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Cross-Border Payments Integration in Latin America and the Caribbean

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Cross-Border Payments Integration in Latin America and the Caribbean

Prepared by Dimitris Drakopoulos, Yibin Mu, Dmitry Vasilyev, and Mauricio Villafuerte*

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ABSTRACT: Cross-border payment inefficiencies are a significant barrier to trade both within Latin America and the Caribbean (LAC) and between LAC and other regions. This paper provides a comprehensive review of historical efforts undertaken by various countries within the LAC region to address these challenges. We also explore the potential of recent financial innovations, such as digital currencies and blockchain technology, to enhance cross-border payments. While new technologies do not substitute for prudent and credible macroeconomic policies, leveraging these technologies can help LAC countries reduce transaction costs and times, thus enhancing economic efficiency and fostering deeper regional and global trade relationships.

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WORKING PAPERS

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Prepared by Dimitris Drakopoulos, Yibin Mu, Dmitry Vasilyev, Mauricio Villafuerte[1]

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Contents

INTRODUCTION 3
TRADE AND FINANCIAL LINKS IN LATIN AMERICA AND THE CARIBBEAN 4
EXISTING REGIONAL PAYMENT ARRANGEMENTS AND INITIATIVES IN LAC 6
Reciprocal Payments and Credits Agreement (CCR) 7
Local Currency Payments System (SML) 8
Interconnected System of Payments (SIP) 11
TOWARDS ENHANCED PAYMENTS INTEGRATION: GOOD PRACTICES AND POTENTIAL ARRANGEMENTS 11
Good Practices in Cross-Border Payment Arrangements 12
Potential Cross-Border Payment Arrangements/Systems 13
CROSS-BORDER PAYMENTS IN LAC: QUO VADIS? 17
LAC Payment infrastructure: Modernization of Domestic Payment Systems And Rollout Of CBDCs 17
Next Steps in Cross-Border Payment Integration 20
REFERENCES 23

BOXES
1. Estimating the Impact of Cross-Border Transaction Costs on International Trade Flows 5
2. Currency Conversion Arrangements and PvP Mechanism 15
3. Some Retail Fast Payments Systems in LAC 17
4. Adoption of retail CBDCs in LAC 19

FIGURES
1. LAC's Trade Integration 4
2. CCR Activities 1966-2014 and Foreign Reserves ALADI Members 1980-2022 8
3. SML Flows Between Brazil and Argentina 9
4. Exports from Brasil to Other Mercosur Members **Error! Bookmark not defined.**
5. XC Platforms 16
6. Payment Platforms in Brazil and Mexico 17

TABLES
1. Latin American and the Caribbean: Payment Arrangements 6

Introduction

Expansion of trade and financial flows within the Latin America and the Caribbean (LAC) region can both boost economic growth and mitigate the risks from shocks originating outside the region, including those linked to global fragmentation. Despite some progress on trade liberalization over recent decades, LAC continues to trade much less than other regions/countries with similar characteristics particularly at the intra-regional level in both goods and services (IMF, 2023). Poor infrastructure, low quality of human capital, and inadequate governance would stand out as key reasons behind the lackluster performance of LAC in terms of trade integration (IMF, 2023). We also show that high costs of cross-border payments contribute to trade underperformance.

This paper makes the point that the ongoing modernization of payments systems could also help enhance cross-border transactions and payments (including remittances) in LAC, making them faster, cheaper, more transparent, and more inclusive. Nowadays, cross-border payments are slow, expensive, and involve many intermediaries leading to fragmented processes and payments data. Cross-border wholesale payments are typically processed through an "intermediated model" that relies on relatively few "correspondent banks" that specialize in holding accounts of recipients' and senders' banks to settle their claims and manage associated risks (counterparty, foreign exchange, and liquidity risks) (Adrian and Mancini-Griffoli, 2023). This industry is concentrated due to the substantial fixed costs required to build trust and manage risks and many countries in LAC and elsewhere have partially lost access to this system in recent years. By contrast, cross-border retail payments often rely on closed-loop systems (i.e., single platforms connecting both payee and payer) (BIS, 2022a).

However, this paper does not argue that new technologies can substitute for prudent and credible macroeconomic policies. Rather, it emphasizes that new technologies can make cross-border more efficient, while prudent macroeconomic policies are essential for maintaining external stability and preventing disruptions in cross-border flows.

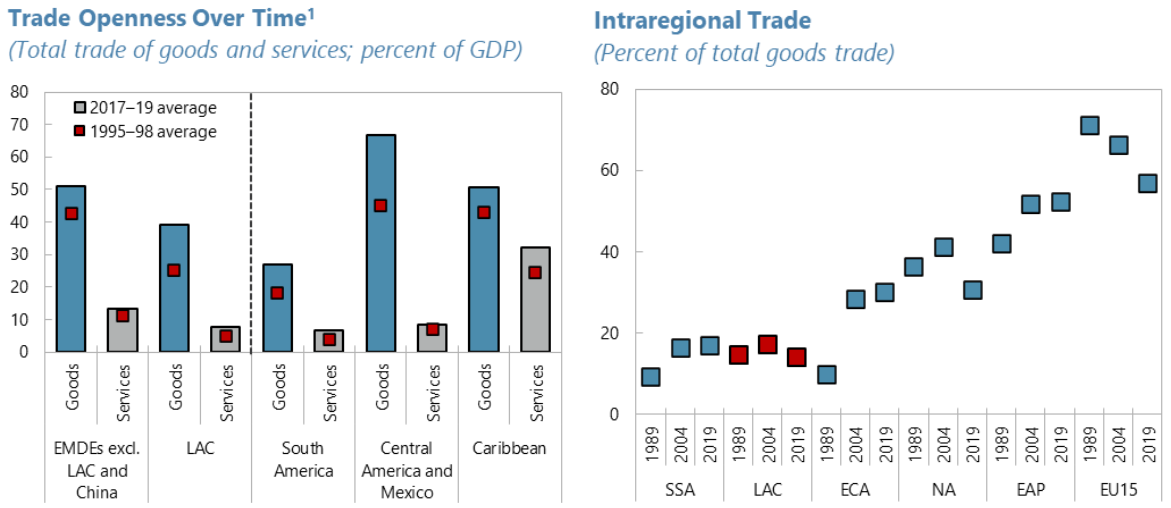
The need for better cross-border payments to enhance global economic development, international trade, and financial inclusion has long been recognized by the international community. Indeed, G20 Finance Ministers and Central Bank Governors endorsed a Roadmap for Enhancing Cross Border Payments in October 2020 which was updated in 2023. The roadmap comprises 19 building blocks (BBs) and its updated version, whose implementation will have to rely on broader global collaboration including from multilateral institutions like the IMF, focuses on three priority themes: (i) payment system interoperability; (ii) legal, regulatory, and supervisory frameworks; and (iii) cross-border data exchange and message standards.

In this context, this paper provides an overview of the intraregional trade and financial links as well as of existing regional payment arrangements/initiatives in LAC and the observed barriers to payment systems' integration. It then briefly reviews some potential solutions that are being explored in other regions including through interlinking payment systems and the establishment of multilateral platforms. The paper finally analyzes the feasibility of introducing those solutions in LAC, considering recent efforts to modernize payment systems in the region.

Trade and Financial Links in Latin America and the Caribbean

Trade integration in Latin America and the Caribbean (LAC) falls short when compared to many other regions, indicating significant unrealized potential.[1] While there has been some increase in LAC's trade in goods and services with the world from around 30 percent of GDP in 1995 to 47 percent in 2019, the region still trails behind other Emerging Markets and Developing Economies (EMDEs), as shown in Figure 1, panel 1. This disparity is particularly pronounced in South America relative to other subregions in LAC (Central America and Mexico, the Caribbean). Additionally, LAC's limited integration is apparent in its intra-regional trade, which accounts for only 14 percent of its total goods trade. This figure is considerably lower than the levels seen in Europe and Central Asia and East Asia and the Pacific, and is similar to that of Sub-Saharan Africa, as depicted in Figure 1, panel 2. A key factor behind these figures is the prominence of primary commodities in the region's exports, accounting for more than 40 percent of merchandise exports (except for Mexico). WHD REO (2023) shows that intra-regional trade is between 40 percent (for goods) and 50 percent (for services) lower than in regions with similar economic and geographical characteristics, though the underperformance is smaller in Mercosur (the trade block between Argentina, Brazil, Paraguay, and Uruguay).

Figure 1. LAC's Trade Integration



Sources: IMF, Balance of Payments Statistics database; IMF, Direction of Trade Statistics and IMF staff calculations.
Note: EMDEs excl. LAC and China = Emerging and Developing Europe excluding LAC and China. EAP = East Asia and Pacific; ECA = European and Central Asia; EU15 = 15 European Union member states that existed before 2004; LAC = Latin America and the Caribbean; NA = North America; SSA = Sub-Saharan Africa.
1/Includes intraregional trade.

While the WHD REO analysis based on a gravity model found that LAC's under-trading is to a large extent explained by infrastructure gaps and low quality of governance, we find that the quality of the cross-border payment system would be a specific and additional factor limiting the level of trade integration in LAC. Our empirical estimates suggest that high cross-border payment fees have had a significant negative impact on

[1] For more detailed discussion see IMF's 2023 Western Hemisphere Department Regional Economic Outlook (IMF, 2023).

trade (see Box 1). In that context, improving cross-border payments would have a positive impact on trade integration and on economic development in general.

Since improvements in cross-border payments are related to the digitalization of payment systems, this result complements Aguilar et al. (mimeo, 2023). Looking at digital payments, informality, and productivity in a panel of 90 economies over 2014-19, Aguilar et al. (mimeo, 2023) find that a 1 percentage point (pp) increase in digital payments' use would be associated with increases in growth rates of total factor productivity of 0.04 pp and in growth rates of GDP per capita of 0.10 pp. It would also lead to a 0.06 pp reduction in the share of informal unemployment. In sum, the digitalization of payment systems and associated improvements in cross-border payments are important policy initiatives for authorities in LAC that would enhance financial inclusion, access to credit, and formalization of economic activities.

Box 1. Estimating the Impact of Cross-Border Transaction Costs on International Trade Flows

A gravity model framework was used to quantify the impact of cross-border transaction costs on international trade flows. Specifically, remittance fees were used as a proxy for cross-border transaction costs. To distinguish the cross-border transaction costs from fixed effects, domestic trade was included in the sample, following the approaches of Yotov (2012), Borchert and Yotov (2017), and Bergstrand and others (2015).

To account for heteroskedasticity of trade data, the Poisson Pseudo Maximum Likelihood estimator with high-dimensional fixed effects developed in Correia, Guimarães, Zylkin (2020) was used. Pair fixed effects were included to account for trade endogeneity and directional time-varying fixed effects to control for the unobserved multilateral resistance (Yotov et al., 2016). The selection of remittance fees as a proxy for cross-border transaction costs narrows the sample, since not every trading country pair also exchanges remittances. The following model was estimated:

$$X_{ij,t} = \exp\left(\pi_{i,t} + x_{j,t} + \mu_{ij} + \alpha \log\left(\text{Distance}_{ij,t}\right) + \beta \times \ln\left(\frac{\text{Remittance Fees}_{ij,t}}{100} + 1\right)\right) + \epsilon_{ij,t}.$$

Where $X_{ij,t}$ denotes nominal trade flows; $\pi_{i,t}, x_{j,t}, \mu_{ij}$ are time-varying source-country dummies, time-varying destination-country dummies, and country-pair fixed effects.

Results of the model suggest that a reduction in remittance fees by 1 percentage point would lead to an increase in trade by 15.2 percentage points, a statistically significant finding at the 1 percent level.

Variables	Dependent variable: all trade Model 1	Dependent variable: foreign trade only Model 2
Log of distance	-1.049*** (0.117)	-0.804*** (0.130)
Remittances fee	-15.22*** (1.478)	-1.801 (6.106)
Constant	20.74*** (0.836)	17.16*** (1.099)
Exporter- Time FE	Yes	Yes
Importer- Time FE	Yes	Yes
Pair ID FE	Yes	Yes
Domestic Trade in included	Yes	Yes
Period	2000-2019	2000-2020
Observations	2,397	2,199
R-squared	0.9997	0.9730

Robust standard errors in parentheses

***p<0.01, **p<0.05, *p<0.1

Sources: USITC, The World Bank, Remittance Prices Worldwide, available at http://remittanceprices.worldbank.org

Existing Regional Payment Arrangements and Initiatives in LAC

Cross-border payment arrangements have been closely tied with efforts for stronger trade integration in the region. Besides facilitating international payments and reducing transaction costs, many of these arrangements also sought to provide a liquidity benefit to countries by reducing the amount of hard currency transfers between central banks.

A key building block of these arrangements is the clearing mechanism between central banks to settle net balances. This mechanism allows residents to make day-to-day international payments while in the background central banks extend credit to each other and settle (in US dollars) over a settlement period. The arrangements differ on the length of the settlement period, the currencies used to invoice trade, and the provisions for debt repayments between central banks during and beyond the settlement period.

Although the use of this type of arrangements has declined, their operational characteristics can offer some useful lessons for the design of new arrangements (see Table 1). The sub-sections below focus in particular on the Reciprocal Payments and Credits Agreement (CCR), the Local Currency Payments System (SML), and the Interconnected System of Payments (SIP)

Table 1. Latin American and the Caribbean: Payment Arrangements

Arrangement	Start	Termination
Central American Clearing House (CACH)	1961	1984
Caribbean Community Multilateral Clearing Facility (CMCF)	1977	1983
Unified System of Regional Payments Compensation (SUCRE)	2009	-
Reciprocal Payments and Credits Agreement (CCR)	1965	-
Local Currency Payments System (SML)	2008	-
Interconnected System of Payments (SIP)	2011	-

Note: Ecuador exited SUCRE in 2018.

The Central American Clearing House (CACH) worked well for almost two decades but collapsed as sovereign risks build up. The CACH relied on credit lines extended by member central banks and deferred clearing in US dollars. Between 1972 and 1980, 92 percent of intraregional trade was channeled through this mechanism (Guerra-Borges, 1996). The arrangement collapsed in the early 1980s largely due to Nicaragua's incapacity to settle its debts during the settlement period (Ocampo and Titelman, 2012). These debts were rolled over by the surplus countries (Costa Rica and Guatemala) but their buildup led to the gradual disuse of the arrangement in the 1980s until its full suspension in 1992.

The Caribbean Community Multilateral Clearing Facility (CMCF) also collapsed as some members utilized it as Balance of Payments support facility. Like CACH, the CMCF (established in 1977) allowed for a relatively long settlement period of six months. Miller (1993) notes the facility failed in the sixth year of its operation as net debtors were continuously exceeding their credit limits and major creditors were experiencing deteriorating external positions of their own that prevented them from further extending credit.

By contrast, the Eastern Caribbean Currency Union (ECCU) has implemented integrated systems for both retail (Eastern Caribbean Automated Clearing House (ECACH)) and wholesale transactions (Real Time Gross Settlement (RTGS)). Nevertheless, cash and checks still represent 80 percent of the ECCU's retail payment methods. The expenses associated with handling cash, such as transportation, storage, and security, pose significant costs to both the central bank and the private sector. Moreover, the charges for using credit or debit cards and account transfer services stand at 4-6 percent per transaction for customers, which is notably higher than the global average of 1-2 percent (as reported in the ECCU Article IV report, 2020). The prevalent reliance on cash within the ECCU has prompted the Eastern Caribbean Central Bank (ECCB) to initiate a pilot project for a Central Bank Digital Currency (CBDC), detailed below in Box 4. Concurrently, the ECACH is investigating the feasibility of implementing a fast payment system.

In addition, in November 2023 central bank governors from the Caribbean Community (CARICOM) announced a pilot program for Caribbean intraregional payments using the Pan-African Payment and Settlement System (PAPSS), facilitated by the African Export-Import Bank (Afreximbank). This pilot is slated for rollout at the end of 2024. Through PAPSS, the Caribbean region aims to engage in cross-border payments in local currencies, thereby enhancing trade connections both within the region and with African nations.

Reciprocal Payments and Credits Agreement (CCR)

The CCR has a long history dating back to 1965. The CCR agreement was signed in 1982 between the twelve Latin American Integration Association (ALADI) members.[2] The 1982 agreement reformed the 1965 agreement for the prior version of the CCR (the Multilateral Netting System of Reciprocal Payments) under the precursor of ALADI the Latin American Free Trade Association (ALALC). Since its inception, its main objectives were to stimulate the financial relations among the countries of the region, to facilitate the expansion of reciprocal trade, and to conserve hard currency (IMF, 1998).

The CCR relies on credit lines that offer a temporary liquidity benefit while risking the buildup of sovereign arrears. Each central bank utilizes a credit line that covers the daily balances with another central bank during a four-month period. At the end of that period, the net balances are settled through the transfer of US dollars between central banks. This mechanism allows trade to occur with a fraction of US dollar liquidity requirements which can be highly beneficial to countries with low reserve adequacy. Net creditors assume the risk of delays or default at the end of the fourth month period. Over the years, amendments to the agreement have tried to mitigate credit risks but the reliance on credit lines remains the core feature of the CCR.

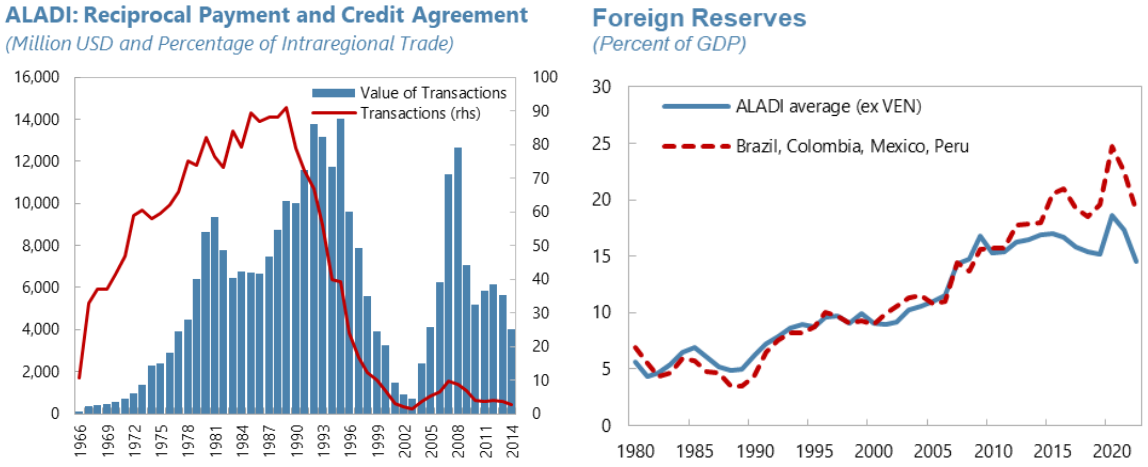
The arrangement proved quite useful during the first three decades of its operation. By the late 1970s, more than three fourths of intraregional trade was channeled through the CCR (Ocampo and Titelman, 2012). The CCR use grew further during the debt crisis of the 1980s amid high costs of external financing and broad-based shortage of FX reserves. By the late 1980s, close to 91 percent of all intra-regional import transactions went through the CCR (CEPAL, 2012). As UNCTAD (2011) notes, due to the extent of external pressures, most members made it mandatory to channel payments through the CCR until 1992.

[2] Argentina, Bolivia, Brazil, Chile, Colombia, Dominican Republic, Ecuador, Mexico, Paraguay, Peru, Uruguay and Venezuela.

The use of CCR started falling rapidly in the 1990s[3] as the capital account liberalization efforts made its terms uneconomical. The deepening of FX markets allowed banks to offer more competitive terms to facilitate cross border transactions (e.g., trade financing, hedging) than the CCR. Relatedly, as reserve adequacy started to improve, the cost of borrowing for central banks under the CCR was not competitive with market terms. As a result, the mechanism saw an increase in settlements before the four-month period.[4]

Another key factor behind the decline of CCR was the overall reluctance of central banks to assume credit risks. As the ALADI secretariat notes (2009), "institutional changes with respect to objectives and aims of the members' central banks turned out to be 'problematic'…. due to their duty to provide reimbursement guarantees." These guarantees required the assumption of sovereign default risk resulting from operations conducted by the private sector. Moreover, the net creditor/debtor position became increasingly asymmetric, increasing concerns about sovereign default risks.[5] In 2019 the Brazilian central bank announced its exit from the CCR citing its low usage and the buildup of credit risks to the public sector.

Figure 2. CCR Activities 1966-2014 and Foreign Reserves ALADI Members 1980-2022



Sources: ALADI, Haver, and IMF staff calculations.

Local Currency Payments System (SML)

The SML settles international payments within the Mercosur in local currencies. The types of authorized transactions and other operational details are prescribed in the bilateral agreements, which differ among themselves.[6] The original agreement between Brazil and Argentina was signed in 2008, Brazil with Uruguay in 2014, Argentina with Uruguay in 2015, Paraguay with Uruguay in 2015, Brazil with Paraguay in 2018 and Argentina with Paraguay in 2021. As of 2023, most of these bilateral agreements have all been updated to capture both goods and services trade.

[3] Ocampo and Titelman (2012) note that a small revival in volumes during 2004 to 2008 was closely associated with the exchange controls imposed by Venezuela.

[4] These operations rose from less than 10 per cent of the total at the end of the 1980s to more than 90 per cent in the mid-1990s (UNCTAD, 2011).

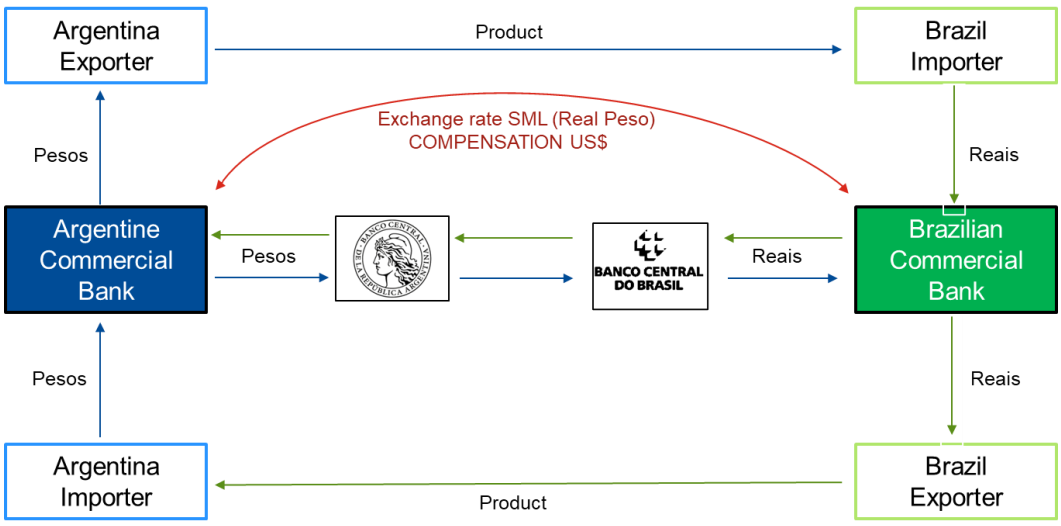
[5] For example, the UNCTAD (2011) notes that the bulk of the CCR operations have involved Venezuelan imports and Brazilian exports of engineering services associated with big infrastructure projects.

[6] This section is based on the agreement of the two biggest countries (Brazil and Argentina).

The primary goal was to deepen the Brazilian Real – Argentinian Peso market (Meirelles, 2008) and reduce costs for SMEs. Policymakers hoped that the increased usage of local currencies will incentivize the private sector to offer new financial products that deepen the real-peso market. The SML was also seen as a promising initiative for small and medium businesses that are less able to manage exchange rate risk through derivatives and face higher transactions costs when they try to access the exchange rate market.

The SML utilizes trade invoicing in local currency and netting agreements with short settlement period. The values of exports are invoiced (except for the SML agreement between Brazil and Argentina where the values of exports are invoiced only in the exporter's currency) in both local currencies and received in the local currency of the exporter while the importer pays in his own local currency. The exchange rate conversions happen at a reference exchange rate (the "SML rate") determined daily by the central banks. By design, the SML offers a competitive daily exchange rate given that it relies on interbank transactions which involve high value transactions. The central banks net out the difference in the SML transactions in US dollars daily. Unlike other arrangements, there is no extended settlement period. As a result, central banks do not face significant sovereign exposures due to the use of the SML although some credit risks are present (e.g., to keep to the system operational during non-working days).

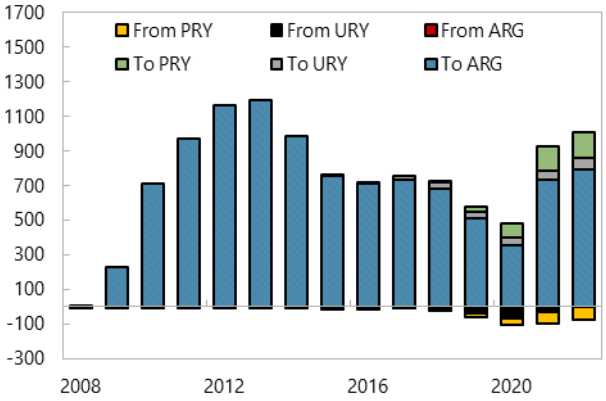
Figure 3. SML Flows Between Brazil and Argentina



Source: Central Bank of Argentina.

Usage of the SML rose sharply after its introduction but has stabilized and remains highly asymmetric. The size of SML trade shows a steady increase until 2013 when it started to stagnate. Volumes increased over the last few years helped by the introduction of Paraguay and Uruguay in the mechanism. Despite these two new entrants, the bulk of the flows consist of exports from Brazil to Argentina while trade with Uruguay and Paraguay is more balanced. SML usage as a share of all goods exports has hovered around 5 percent for Brazil and even lower for Uruguay and Paraguay.

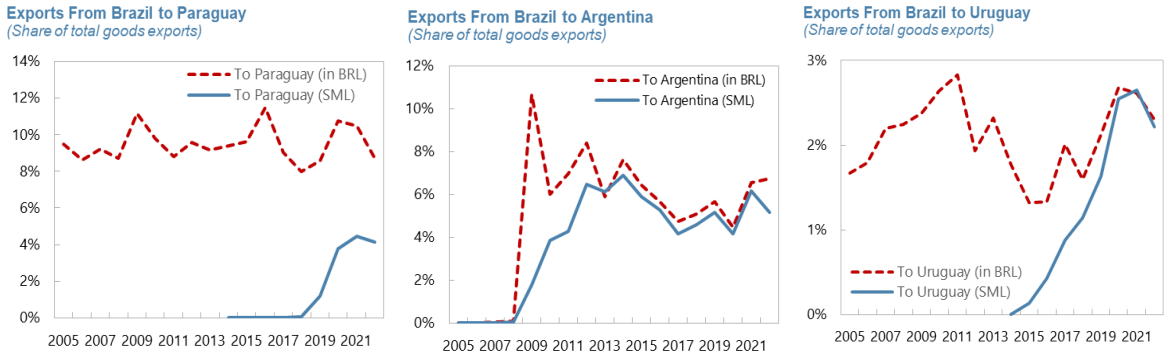
SML Trade Volume for Brazil
(USD million)



Sources: Central Bank of Brazil

SML has fallen short of its objectives of facilitating regional SME trade and increasing local currency invoicing. De Barra (2020) shows that the share of SMEs in the SML is only 10 percent in the case of Brazil-Argentina operations and a bit below 25 percent in the case of Brazil-Uruguay. This is likely driven by intra-industry trade among larger companies in the automobile and processing industries with pre-established trade relationships. In terms of local currency invoicing, trade data do not show a notable increase of local currency use following the introduction of the SML (Figure 4).

Figure 4. Exports from Brazil to Other Mercosur Members



Source: Brazil Ministry of Development, Industry and Foreign Trade (MDIC) and Central Bank of Brazil

There are several reasons that would explain why the SML usage has remained low, including:

- **Preference for US dollars.** Some exporters prefer to be paid in US dollars to hedge against local currency instability. Additionally, some companies might have a cost structure largely dependent on US dollars (e.g., US dollar financial liabilities) which makes US dollar export proceeds more desirable.

- **Commodities.** A large share of trade between countries is commodity-based, which in turn is primarily priced in US dollars. This reduces the type of goods that could benefit from the use of local currency.

- **Import controls and parallel exchange rates.** Over the years, Argentina has introduced several capital control measures that have affected SMLs attractiveness. Most recently stringent import financing requirements as well as preferential exchange rate regimes (e.g., agricultural exporters partially allowed to use the more depreciated parallel exchange rate) have reduced SML's attractiveness.

- **Availability of letters of credit and export financing.** According to Kaltenbrunner and others (2020), some SML exporters in Brazil were unaware whether they can get credit/counterparty insurance e.g., Letter of Credit from a commercial bank. This arguably indicates the lack of information on the program and perhaps the limited incentives of banks to advertise it and create products around SML. According to the same authors the lack of insurance options is likely one of the reasons why SML transactions are mainly intra-industry trade operations of large regional firms. Additionally, given the high interest rates in Brazil exporters utilize pre and post shipment financing programs that offer attractive interest rates in BRL terms. These programs assume that the repayment of the loans will be based on the exporter receivables which are normally denominated in US dollars. The presence of the US dollar in these schemes allows the banks to offer such products with more attractive interest rates. In the absence of a USD receivable, the same financing mechanisms become more expensive. This lack of export financing can be a major obstacle for SMEs, who do not have enough internal resources to finance their trade operations.

Interconnected System of Payments (SIP)

The SIP is a payment system between the members of the Central American Monetary Council (CMCA). It began operations in 2011 with the goal of modernizing and harmonizing the payment systems of CMCA, as well as promoting the development and integration of regional financial systems.
The SIP links central banks' Real-Time Gross Settlement (RTGS) systems and uses the US dollar for its settlements accounts. Compared to other arrangements discussed above, SIP is a hub that links existing real time settlement systems through SWIFT messaging. Its design has similarities with the TARGET system launched in 1999 that was based on linking existing systems rather than setting up a new clearing mechanism. A key difference with TARGET, however, is that SIP utilizes a foreign currency (the US dollar) for its settlement accounts while TARGET used the common currency of the participants (the euro). For this system to operate, each financial institution that is participating in SIP must maintain a settlement account in US dollars (See more details in Heinrich and García Dubón, 2011).

Despite a small pickup in recent years, the usage of the system has remained relatively low. Some commentators have argued[7] that part of the reason could be the limited incentives for banks to use it as opposed to their own correspondent banking channels as well as the lack of awareness of its existence among households and corporates.

Towards Enhanced Payments Integration: Good Practices and Potential Arrangements

As discussed above, there are significant shortcomings with past and existing arrangements of public infrastructures for cross-border payments. Some arrangements were deficient from the start due to their long settlement periods and the buildup of sovereign credit risk. Others were not designed in a way that offers adequate incentives for the financial system to adopt them over existing practices. At the same time, private sector arrangements that rely mainly on correspondent banking relationships (CBRs) also exhibit several weaknesses. Maintaining numerous CBRs across different jurisdictions can be very expensive for a respondent

[7] https://iconsolutions.com/wp-content/uploads/2017/10/Spotlight-on-Central-America-SIP-Whitepaper.pdf

bank, leading to a proliferation of intermediary banks, extending the transaction chain and reducing transparency (BIS 2022a).

In this section, we briefly discuss good practices in cross-border payment arrangements and describe some alternative arrangements or systems that have been advanced, including by the BIS and the IMF. Adoption of good practices in the cross-border payment ecosystem should help create a more reliable, transparent, and inclusive regional/international financial system.

Good Practices in Cross-Border Payment Arrangements

The following is a list of 10 good practices that a cross-border payment arrangement should follow.

1. **Standardization and interoperability.** Standardizing payment formats, messaging, and protocols helps ensure interoperability between different financial institutions and systems. Adhering to global/regional standards, such as ISO 20022 for messaging, promotes consistency and compatibility in cross-border transactions.

2. Regulatory compliance. Compliance with international/regional regulations and anti-money laundering (AML) measures is crucial for cross-border payments. Financial institutions should stay updated on regulatory changes and ensure adherence to global standards.

3. Swift and efficient settlement. Utilizing real-time payment systems and settlement mechanisms improves the speed and efficiency of cross-border transactions. Leveraging innovative technologies like blockchain, digital monies, and various fast payment systems can enable faster and more cost-effective settlements.

4. Minimizing settlement risks with clear rules. For payment arrangements to be sustainable, there should be resilient to settlement risks. Although multi-month settlement periods are no longer present in modern mechanisms, settlement risks can still rise. In that regard, it is crucial to establish clear rules that outline when final settlement should occur, and the point as of which transactions can no longer be unwound, including for settlement on non-working hours and/or when a direct participant fails. Clearly defined processes for such cases will contribute to build resilience and trust among participants in the cross-border payment ecosystem.

5. Cost efficiency. Promoting cost efficiency involves minimizing fees associated with cross-border payments. This may involve adopting cost-effective new technologies.

6. Customer authentication and security. Implementing strong customer authentication measures helps prevent fraud and unauthorized transactions. Utilizing encryption technologies and secure channels ensures the confidentiality and integrity of cross-border payment data.

7. Transparency and disclosure. Providing transparent information on fees, exchange rates, and processing times helps users make informed decisions. Clear disclosure of terms and conditions ensures that both the sender and receiver understand the complete cost and process involved in a cross-border transaction.

8. Adequate incentives for private sector collaboration and innovation. Building strong partnerships between financial institutions, PSPs, and regulatory authorities fosters collaboration in developing efficient and innovative payment solutions. As discussed above some past/existing arrangements did not offer adequate incentives for financial institutions and other payment system participants to adopt them and offer complimentary products (e.g., export financing linked to these platforms). Brazil's successful Pix platform offers a useful lesson in that regard. In addition to requiring mandatory participation, it was also designed in a way

that allowed the private sector to innovate and offer new products based on Pix, further incentivizing its broad adoption.

9. Financial inclusion. Promoting financial inclusion and enhancing awareness around these platforms can ensure that cross-border payment services are accessible to a broader set of individuals/businesses. This involves addressing issues related to accessibility, affordability, and literacy.

10. Continuous innovation. Embracing technological advancements and exploring innovative solutions through pilots, such as the use of smart contracts and artificial intelligence, can further enhance the efficiency and effectiveness of cross-border payments.

Potential Cross-Border Payment Arrangements/Systems

This subsection focuses on some potential arrangements that have been implemented or explored to enhance cross-border payments, including the option of interlinking payment systems and setting up multilateral platforms like an mCBDC or a so-called XC payment platforms.

A. Interlinking Payment Systems

Interlinking payment systems offer a flexible alternative to traditional correspondent banking by leveraging new technologies like APIs and the ISO 20022 messaging standard, allowing Payment Service Providers (PSPs) from different countries to seamlessly transact without the need for direct participation in each other's systems. This approach, underpinned by contractual and technical frameworks, aims to streamline cross-border payments through four models: single access point, bilateral link, hub and spoke, and common platform (BIS 2022b). The key challenge lies in harmonizing API protocols and ISO 20022 implementations to ensure smooth, secure interoperability across diverse payment systems, a task potentially made more feasible by the adoption of fast payment systems incorporating these standards. The recent rollout of retail fast payment systems (FPS), including in LAC, which tend to include ISO 20022 messaging standards and harmonized APIs, would make interlinking retail payments more feasible.

The ***Directo a Mexico*** scheme between the U.S. Fed automated clearing house and the Mexican RTGS system is an (early) example of a bilateral link model. It was conceived originally as a marketing program to promote awareness and facilitate the use of the Automated Clearing House (ACH) channel by U.S. financial institutions for remitting funds to Mexico. Specifically, the program, established in 2004, aims to encourage the adoption of the Federal Reserve Banks' FedGlobal Mexico Service, which is part of the FedACH® Services suite. Under this service, U.S. financial institutions initiate cross-border transactions through FedACH using U.S. dollars. These payments are then transferred from FedACH to the Banco de México, the Mexican gateway operator. In Mexico, the payments are distributed through the local payments system. Funds are posted to the receiver's account in pesos on the next banking day, and each payment is computed using a wholesale foreign exchange rate. There is a fee of US$0.67 per transaction and there is no maximum amount per transaction. This process ensures efficient and cost-effective cross-border transactions between the U.S. and Mexico.

Another more recent (and sophisticated) example of a bilateral link model is the ***India and Singapore FPS interlinking***. India and Singapore established a historic cross-board real time payment systems link in February 2023. This marks India's inaugural cross-border link and Singapore's second. The link connects India's Unified Payments Interface (UPI) and Singapore's PayNow. Users can transfer up to the equivalent of about US$725 daily using their UPI ID, mobile number, or virtual payment address via bank accounts or e-

wallets, as per the Reserve Bank of India. The service prioritizes cost-efficiency and accessibility, especially for foreign workers and students in Singapore and India, according to the Monetary Authority of Singapore. Participating Indian banks facilitate both inward and outward remittances. In Singapore, DBS Singapore and Liquid Group (a non-bank firm) offer those services. It is claimed to be the world's first real-time payment systems linkage to use a scalable cloud-based infrastructure, featuring a non-bank financial institution as a participant, according to the Monetary Authority of Singapore. The cloud architecture is designed to accommodate service expansion and increased remittance traffic.

Project Nexus presents a solution that would significantly simplify bilateral interlinking. This global initiative proposes connecting the existing fast payment systems of multiple jurisdictions through APIs, rather than setting up a shared technical infrastructure typical of multilateral platforms. Instead of requiring a payment system operator to establish custom connections for each new country it adds, the operator needs only one connection to the Nexus platform. This single connection enables any fast payment system to access every other country in the network, facilitating a more streamlined and efficient expansion.[8]

Despite its potential benefits, interlinking arrangements across borders presents challenges, particularly in creating effective governance and oversight mechanisms across multiple jurisdictions or currencies. Recognizing this, the G20 has prioritized the governance and oversight of Fast Payment Systems (FPS) interlinking. A recent interim report by BIS CPMI (October 2023) highlights the need for strategic alignment and clear objectives for governance, addressing the design for coherence, scalability, business viability, and inclusiveness, and considering the unique oversight requirements in a multi-jurisdictional setup for FPS interlinking.

The appropriate choice of a currency conversion model is another important issue for interlinking arrangements in LAC given the relative high exchange rates' volatility and the high frequency of financial stress events, which would significantly affect liquidity management in interlinked payment systems.

B. Multilateral Platforms

A multilateral platform for cross-border payments is multi-jurisdictional by design, allowing PSPs from several jurisdictions to participate in and use it to provide cross-border payment services to their customers avoiding reliance on multiple intermediaries (BIS, 2023). They require cross-jurisdiction cooperative governance and oversight arrangements and a single rulebook for all participants. In addition, these platforms would have to offer extended operating hours to adapt to participants in different time zones and facilitate compliance with anti-money laundering and combating the financing of terrorism (AML/CFT) provisions.

There are a few multilateral platforms currently in operation, at a wholesale or retail levels, with regional or global geographical scope, and relying on common platforms or hub and spoke arrangements. Within LAC, the Eastern Caribbean Central Bank manages an RTGS common platform for operations in the Eastern Caribbean dollar (wholesale common platform within a currency union). The SIP, explained in detail above, has been set up by the Central American Monetary Council to serve as a hub and spoke arrangement to settle transactions across the RTGS systems across the Central American region and the Dominican Republic in US dollars. Box 2 describes alternative currency conversion arrangements and explains the Payment versus Payment (PvP) mechanism that could be fostered to settle cross-border transactions.

[8] https://www.bis.org/about/bisih/topics/fmis/nexus.htm

Box 2. Currency Conversion Arrangements and PvP Mechanism

There are three types of potential currency arrangements:

- Single-currency, where one currency is used for settlement with conversions done by a PSP.
- Multi-currency, where transactions across different countries or currencies are processed in parallel.
- Cross-currency, enabling payer and payee to transact in different currencies, often incorporating FX conversion mechanisms like PvP (Payment versus Payment) such as in the case of *Directo a Mexico*.

PvP is a settlement mechanism which ensures that the final transfer of a payment in one currency occurs if and only if the final transfer of a payment in another currency or currencies takes place (BIS, 2012). It can be centralized or decentralized and aims to reduce funding costs through netting. Current PvP arrangements, mostly for wholesale payments, vary in their operational hours and currency inclusivity, with efforts underway to expand 24/7 settlements and include emerging market currencies, potentially extending into retail payments.

Within LAC, a PvP arrangement is the ***Brazilian B3 FX clearinghouse*** (2002), a private solution limited to domestic participants and regulated by the Central Bank of Brazil (BCB). It works as a central clearing with net settlement only in Brazilian real and U.S. dollars for spot transactions between banks and some other financial institutions (but not non-bank PSPs). Its operations are supported by explicit exposure limits, margins, default funds, and loss-sharing agreements.

B.1 Multi-Central Bank Digital Currency (mCBDC)

The mCBDC arrangement (BIS, 2022c) aims to enhance cross-border payments through wholesale and retail CBDCs. This approach promises increased security for cross-border payments, leveraging central banks' established payment infrastructures. Hong Kong Monetary Authority, the Bank of Thailand, the Central Bank of the United Arab Emirates, the Digital Currency Research Institute of the People's Bank of China, and the BIS Innovation Hub in Hong Kong launched a unified pilot mCBDC platform, called **mBridge**. The mBridge ledger connects central banks with financial entities directly, potentially revolutionizing international trade and cross-border business by prioritizing scalability, modular functionality, and compliance with diverse legal and regulatory standards (BIS 2022a).

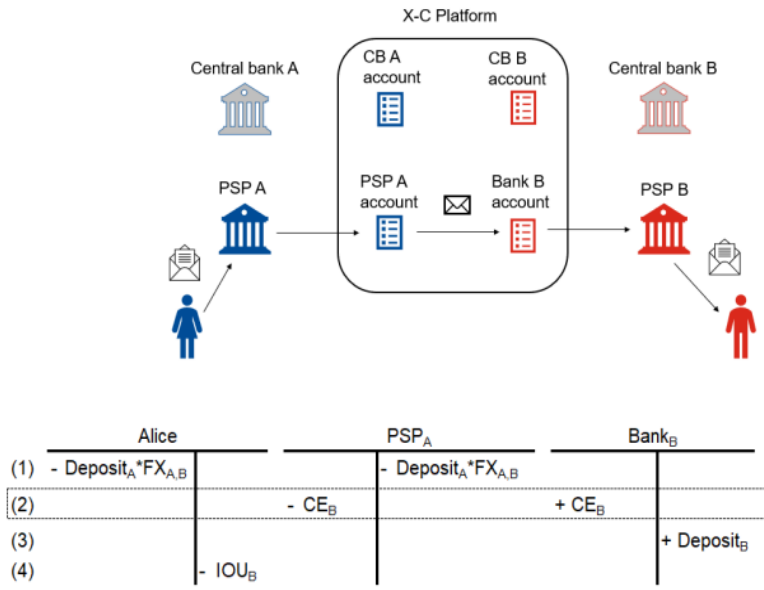
During the pilot, 20 commercial banks from Hong Kong SAR, Mainland China, the UAE, and Thailand carried out over US$22 million worth of payment and FX PvP transactions for their corporate clients using CBDCs issued via **mBridge**. This demonstrated the platform's practical application and highlighted the need for careful consideration of policy, legal, and regulatory issues, notably regarding direct access to central bank funds, data privacy, and governance. The pilot also underscored the legal complexities introduced by a new digital currency and the multi-CBDC platform, indicating the need for regulatory adjustments. As project mBridge moves towards developing a minimum viable product (MVP) and a production-ready system, it continues to refine and address these challenges to harness the full potential of CBDCs for cross-border payments.

Overall, project mBridge confirms the need for international cooperation to coordinate and integrate cross-border functionalities at an early stage to fully harness the potential of CBDCs in enhancing cross-border payments. This should be facilitated by the fact that the exploration of CBDCs and their specific design are just starting in many countries, offering central banks the opportunity to make timely decisions regarding two critical and complementary issues: **cross-border access** (i.e., by foreigners/nonresidents to domestic wholesale or retail CBDC) and **interoperability** between different CBDCs (BIS 2022c).

B.2 Exchange and Contracting (XC) Platforms

The XC platforms refer to a conceptual model to guide the design of cross-border and multicurrency contracting arrangements, with the intention of improving multilateral transactions through a trusted single ledger for efficient exchange of digital central bank reserves, offering enhanced privacy via cryptographic methods (Adrian et al., 2022). It seeks to centralize payment and settlement, reduce FX costs, and leverage new technologies like smart contracts for optimized payment processes. This approach overcomes the need for changes to domestic systems, allowing banks and non-bank institutions from various jurisdictions to participate without altering their infrastructure. The platform uses 'Certificates of Escrow' (CEs) issued by central banks against reserves in a one-to-one ratio, eliminating intermediary risks and interoperability issues, and ensuring secure, cost-effective transactions. Settlements on the XC platforms, facilitated by transferring CEs between accounts, aim for instant or assured future settlements through PvP and DvP mechanisms, promising seamless, irrevocable cross-border transaction settlements.

Figure 5. XC Platforms



Source: Adrian and Others 2022

Project Agorá, launched by the BIS in April 2024 with seven central banks and private sector partners, explores the potential of tokenization to revolutionize the monetary system by improving international payments through the use of programmable platforms and smart contracts.[9] This initiative aims to tackle the inefficiencies of current payment systems, particularly in cross-border transactions, by integrating tokenized central and commercial bank deposits within a unified ledger. The project emphasizes testing technology under real-world operational and regulatory conditions to enhance transaction speed, integrity, and cost-efficiency. Agorá seeks to merge traditional monetary structures with innovative digital solutions, aiming to maintain the system's integrity while offering new transactional possibilities and efficiencies on a global scale.

[9] https://www.bis.org/press/p240403.htm

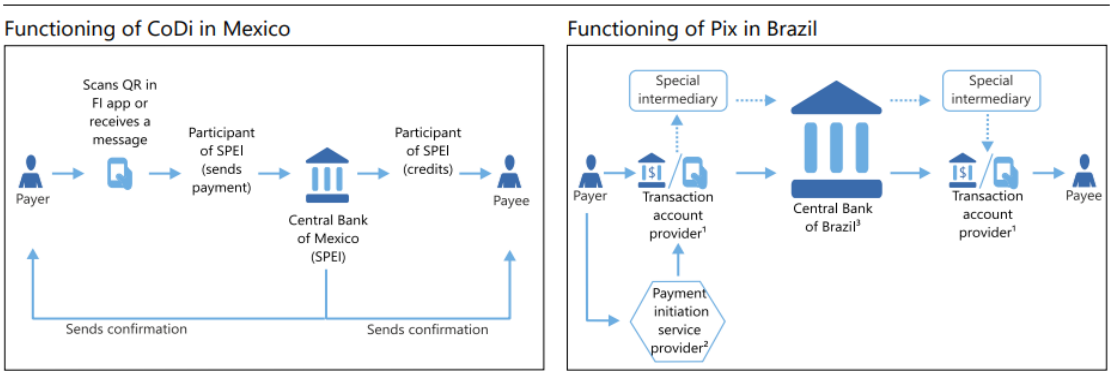
Cross-Border Payments in LAC: Quo Vadis?

The initiatives discussed above can potentially help the region to enhance cross-border flows. To that effect, there is a need to determine both whether LAC has the technical capabilities to implement them and whether those initiatives align with the region's challenges and needs. This section explores those issues and proposes some ways forward.

LAC Payment infrastructure: Modernization of Domestic Payment Systems And Rollout Of CBDCs

A particular aspect where there have been interesting developments in LAC in recent years pertains to the **modernization of domestic payment systems**, with central banks introducing digital, safe, and more broadly accessible systems to complement efforts from private fintech and big tech firms to facilitate payments and/or better integrate them into their digital platforms. Until very recently, LAC was characterized by low access to the financial system and to retail payment services, a prevalence of cash,[10] weak interoperability (e.g., full interoperability of ATMs in only one third of LAC countries compared with 75 percent of Asian EMEs) and high user costs (Alfonso, Tombini, Zampolli, 2020). In this context, several central banks decided to enhance wholesale payment systems (e.g., Chile's Transferencias en Linea (TEF) in 2008, Argentina Immediate Transfer (IT) in 2011, Costa Rica's Transferencias de Fondos a Terceros del SINPE in 2011, Ecuador's Pago Directo in 2012, Mexico's SPEI in 2015, Belize's Automated Payment and Securities Settlement System (APSSS) in 2016, Colombia's Compensación Electrónica Nacional Interbancaria (CENIT) in 202x) and introduce retail FPS that allow retail customers to send or receive payment transfers through an expanded set of payment service providers (PSPs) in a few seconds and 24/7 (Box 3).

Figure 6. Payment Platforms in Brazil and Mexico



Source: Alfonso, Tombini and Zampolli (2020), based on the information from central banks of Brazil and Mexico.
Notes: FI= Financial Institution.
1\ Can be direct or indirect participant.
2\ Does not participate in settlement.
3\ Provides settlement infrastructure and liquidity.

Box 3. Some Retail Fast Payments Systems in LAC

The Central Bank of **Brazil** (BCB) launched the retail fast payment system Pix in November 2020. It gives access to all financial and PSPs licensed by the BCP (i.e., more than 700 banks and non-banks), allowing their customers

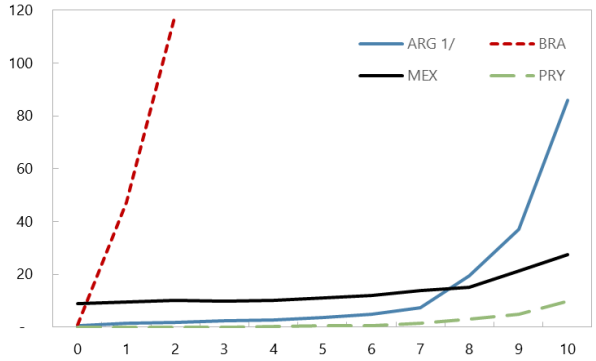
[10] In 2017, on average only 49 percent of adults in LAC had access to transaction accounts to make and receive payments and cash in circulation was relatively high in most countries of the region (World Bank's Findex). The latter would be explained by factors like a larger shadow economy and a lower level of financial literacy (Alfonso, Tombini, Zampolli, 2020).

real-time payments through a mobile phone interface and relying only on a phone number or a QR code. It is compulsory for all participating PSPs to provide their customers with all the payment system's functionalities and the system does not impose any transaction value limit (though participants can set individual limits to their customers). P2P and P2G payments are free of charge while the transaction cost for merchants (which is set by participating institutions) averages about 25 basis points (compared to 2.2 percent charged by credit cards and 1.1 percent charged by debit cards). The expansion of Pix has been impressive, covering 85 percent of Brazil's adult population and 15 million firms, and enhancing financial inclusion by bringing 70 million newcomers to the world of electronic transfers.

The central bank of **Mexico** (Banco de Mexico) rolled out the retail FPS called Cobro Digital or CoDi in 2019. The system is opened only for financial institutions that are members of the Banco de Mexico's real-time gross settlement system (SPEI), though it lets third parties develop applications that generate payment requests. Use of the system is free of charge for individuals and merchants.

The Central Bank of **Paraguay** launched its national payment system SIPAP (Sistema de Pagos del Paraguay) in 2013, supporting both wholesale and retail operations within the RTGS business hours (i.e., from Monday to Friday). In 2022, Paraguay launched a retail fast payment system SPI (Sistema de Pagos Instantaneos) as part of the broader SIPAP payment ecosystem. It enables instant availability of funds to the beneficiaries 24/7, 365 days a year, and without charging fees. The SPI system allows for easy addressing (e.g., through the use of an alias) and for the use different payment instruments (e.g., credit transfers and payment orders) for individuals and firms holding accounts at commercial banks and financial companies. The SPI has experienced a quick expansion and by December 2023 operations held during the weekends already represented 18 percent of the week's operations and those held between 6pm and 6am about 24 percent of the day's transactions. The SPI operates exclusively in local currency, with a maximum value of PYG 5 million (about USD 700) in operations processed. The SPI has a deferred settlement model, with participants' reserve accounts mirroring their RTGS accounts to mitigate liquidity risk. Access to the SPI is linked to the participation within the RTGS system (SIPAP), i.e., 24 banks and non-bank financial institutions. The SPI will be gradually extended to other financial institutions, particularly credit unions.[11]

Fast Payments Transactions: Evolution Over Time
(Transactions per capita)



Sources: Source BIS, Central Bank of Paraguay.
1/ Data corresponds to private system operated by RedLink and Prisma

The introduction of these (and other) fast payment systems have been quite successful in terms of financial inclusion and efficiency, as implied in the figure below which captures the rapid expansion in retail digital payments in per capita terms.

Recent improvements in domestic payment systems can become foundations for the enhancement of regional cross-border payments and, therefore, of trade and financial linkages. The modernization of payment systems described above should allow for instance for their interlinking across borders. In fact, the increased use of the Brazilian Pix system in border areas presents an opportunity for other Mercosur countries to introduce integrated payment system solutions:

- Fintech solutions have been developed in Argentina to allow retailers there to use Pix in reals at an exchange rate determined at the time of the purchase12
- A card processor in Paraguay (Bancard), a technical participant in SIPAP, started to accept Pix as a means of payment in early 2024. If a Brazilian tourist pays with Pix to a Paraguayan merchant through the POS (Point of Sale) issued by Bancard, the purchase value is debited from the client's Brazilian bank and then that bank transfers that value to a Paraguayan bank (P2P). Even if Bancard is not yet

[11] Sistemas de Pago en Paraguay: Balance de la Primera Década; Caballero, Legal, Ratti, Vega; Banco Central del Paraguay (2023).

[12] "Pix for export? Fiserv takes Brazil's mobile payments to Argentina", Fintech Nexus, July 19, 2023.

regulated by the central bank, this can be deemed as another development towards a cross-border integration of payment systems.[13]

In terms of **a rollout of CBDCs**, most central banks in LAC are exploring them, be in the form of retail or wholesale CBDCs (see 2022 regional survey in Appendino et al. (2023)). Furthermore, the region has been in the forefront of retail CBDC adoption, with formally launched CBDCs in the Bahamas and Jamaica and an advanced pilot in the Eastern Caribbean Currency Union (ECCU) aimed at boosting financial inclusion (including for communities in remote islands) and at strengthening the resilience of the whole payments system (e.g., to natural disasters and pandemics) (Box 4). By contrast, and since the instant payment system "Pix" has already been quite successful in improving financial inclusion and enabling efficient retail payments in Brazil, the BCB is focusing on the introduction of a wholesale CBDC platform (Drex) as a "smart" platform to promote financial innovation based on a public blockchain infrastructure that leverages the digital representation of assets (tokenization) and programmability and that is interoperable with other payment infrastructures. Tokenized deposits issued by regulated institutions would be the main payment instrument, with later development of digital representation of other real-world assets driving the provision of new token-based financial services. Drex would be launched in late 2024 or early 2025, with a couple of key pilots being undertaken in advance: Lift Challenge (private sector tests of specific use cases like tokenization of cars using Decentralized Finance DeFi) and Pilot Drex (using government bond transactions to test compliance with data privacy regulations).

Box 4. Adoption of retail CBDCs in LAC

In **Bahamas**, the "Sand Dollar" was officially launched in October 2020 to boost financial inclusion for communities in remote islands, to strengthen the resilience of the payment system to natural disasters, and to facilitate government digital payments. It includes holding limits and in monthly transactions and has been exclusively allowed for domestic purposes, with foreign tourists allowed to register limited accounts for domestic transactions only. Cross-border payments continue to take place through commercial banks in traditional non-CBDC Bahamian dollars. Issuance and adoption of the Sand Dollar has been quite limited so far (less than 0.3 percent of currency in circulation).[1]

Jamaica rolled out a retail CBDC in 2022 with the main objective of promoting financial inclusion. It relies on an existing centralized payment system (the central bank's RTGS) and it is held in a CBDC wallet issued by banks or authorized PSPs. It does not earn interest and can be exchanged one-for-one with bank notes and coins. There are no fees charged for CBDC transactions (payments and transfers). Wallet providers ensure that data is protected and kept private and, when conducting transactions, identities are not recorded. The CBDC is limited for domestic transactions in Jamaican Dollar, so it cannot be used to facilitate cross-border payments.

The **ECCU** has completed the pilot phase of its CBDC (Dcash) and is now gearing up to introduce Dcash 2.0 over a 18-24 month testing period in a controlled setting to ensure the system's reliability and efficiency. The ECCB is reflecting on the insights gained from the initial pilot, including from the system's outage during the first quarter of 2022. The forthcoming Dcash 2.0 would include enhanced functionality and interoperability within the domestic payment network, allowing users to conduct transactions through digital wallets offered by private financial entities. Adoption of ISO20022 standards would also eventually facilitate integration with international payment systems (Reslow, Soderberg, Tsuda, forthcoming).

[1/]The Central Bank of the Bahamas's Quarterly Statistical Digest February 2024.

[13] "Bancard ahora acepta Pix el medio de pago más popular de Brasil", Diario ABC Color, March 7, 2024.

Next Steps in Cross-Border Payment Integration

An enhancement of cross-border payment arrangements in the region requires a comprehensive approach including some basic tenets building on the good practices detailed in a previous section. Obviously, the earlier these actions are taken, the more efficient the solutions implemented:

- Establishing rules for cross border *governance* (i.e., the accountability of risk decisions and the exercise of decision-making power).
- Harmonizing regulatory frameworks to minimize legal complexities and facilitate smoother cross-border transactions.
- Building cross-border payment arrangements in line with standards issued by industry and public standard setting bodies, including common messaging standards and protocols, to ensure compatibility and interoperability among different payment systems. Collaboration on interoperability of digital financial assets can be facilitated by the adoption of common technology stack (Budau and Tourpe, 2024).
- Fostering collaboration among various stakeholders including central banks, financial institutions, and payment service providers to collectively address challenges and work towards common goals.
- Embracing digital technologies and fintech solutions to streamline cross-border payment processes, reducing reliance on manual and paper-based methods. The recently announced FuSSE project by the IDB and BIS aims to assist countries in the region in acquiring the necessary technologies.[14]
- Implementing robust risk management practices and common security standards and protocols to protect against fraud, money laundering, and cybersecurity threats.
- Promoting financial inclusion and broader accessibility including through awareness campaigns and educational initiatives.
- Implementing mechanisms for continuous monitoring and evaluation of the effectiveness of regional cross-border payment arrangements, updating them based on emerging technologies, market dynamics, and feedback from stakeholders.

If capital flow measures are justified, their integration into cross-border payment systems and new technologies should not create any loopholes.[15]

In identifying specific solutions to foster cross-border payments on top of the general elements described above, the review of past experiences and recent payment modernization processes in the region suggests that there is no one size fits all approach and that a cost-benefit analysis needs to be undertaken to decide which solution(s) is(are) optimal and the phasing of its(their) implementation (BIS, 2022c). In that context, there is a case for focusing on specific subregions within LAC (i.e., the Caribbean, Central America and Mexico, Mercosur) to identify potential ways forward. In what follows, some specific suggestions are laid out along those lines.

The **Caribbean countries** could follow a dual approach taking advantage of the rollout of several retail CBDCs in the region. On the one hand, the interlinking of wholesale payment systems (like the ECCB-RTGS serving the Eastern Caribbean dollar which already handles cross-border payments between jurisdictions within the currency area) could be explored for larger transactions intermediated through financial institutions and

[14] https://www.bis.org/press/p230914.htm

[15] For an introductory discussion on the implementation of CFMs with CBDCs, see He et al. (2023).

designated PSPs. The relative stability of the subregion's currencies would protect against exchange rate risks. The counterparty/liquidity risks that were triggered during the functioning of the CMCF mechanism in the early 1980s could be managed through limits on transaction values or on (negative) balances carried by each central bank. An alternative would be the adoption of a hub-and-spoke or a single arrangement through the capitalization or constitution of a guarantee fund by each country under centralized management that would have to be calibrated (e.g., increased) based on observed trends. This could be the scheme behind the initiative announced at the November 2023 meeting of the Caricom central bank governors of a pilot for Caribbean intraregional payments leveraging the Pan-African Payment and Settlement System (PAPSS) offered by the African Export-Import Bank (Afreximbank). Again, setting up hub-and-spoke or single/unified systems face larger implementation challenges making it more viable if relatively large trade and/or financial relations are projected. On the other hand, interlinking of retail CBDCs would focus on smaller transactions across borders between individuals and (small) firms. In that case, regional central banks would need to set up an appropriate legal basis, determine access conditions in terms of non-residents' participants and transactions' limits, and coordinate necessary conditions for interoperability across the various retail CBDC systems operating in the region. The latter is not trivial as CBDCs design and rollout has tended to a strong domestic (and retail) focus.

In **Mercosur**, interlinking fast payment systems seems an interesting option at this stage given the proliferation of retail fast payment systems in the region, the expanded use of Brazil's Pix system in border areas, and the potential removal of substantial balance of payments' restrictions in Argentina. Aside from technical considerations, a key issue would be to agree on the governance and oversight arrangements to manage risks and ensure, for instance, compliance with each jurisdiction's AML/CFT and CFM provisions. Issues with exchange rate volatility, particularly in Argentina, can be partially dealt via real time payments or near 24/7 funds' transfers. The interlinking model being applied between India and Singapore FPS (to be also applied between India and Nepal) or project Nexus could offer benchmarks to implement this. In parallel, and to allow for higher value cross-border transactions needed to enhance the regional value chain, the use of the SML system described above should be expanded beyond intra-industry operations of large regional firms. Again, a removal of substantial balance of payments' restrictions in Argentina should help in that regard, but other actions could be envisaged. While these solutions may not enable a complete transition to trade exclusively in national currencies, they have the potential to marginally reduce FX volatility risks and lower transaction costs for participants, thereby supporting international trade within the region.

In **Central America**, the SIP payment system constitutes a good basis to foster wholesale transactions across borders, though the possibility of including payments/settlements in local currencies could be explored. The SIP could help create a bilateral linking arrangement between Central American countries, Mexico and the U.S.

One additional aspect worth highlighting is the potential of more widely applied Open Finance regulations to help streamline cross-border payments, enhancing the flow of capital and trade across borders. By empowering clients of financial institutions, Open Finance allows for the secure transfer of financial data between entities. This regulatory framework is gaining traction in Latin America, with countries like Brazil, Chile, Colombia, Ecuador, and Mexico leading the charge by implementing Open Finance regulations.[16] Others in the region are either in the process of adoption or actively considering its implementation. The adoption of Open Finance across borders promises to simplify and automate Know-Your-Customer processes, thereby facilitating

[16] See the map of regulation in Latin America and the Caribbean provided by the IDB and Bakker et al. (2023) for further details.

cheaper and faster cross-border transactions. This will require a concerted effort to align regulatory standards and guarantee interoperability among diverse financial systems via standardized API protocols.

To sum up, while new technologies cannot substitute for sound and credible macroeconomic policies, their strategic use can help significantly lower transaction costs and times for Latin American and Caribbean countries. This improvement in economic efficiency could enhance regional and global trade connections. Specifically, the adoption of innovative cross-border payment systems, together with comprehensive Open Finance regulations, could empower individuals and businesses in the LAC region to transfer payments and financial assets more easily in any amount, at any time and trough any device. This integrated approach promises a more interconnected payment system that facilitates trade and an efficient regional financial landscape.[17]

[17] For additional details on the concept known as Finternet, refer to Carstens and Nilekani (2024).

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