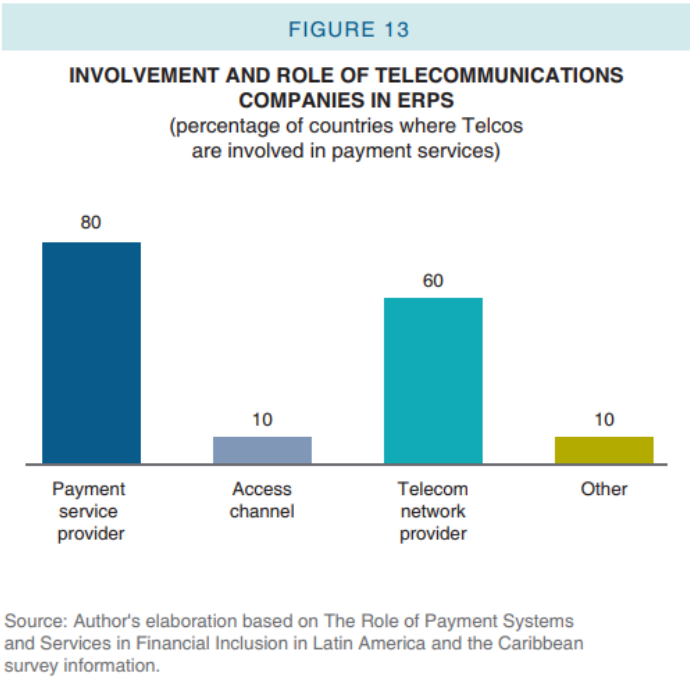
In addition to the competitive environment that must be guaranteed for DP, it is necessary to promote access to and usage of them. In this regard, the region's countries confirm that the following are important dimensions for access and usage of payment services: 1) geographic coverage of PSP, 2) the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

The majority of countries in the region evidence 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 networks 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.

Role of new Payment Service Providers (PSP)

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 providers (EMP) 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).¹⁵ Moreover, telcos and EMP 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 DP, and consequently, for central banks, 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.

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 DP.

Meanwhile, granting operating licenses for EMP 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 DP. 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 DP, which, as has been seen in this paper, influences the promotion of access to and use of financial services.

4. Central banks potential actions to enable DP as gateway for FI

In this paper, it has been shown how a large number of Latin American and Caribbean countries have defined financial inclusion strategies where DP 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

¹⁵ 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.

are generally responsible for guaranteeing the efficient and safe operation of retail payment systems and services.

This paper 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 DP 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 cooperation. The latter implies, for instance, making efforts so EMP 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 co-ordinating and implementing new measures that allow DP 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 DP in financial inclusion, a gap that the framework of reference recently proposed 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.¹⁶

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.

This paper reflects an effort to measure and approach the interplay of digital retail payment services and systems with financial inclusion, and has benefited from the CPMI-WB PAFI framework. One key conclusion of the report is that in addition to actions central banks have adopted for reducing the cost of transactions between

¹⁶ In April 2016, the CPMI-WB Task Force on Payment Aspects for Financial Inclusion (PAFI framework) 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

economic agents, for instance, by promoting digital retail payments and reducing the use of cash with transaction accounts, agent banking model and the so-called e-money and mobile payment solutions, significant room is available for improvement in areas such as interoperability and standardization.

For the above reasons, this paper represents a contribution to the type of orientation required for focusing the actions of central banks seeking to support financial inclusion strategies with payment systems and services.

Bank of Morocco – CEMLA – IFC Satellite Seminar at the ISI World Statistics Congress on “*Financial Inclusion*”
Marrakech, Morocco, 14 July 2017

The role of payment systems and services in financial inclusion – the Latin American and Caribbean perspective¹

Raúl Morales Resendiz,
Center for Latin American Monetary Studies (CEMLA)

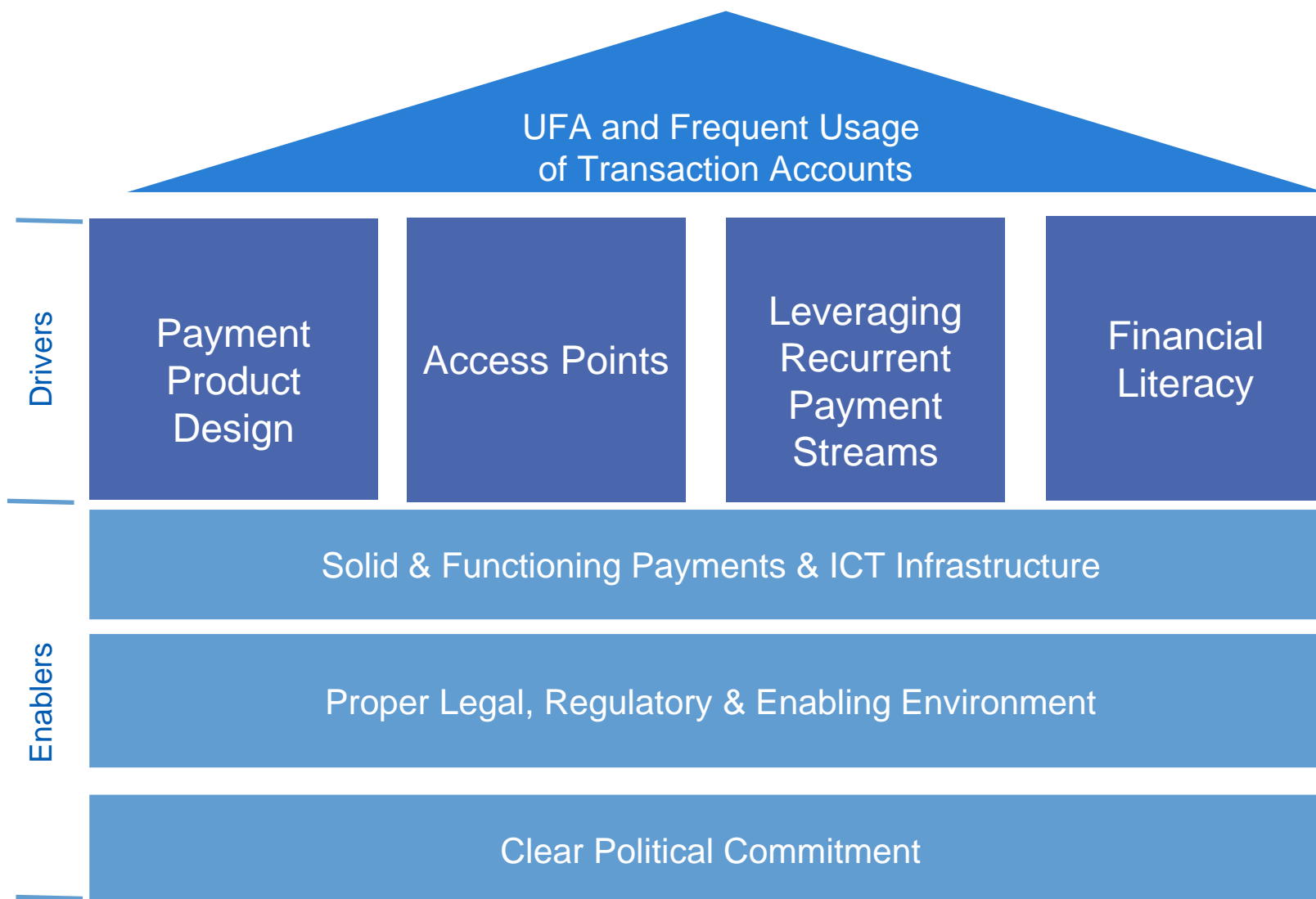
¹ This presentation was prepared for the meeting. The views expressed are those of the author and do not necessarily reflect the views of the BIS, the IFC or the central banks and other institutions represented at the meeting.



Payment Aspects of Financial Inclusion in Latin America and the Caribbean

IFC / Bank Al-Maghrib / CEMLA Satellite Seminar on Financial Inclusion”
Marrakech, 14 July 2017

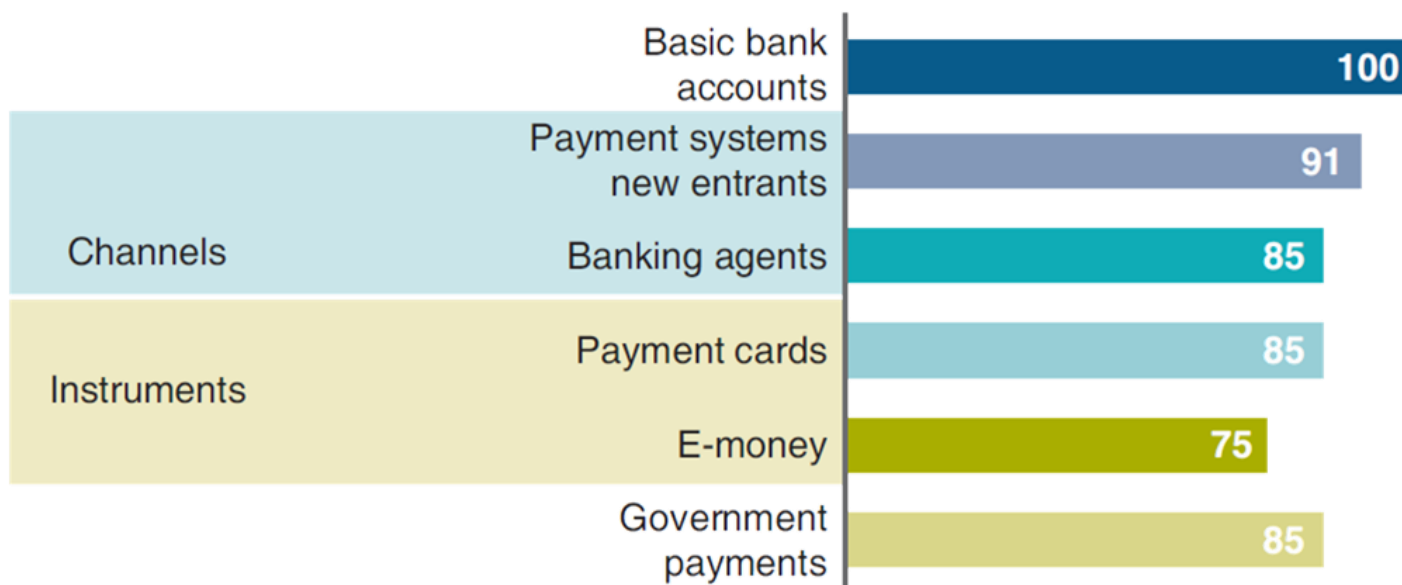
PAFI in LAC



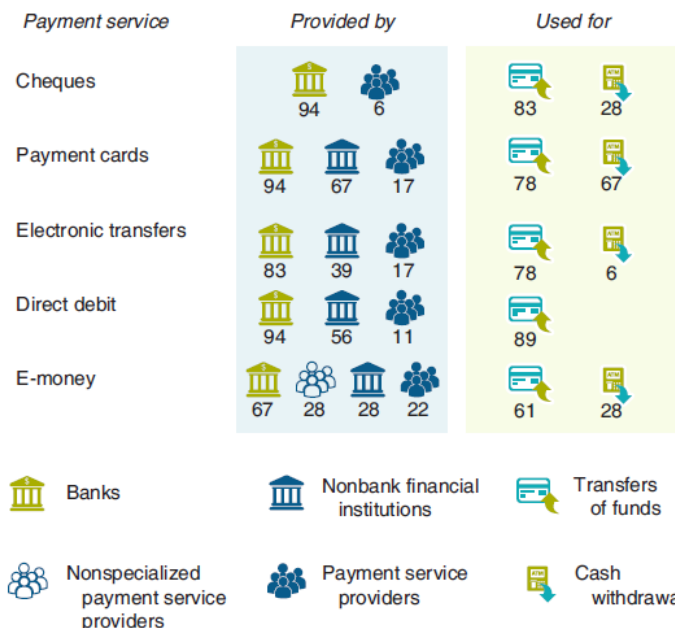
Key findings (I)

- Transaction accounts is the more relevant payment aspect for FI strategies.
- New PSP accessing PS (e.g. RTGS) is becoming more relevant
- E-money and mobile phone seems less relevant than agent banking, g-payments and payment cards for FI.

Relevance of payment aspects for financial inclusion

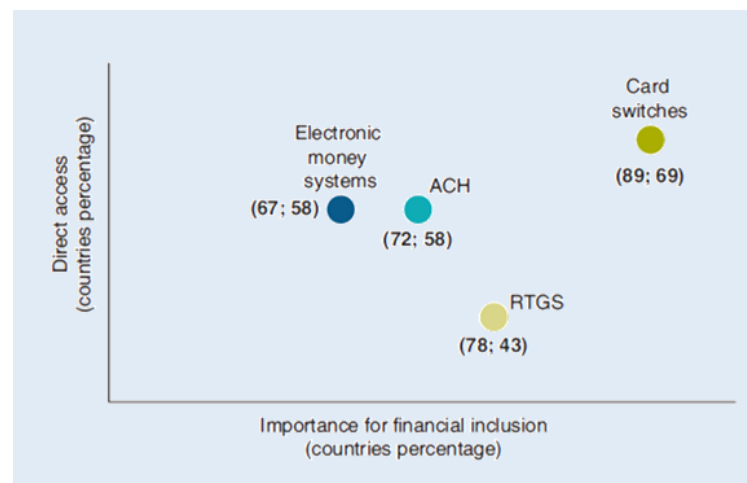
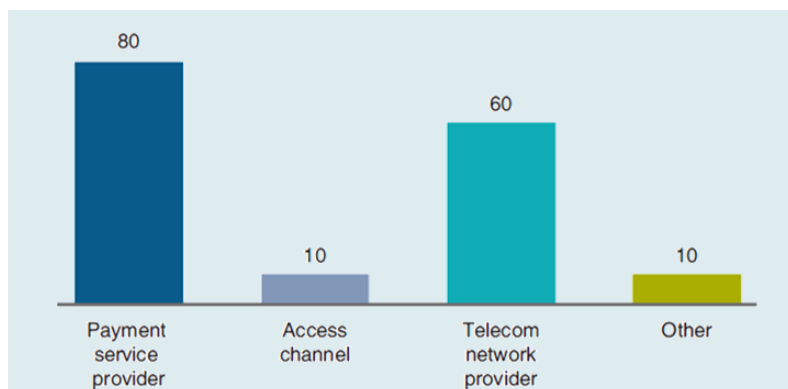


Key findings (II)



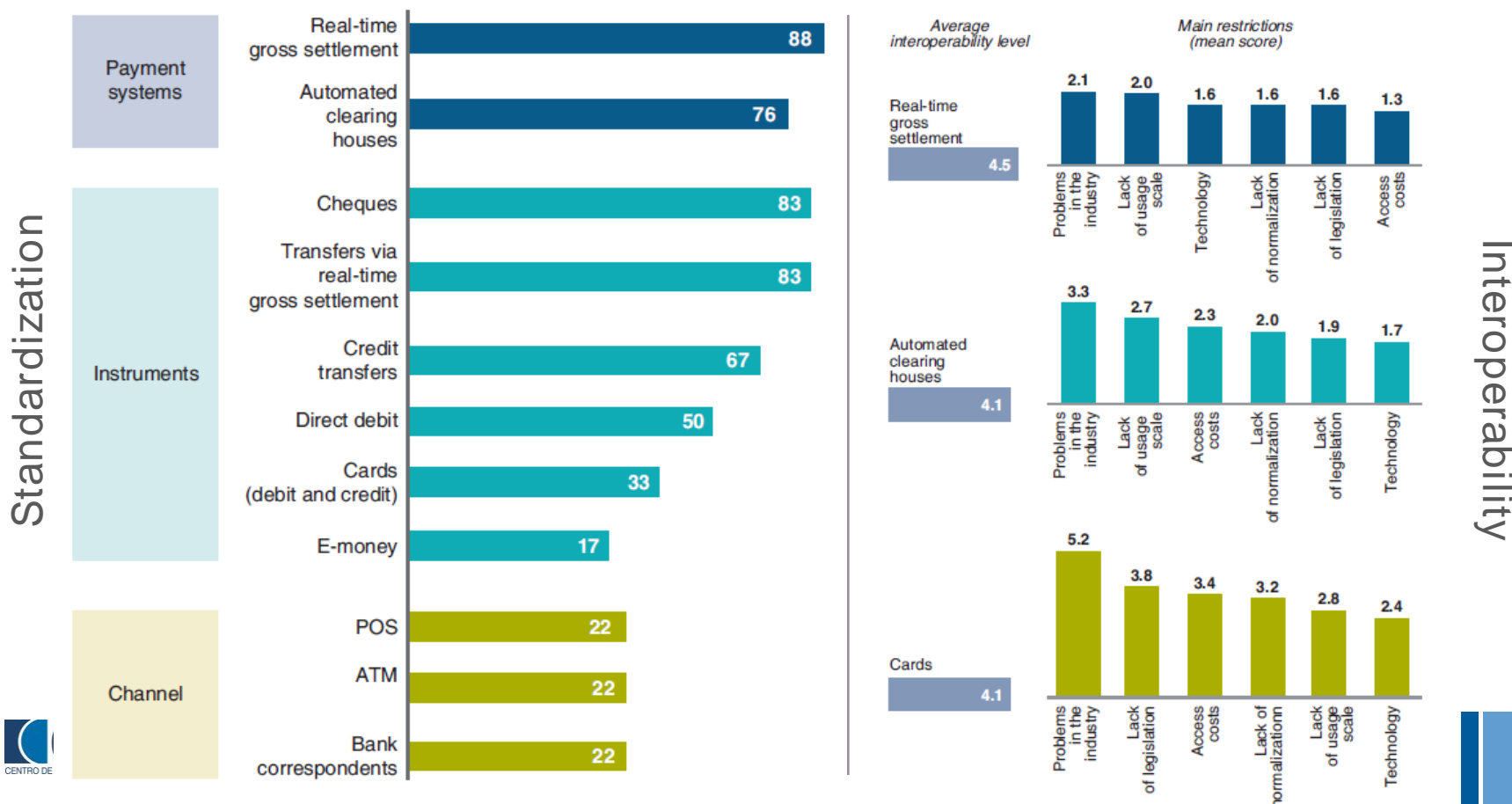
- Despite fairy tales, banks remain strong.
- New PSP gaining space in digital services.
- Telcos act as PSP in 56% of countries, but they meet less requirements.
- Platforms like card switches and RTGS are more relevant than e-money, but direct access is not equal, nor considered.

Payments ecosystem: different views



Interoperability and standardization

- More interoperable platforms: RTGS, followed by ACH, card switches and e-money systems. Market structure is the barrier to tackle.
- ECT and faster payments reported to be reasonably standardized, but cards (processing+physical infr.), agent banking and e-money lack of.



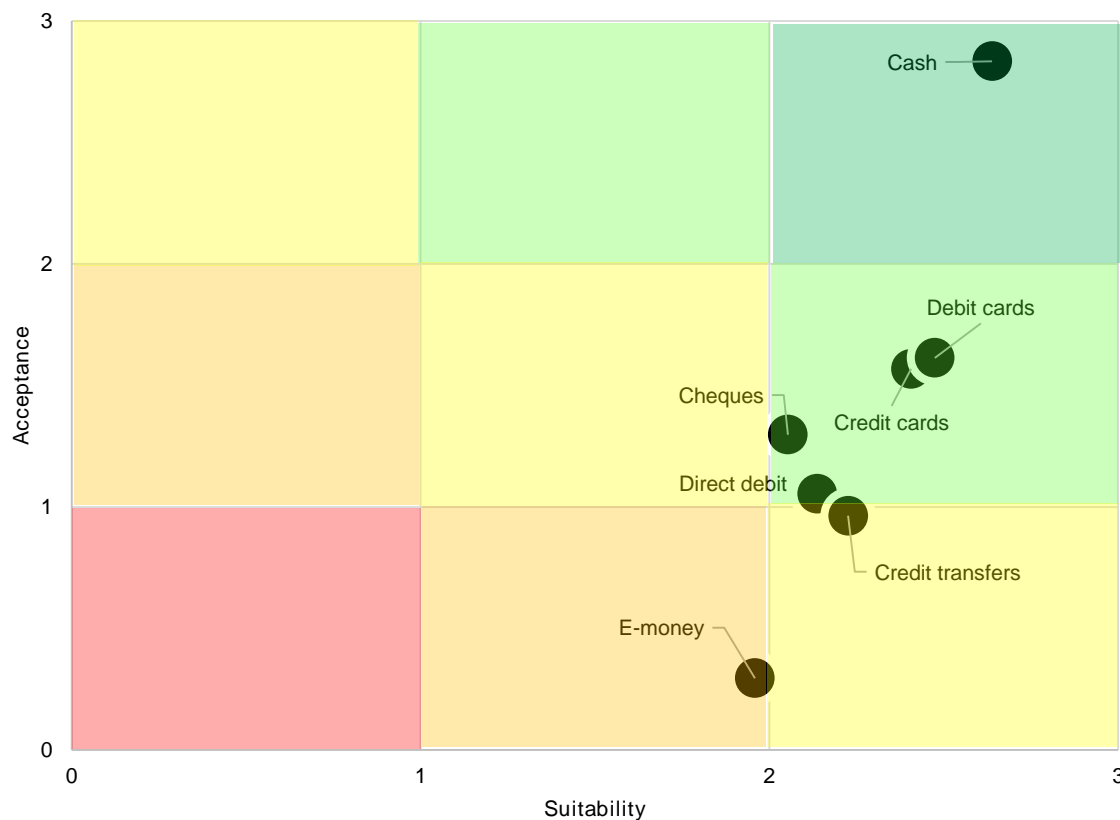
Access points & infrastructure

- Informality in the economy is critical so merchants cannot serve as access points.
- Accessible points face high fees or a fragmented pricing policy.
- G-payments and transportation need to be exploited.

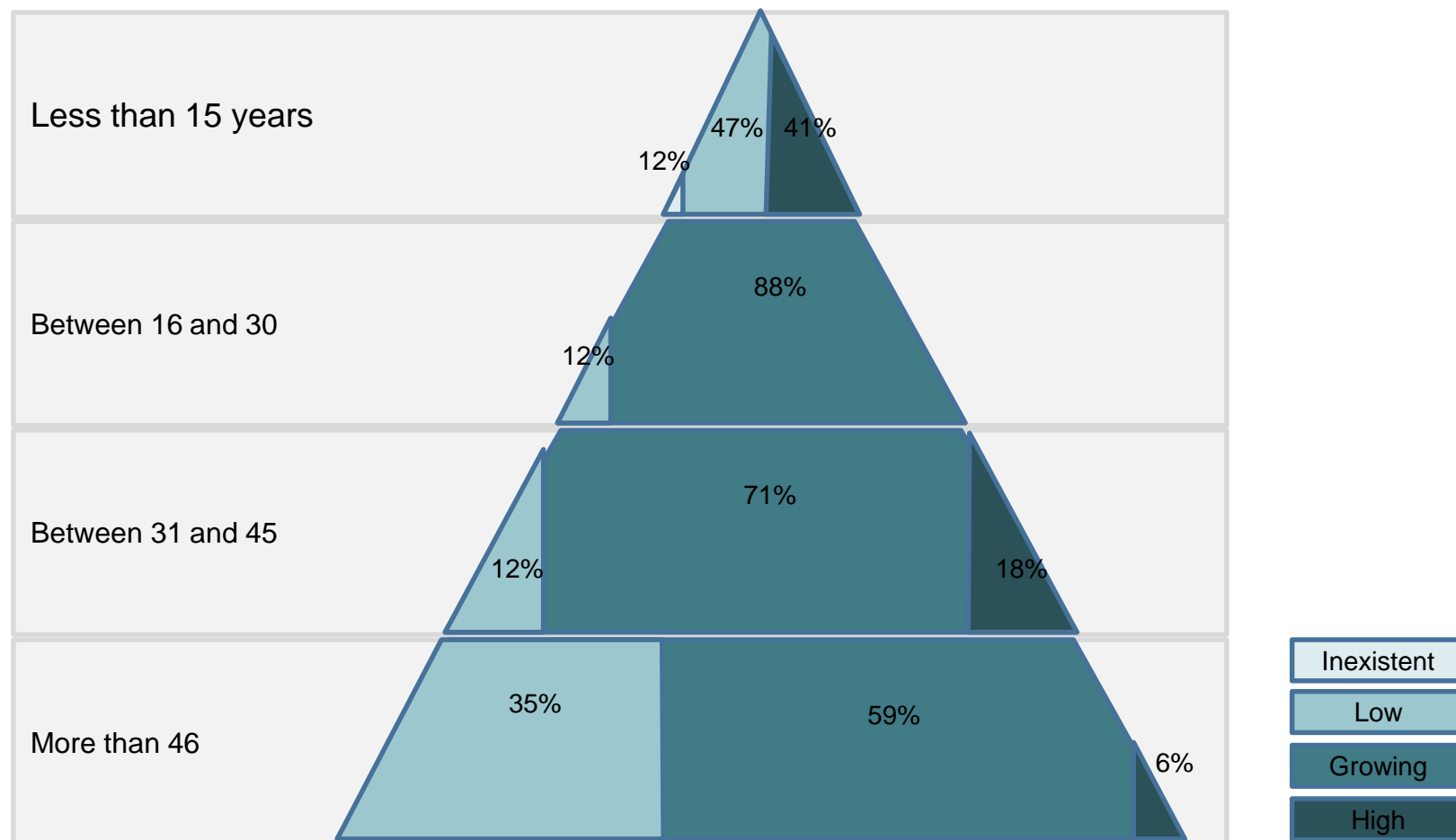


Payments product design

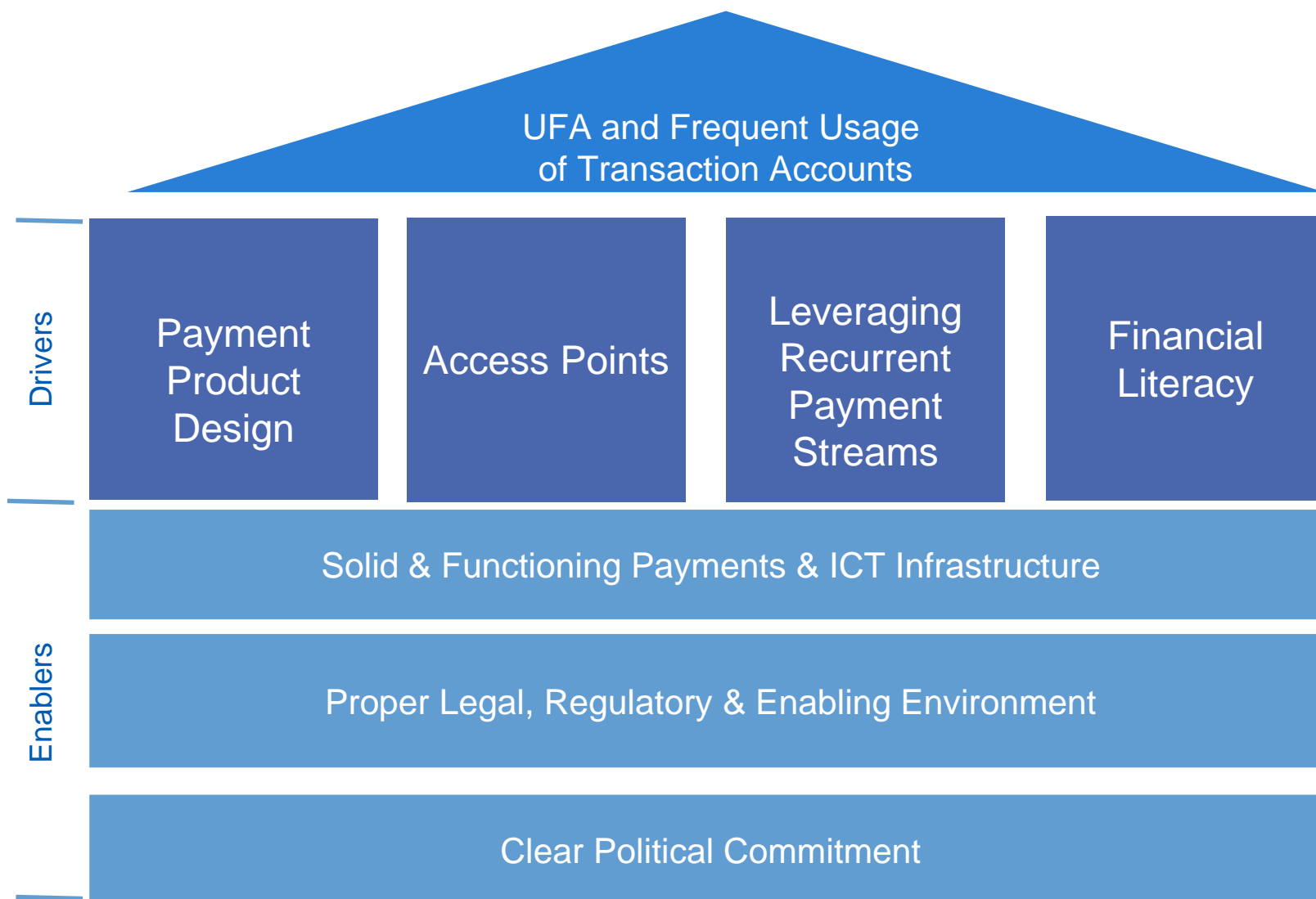
- Users perception is critical: convenience and friendliness.
- Frictionless & well-established products are the most accepted.
- Despite good suitability, digital payments remain low.
- The more contactless, the least accepted.



Financial education



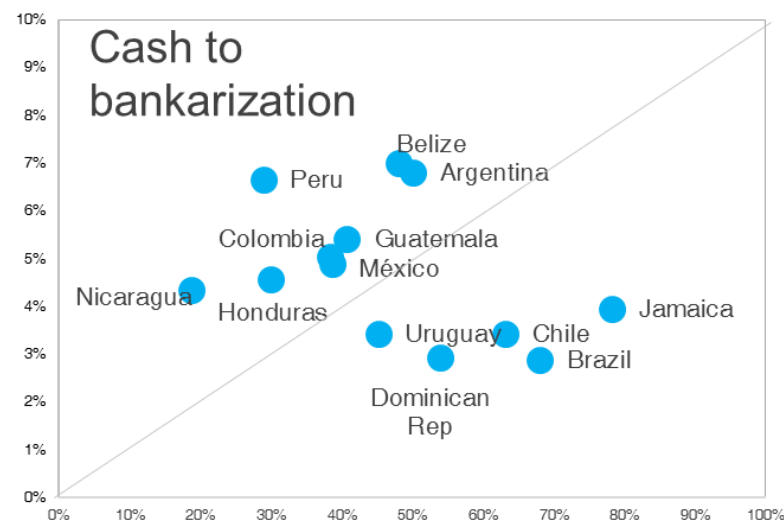
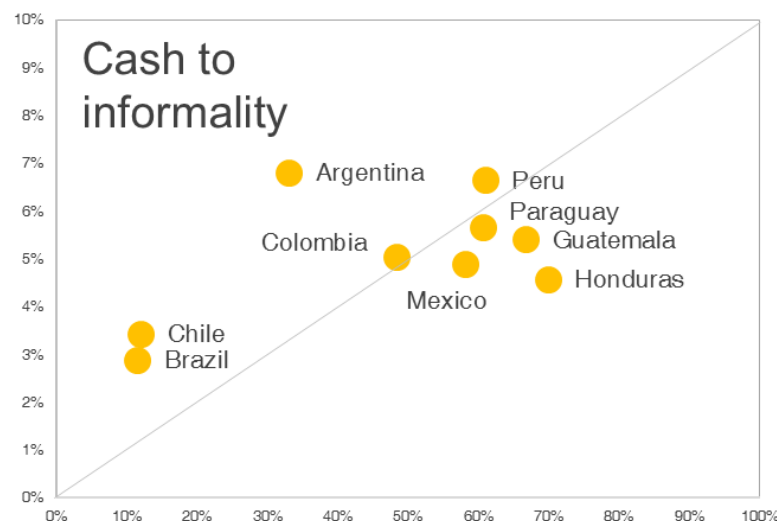
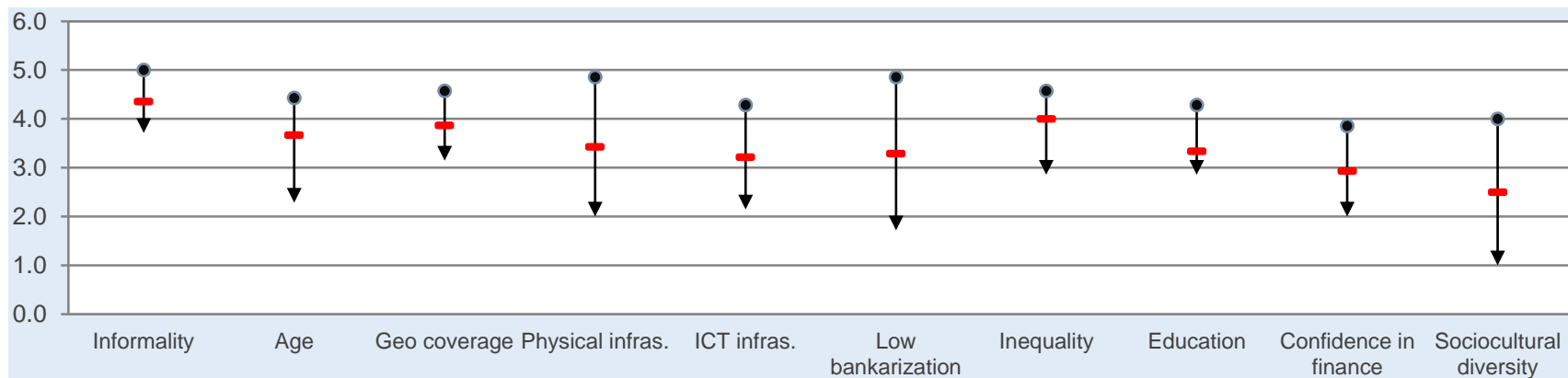
PAFI in LAC



Further work: cash and digital
payments in LAC

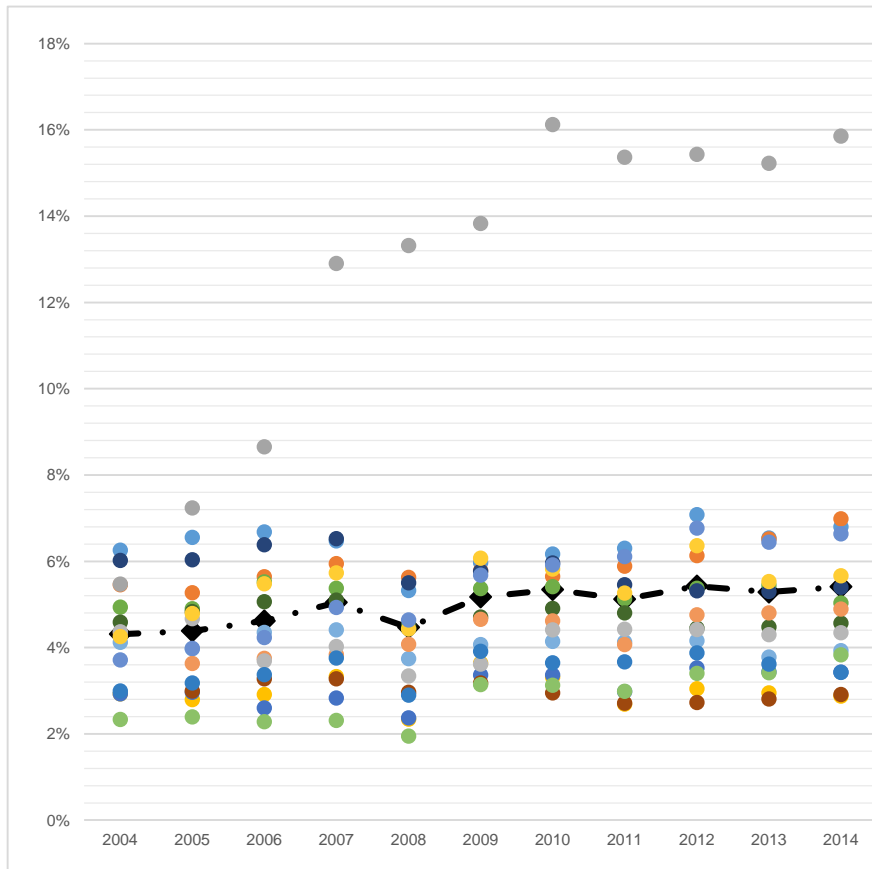
Why cash is still king in LAC?

Determinants of cash usage

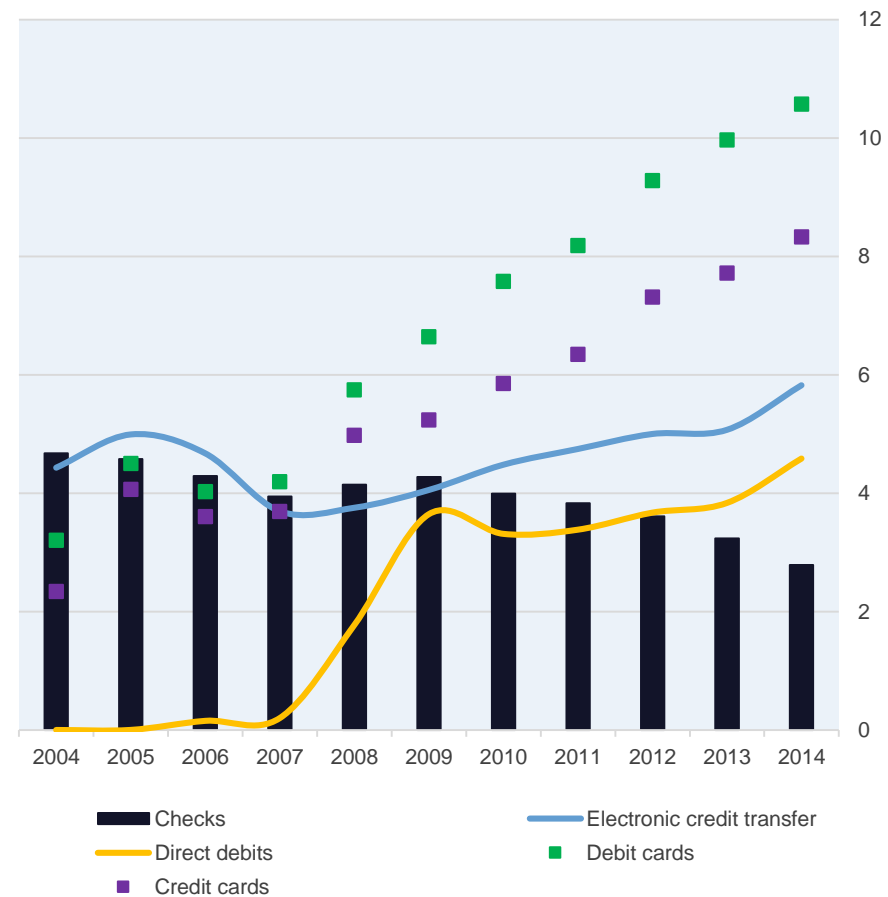


Recent trends

M0/PIB



Noncash payments per capita



Discussing points

- Informality and inequality, low bankarization, and financial education (age gap) drive payment habits towards cash.
- E-payments display a low rate of acceptability for various daily transactions, while cash is acceptable anywhere and anytime.
- People appeal to hold cash in pocket for unexpected outlays.
- Innovation in ICT and physical infrastructure, (e.g. mobile phone and internet), are key disruptive factors in financial and payment services:
 - tackling access barriers and enhancing the value chain, but
 - posing regulatory and oversight challenges.
- Financial inclusion efforts w/focus in payments are gaining space in the region.
- Better harmonized data about payment habits would facilitate the work of central banks to analyze this phenomenon.