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I Meeting of Heads of Financial Market Infrastructures
Digital Meeting

The new economics of payments
Opening Speech
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- Welcome to the I Meeting of the Heads of Financial Market Infrastructures. This meeting represents the new face of the annual gathering for the CEMLA Payments group.

- Let me start by saying that we have a distinguished group of experts and practitioners from the central banking community who will, over the next three days, generously share their perspectives on the most topical issues for payments and financial market infrastructures. Let me express my gratitude for accepting the invitation to speak at this meeting. Let me also especially thank Professor Robert Townsend, who is at MIT, and who will speak in a few minutes.

- For this meeting, we have over 110 registered participants, from 25 central banks from the region and beyond, including representatives from the central banks of Canada, France, Germany, Hungary, Portugal, Spain, the United States, the European Central Bank, and from the CPMI as well. With this backdrop, I am convinced that the discussions will be of much relevance for our Membership, under the current circumstances of the COVID-19 pandemic.

Motivation

- In my speech, I will talk about the new economics for payments in light of the pandemic and the escalation of new technologies.

- As the bedrock of the financial system, the payment systems and financial market infrastructures - I will be referring to them from here on indistinctly as payments or market infrastructures - serve a wide range of transactions, from interbank exchanges, to buying coffee or paying for the subway. As such, they need to be safe, efficient and contestable to adequately meet and adapt to the needs of households, businesses, the Government, and the financial system's participants.

- More than ever, these objectives stand out. On the one hand, new technologies are spurring innovation in payments and financial services. By doing so, technology is significantly changing the game. The application of new technologies to conventional business models and infrastructures is disrupting the landscape for the provision of payments and financial services. Clear examples of this are the entrance of Big-tech companies and the rise of Central Bank

Digital Currencies (CBDCs) and Global Stablecoins (GSCs) initiatives worldwide. On the other hand, the unprecedented health crisis has underscored the importance of having a resilient and accessible payments infrastructure to serve, among others, the extraordinary wholesale liquidity support measures and the emergency relief social programs that most central banks and governments have implemented to assist in this unexpected episode.

- In this context, central banks are called to play a substantial role in ensuring that the payments rails continue to be safe and efficient during this time. The challenge pertains to how central banks act as operators and agents of change. What type of role should the central bank play? And how much public intervention is desirable?

- With these questions in mind, let me motivate how the COVID-19 crisis and the new digital forms of money could be shaping our thinking of payments infrastructures.

The pandemic from the perspective of market infrastructure

- Before anything, let me just say that in a crisis like the present one, the response by central banks needs to be quick, timely and forceful, that is, with significant resource backing.

- The main objectives of this response are: 1) to avoid a systemic crisis; and 2) to facilitate the recovery.

- In this context, central banks have had mainly two *intermediate objectives*: a) the provision of liquidity; and b) the enabling of credit channels.[1]

- The most immediate response by central banks, thus, has much to do with avoiding a systemic crisis. In effect, in a crisis such as this, central banks must quickly act to provide a significant degree of monetary accommodation, including through existing or newly established facilities for the provision of liquidity. Let me elaborate on how central banks have done so from the perspective of payments and financial markets infrastructures.

Underpinning the stabilization of wholesale markets

- The prime goal of financial market infrastructures is to support the smooth functioning of wholesale markets, especially in times of stress. Just after the Lehman default, liquidity in the main global and domestic interbank markets plunged dramatically. The timely and forceful response of central banks to supply the required liquidity and their ability to guarantee the continuous settlement of obligations under such circumstances was only possible given the

[1] Most countries have taken different measures to mitigate the impact of the present pandemic. According to the World Bank (WB) and the International Monetary Fund (IMF) in their Position Note published in May, some of these actions consisted on 1) prudential regulatory and supervisory measures to support banks facilitating credit to the real economy; 2) measures related to supporting borrowers and loan restructuring, and measures to 3) strengthen payment systems, among others, IMF-WB (2020). In the same vein, according to the FSB, policymakers have taken some actions such as: "(1) government guarantees and direct lending, loan restructuring; (2) central bank policy interventions to ease credit conditions and keep markets open; (3) prudential measures to facilitate the flow of credit to the real economy,". For instance, some authorities have recommended that financial institutions use capital buffers to finance the real economy and absorb losses in this stressful period, FSB (2020).

sound and safe arrangements achieved through the years by systemically important payments and market infrastructures.

- The pandemic has represented an important challenge for market infrastructures given the extreme volatility and unusual high trading records and, perhaps more importantly, the need to implement policies and facilities to provide (extraordinary) liquidity. This is explained by:

    - First, securities settlement systems and other market infrastructures have faced a massive number of transactions to be cleared and settled every day since the March turmoil. As such, market infrastructures have proved to be able to ensure that markets do not falter. Central Counterparties[2] (CCPs) and other clearing infrastructures worldwide have seamlessly managed significant trading volume and market volatility during the pandemic thanks to significant investments in technology and to the establishment of comprehensive resilience planning (e.g. implementing telecommuting) that were necessary in the aftermath of the Global Financial Crisis of 2008.

    - Second, most facilities of liquidity provision involve the use of collateral.[3] Case in point are repos. During the pandemic, it has been necessary to adapt the collateral management framework in several ways to keep the markets and the relevant infrastructures safe and sound. Some of the most significant adjustments to collateral have to do with its valuation, the universe of eligible assets that can be used as such, the set of institutions that can celebrate a contract entailing collaterals with the central bank, the maturity of the repos where the central bank is the liquidity provider, and the amount of resources that the central bank is willing to channel to support the facility in question.[4]

- Evidently, these stabilization measures have aimed at increasing liquidity rapidly and, thus, restore adequate market functioning. At the same time, the COVID-19 crisis should serve central banks to incorporate lessons going forward, for instance, strengthening risk management for financial and non-financial risk in market infrastructures (WEF, 2020).

Making operable the social and relief programs

- The COVID-19 pandemic has unveiled gaps in the access to financial and payment services. Both, Advanced and Emerging Economies, have suddenly found themselves with the urgent

[2] CCPs play a significant role in providing stability to wholesale markets, operating behind the scenes to flawlessly process transactions, mitigate risk by monitoring exposures and requiring margin to protect against a firm default, and promote efficiency and liquidity. These activities, and many others, helped to ensure that firms and markets remained stable and that investors could have confidence in the integrity of the financial system. WEF, (2020).

[3] Central Counterparties and Trade Repositories became part of the payment and market infrastructure of many jurisdictions globally. Such infrastructures restored confidence in the financial system and developed important tools that resulted critical with the COVID-19 pandemic. The establishment of a collateral and margin management framework is perhaps one of the most notable tools. It has allowed market infrastructures to cope with the special liquidity needs and market exposures that the health crisis has provoked.

[4] During a crisis, there is much uncertainty on how the value of collaterals will evolve. As credit quality requirements for collateral have been relaxed by the authorities, adds to this uncertainty. Moreover, if the borrower defaults, there would be uncertainty on whether the collateral would be sufficient to completely cover the loss, even when considering haircuts. If it does, there might be some administrative expenses.

need to deliver relief and support programs to underbanked and unbanked target populations. Yet, they are encountering significant challenges to do this. Several emerging and developing economies have pointed out that relief payments are taking longer than expected (OECD (2020)). This is more evident for households and small businesses without a payment account, since they are the most in need for support to be able to weather the effects of the confinement.

- As such, the urgency of making COVID emergency programs work efficiently has been a lively test for payments infrastructures to reach the end-mile. Central banks are working to find ways to ensure that the money from relief programs get to households and businesses more rapidly. Given the cash-flow (liquidity) constraints faced by many households and businesses in vulnerable situations, “reachable” and “contactless” payment infrastructure access to relief funds is of the greatest relevance. As noted by Shin (2020), the pandemic has given fast-track to ongoing trends for digital payments, given the nature of the crisis and the need to attain social distancing and confinement measures. To name a couple of examples, universal access to payment accounts and the availability of contactless technology at point of sale (POS) are some of the areas in payments infrastructure that have been given further impulse globally. At the same time, this entails one of the most relevant challenges for many Latin American and Caribbean payments infrastructures.

- Both, access to payment accounts and remote payments in the region were already rising before the pandemic, although they were still far from the desired and required levels for relief programs to permeate to the most vulnerable households and businesses. According to CEMLA´s Yellow Book Statistics, the number of available payment cards has recorded an average annual growth rate of 7.3% for Latin American and Caribbean countries since 2013, but still only 12% of the population has access to a payment account. On the other end, the number of electronic points of sale have grown at a rate of 13.4% in the last five years, yet investments in infrastructure to have the contactless technology fully deployed have not reached all the corners of our region.

- Bridging these gaps in access is a task for which the role of central banks is crucial, and the pandemic may require a more active stance. Some of the instruments that they have been exploring comprise fast payment schemes, improvements of interface mechanisms with social ID systems, and retail CBDC projects. The response led by each central bank is a rich source of knowledge on how to proceed and re-strategize when things go bad. The cases of Costa Rica and the Dominican Republic to have contactless payments in public transportation, and the CoDi in Mexico and PIX in Brazil are noteworthy initiatives. CBDC pilots like the Sand Dollar Project in the Bahamas is perhaps one of the few cases in point where to learn how such an infrastructure can respond to this multidimensional crisis. I am glad to say that the main focus of this meeting is to learn from such experiences, so I will let the experts to do their job when presenting what their central banks have done to cope with the crisis.

- Let me underline once more that providing the rails and the means has been the main lesson of the pandemic from a payments’ perspective. Ensuring that the payment infrastructure remains accessible, resilient and gets to be faster will be an important step to support the population in good and bad times (Brainard (2020)).

- Finally, the pandemic has also revived an old debate on the comforts of cash (Financial Times (2020)). While one would expect that the enthusiasm to always pay digital will not stop after the pandemic, the truth is that despite that cash is not any longer the preferred method for several transactions, holdings of it have risen with the COVID-19 crisis, possibly for precautionary purposes, as it has happened in other episodes of stress. Moreover, for many Emerging Economies where the shadow economy (or informal sector) is large, the use of cash remains high and the ability to receive public aid in the form of cash becomes of utmost relevance. The ability of the Government to disburse and get to households and businesses its relief programs is, in my view, the most significant test for the payments infrastructure.

New technologies: transforming the retail payments infrastructure

- Innovations in financial market infrastructures have occurred in waves over the past few decades. First, in the 1990's Real Time Gross Settlement Systems (RTGS) and supporting Securities Settlement Systems (SSS) were implemented worldwide to support financial risk management from wholesale markets. This first wave also made financial market infrastructures more liquidity intensive. The introduction of specialized market infrastructures like Central Counterparties (CCPs) and Trade Repositories (TRs) constituted a second wave in the 2000s. A leapfrog was achieved with such new infrastructures by deploying significant liquidity-saving mechanisms (Bech, 2020). Today, new technologies are making the big change in the retail domain.

- After a long history of costly and niche offerings in retail payment infrastructures, new payment services providers (PSPs) have entered the game, many of them nonbank firms with platforms and business models highly specialized in information technology. As a result of this, new methods and interfaces (and many more being developed) have flooded the payment services' market.

- Innovation in financial services involves greater integration of payment services into non-financial products that are at the heart of people's lives, from paying for a bus ride to paying monthly bills without doing anything more than a click. The battle focuses on fostering an all-in-one environment in which customers initiate and receive payments with the least friction possible. This one-click experience is laying the ground for faster and more efficient initiation, authorization and confirmation processing. As such, new technologies are enabling digital payments to perform like cash and, at the same time, infrastructure to become widely accessible by increasing the reach of payment instruments and products beyond the current and well-known boundaries. In Emerging Economies, it is of extreme importance to achieve a universal access to payment accounts.

- Given the large and growing number of payment innovations emerging, I will draw your attention only to two of them, which I find to be the most disruptive:

    - Instant payments and retail CBDC. Quick-Response Barcode (QR) has progressed into a fit-for-purpose standard for digital payments before and during the pandemic. It is a technology standard that, despite not being new, is taking the *state* of payment accounts and card payments to the next level. Moreover, it can represent leapfrogs in contactless payments without the need of huge investments like the ones needed to replace physical points of sale with Near Field Communication (NFC) technology. Asian payment infrastructures have learnt this earlier, but the present conditions represent a good opportunity for our central banking community to work toward the massive adoption of such technology in the near future.

Instant payments are one of the most transformative options for retail payments. Deploying such a method under the leadership of a central bank and the wise use of available technology like QR, could be the difference between a niche new method and the opportunity to set the basis for a greater interoperable and less physical payment infrastructure. This could be also a great opportunity to compete with cash in low-value transactions, and thus provide customers with a safer and more convenient way for payments on a daily basis.

Retail CBDCs are a matter of interest for several central banks worldwide. Based on diverse motivations, a retail CBDC involves important considerations on money and payments. First, a retail CBDC must have the backstopping of a central bank and act as legal tender. Second, it must be universally accepted as another transactional mean to exchange value between peers of (retail) payers and payees. Third, it should help to supplement cash for retail transactions becoming mostly digital. Fourth, a retail CBDC runs on a corresponding payment infrastructure which takes care of issuing, validating and storing it. Fifth, as a retail payment infrastructure it may foster interoperability with other retail payment arrangements (e.g. cards). And sixth, a retail CBDC would permit the emergence of a competitive ecosystem comprised of several PSPs, access points and other third parties and which should become part of the overlay services line (CEMLA (2020)). All in all, a retail CBDC is still a new and unexplored field and, thus, its experimentation will be key for the community of people in charge of financial market infrastructures in and out the region.

- Big-tech and Global Stablecoins. Big-Techs are positioning themselves as a significant type of payment service providers or payment infrastructure operators. They specialize in connecting their business models with features of financial services provision (initiation, authorization, notification, etc.). This can be explained by their comparative advantage to achieve economies of scale and scope by using their (commonly, cross-border) platforms, messaging applications, search engines, and also by their expertise in analyzing information. Big-techs could be rapidly changing the traditional payment services provision domestically and internationally.

  At the country level, the Chinese models of Tencent (WeBank) and Alibaba (MYbank), the Asian giants, show that Big-techs are able to address financial customers' needs. On a cross-border basis, Libra and other Global Stablecoins initiatives spurred the global community to take action on what could be a major disruption for the International Monetary System. Enhancing the cross-border retail payments infrastructure is one of the missing links in payments development worldwide, but raising the possibility that a public good like fiat money could be displaced by a global nonregulated quasi-monetary system does not happen every day. If you allow me, retail CBDCs are a timely counterbalance for such initiatives but, even so, central banks should be extremely careful in managing their response.

- A key takeaway from the reform of the retail payments infrastructure in light of the fintech wave is that the pace of change is disruptive and faster than ever. For instance, credit cards and POS networks, which were initially deployed by the industry incumbents, namely banks and global issuers (such as Visa and MasterCard), are being transformed by big and mid-sized fintech firms like PayPal. This reform consists of unbundling the payments value chain by aggregating physical and remote payments with low-cost mobile devices (like mobile POS). By means of this disruption, access, cost and efficiency challenges in retail payments could be overcome in emerging and developing economies payments markets.

    - In terms of access, the emergence of e-money service providers has contributed to broaden access to payment services, yet the region is still struggling to make such new entrants operate under a regulatory and oversight framework.
    - In terms of costs, which are commonly high in the retail segment, new technologies are changing the competition landscape and thus reducing the prices of certain services. This is the case of international remittances. Fintech firms are filling the gaps that traditional correspondent banking left void for long. While a remittance transfer could cost 10% of the value paid using the correspondent banking network, there are fintech firms offering a 3-4% charge depending on the sending and receiving countries.
    - With respect to efficiency, as I mentioned earlier, much of new methods of payments are embedded in powerful mobile applications. Super Apps like Amazon and numerous Application Programming Interfaces (APIs) developed by fintech firms have significantly changed, payment initiation, onboarding and digital Know-Your-Customer (KYC) among other processes. This Open Banking business model is leading for there to be available higher quality services.

- This is the new landscape that our central banking community is facing. As such, it is of the essence to define what would be the most appropriate role in fine tuning the transformation of the retail payments infrastructures.

    - As operators, central banks are updating the conventional running of their payment infrastructures, the Real Time Gross Settlement (RTGS) systems to enable peer-to-peer fast payments and fostering a tiered access to the backbone of the financial system. Both upgrades are of paramount importance. Fast payment schemes like FedNow in the United States, CoDi in Mexico, and PIX in Brazil, to name a few, are examples of the growing number of central banks embarking in such projects. At the same time, another group of central banks are going beyond by introducing (or testing) a retail CBDC, like the cases of the Bahamas and the Eastern Caribbean Central Bank.

      Another way to support new technologies in retail payments is by expanding participation in the RTGS systems to nonbanks (say fintech firms) to have access to accounts for settlement services. As part of its Innovation Hub, CEMLA is working with the Central Bank of Chile to design such an operational architecture using Distributed Ledger Technologies. This is a promising area of development for central banks as operators of payments infrastructures, as shown by the recent reform in the RTGS of the Bank of England to "democratize" the access to its settlement services for non-banks and fintech firms.

- As agents of change, central banks are taking steps in different directions to ensure a level-playing field and risk management framework.

  By regulating the new landscape, central banks are devoting timely and significant efforts to properly respond to the new entrants and business models. The Fintech Law in Mexico is a remarkable example of how the central bank is in the best position to provide a framework to ensure that the bonus of new technologies is reaped. There are, of course, other initiatives to regulate activities and risks aimed at embracing payments innovation.

  From overseeing the payments infrastructure, central banks have gained significant experience and, as a consequence, are in the best position to perform this role. Commanding new policies and standards to foster interoperability and competition in the retail payments market is a task that central banks have fulfilled even before the fintech wave. Presently, the challenge is to ensure that innovation combines adequately risks and opportunities without hampering developments to take place.

Concluding remarks. The new economics of payments

- Along time, money has experienced important changes from an institutional and practical point of view. Today, digital innovation is also changing money and payments. With the possible introduction of a retail CBDC, or the entrance of some Global Stablecoin arrangement, we may be witnessing a leapfrog in our current understanding of how money and payments work. Nevertheless, our prime concern should remain unchanged. Payment and market infrastructures must continue to be safe, efficient and widely accessible. (Shin, 2020)

- As such, let me conclude on what we must expect from the ongoing transformation in payments. First of all, the premise of safe and sound payment infrastructures is tied to an active role of the central bank. Central banks are empowered, and have demonstrated their capacity, to provide solid foundations for payments, either as operators or agents of change.

- As a second remark, new technologies could imply new economics for payments. Financial innovation has resulted in several forms of digital money and, whether banknotes or a retail CBDC, money and payments rely on the backstopping of the central bank and, ultimately, on the trust of prudent regulation of the financial system and the stability of a sovereign currency. The two-tier structure of private money (bank deposits, for instance) have evolved constantly, but always in the presence of a strong commitment to backing the claims of holders and "binding" rules for good and bad times. Behind this fragile commitment, there are legal, operational and reputational pillars that only a sovereign currency achieves over time. This notion, a contract itself, is present in every corner of regulated financial activities.

- As noted by Frankel a couple of decades ago, the temptation to exercise market power in the supply and exchange of money, that is payments, will definitively have adverse effects on welfare. If a payment technology imposes lower costs for the market and its customers, it can be adopted with the purpose of enhancing network effects. This would imply that innovation will make that, for a larger pool of merchants or customers, a new payment platform (e.g. ApplePay, AliPay) will become more attractive. This is how Bigtechs and other technology firms could become dominant and create new market barriers or simply set higher prices than the socially optimal. Given this potential outcome, central banks should be vigilant to ensure that an unleveled playing field does not distort the payments market.

- My final remark relates to the goal of this meeting and the role of CEMLA during the pandemic and from now and on. Cooperation among central banks is of the essence. Facing the various opportunities and challenges that the COVID-19 pandemic and the fintech wave pose is not a trivial task. We at CEMLA strongly believe that our role in providing a forum for regional cooperation is and remains highly relevant and, as such, we have launched new initiatives toward such goal.

    - The Regional Innovation Hub, begun in June 2019, has become a prominent vehicle to promote research in payments across the region. This initiative counts with expert advice from University College London (UCL). This first year has served to work jointly with three central banks in the region developing analytical tools on anomaly detection using Machine Learning techniques, and with one central bank proposing a conceptual framework for tiered access (of nonbanks, fintechs, etc.) to the RTGS.
    - Together with the Center of Blockchain Technologies at UCL, we are presently working on four use cases of retail CBDC. One of the key areas under research is the contribution of existing and new payment infrastructures. By December of this year, there will be the opportunity to learn on these cases in a digital training on the subject. Our team will make sure you get the information to register your staff.
    - Likewise, we continue to update the Yellow Book Statistics as a supporting tool for the central banking community to know more on the progress and developments in the payments and financial market infrastructures across the region.

- This is a new stage for CEMLA in the field of financial market infrastructures. Of course, we remain open to further suggestions on initiatives that could be relevant for the Membership.

- Before concluding, let me guide you through the agenda of the meeting.

- First, we will have the privilege to hear Professor Robert Townsend, from the Massachusetts Institute of Technology, who will speak on “Optimized Payment and Financial Infrastructures under New Technologies: The Case of Central Bank Digital Currency”. After his presentation there will be a Q and A session. This will be followed by a panel on the role of payment infrastructures in times of COVID-19. We should be able to learn how central banks have adapted their roles and strategies to support the development of their respective payment infrastructures.

- Tomorrow, Tara Rice, Head of Secretariat of the Committee on Payments and Market Infrastructures will brief us on the international agenda set by that Committee. After this special talk, there will be a panel of presentations on efforts by central banks to enhance the retail payments market. In this session, we will learn on retail CBDC projects and other central bank initiatives towards a digital and interoperable payment infrastructure.

- We will conclude the meeting with a briefing on cyber risk initiatives and a final panel on cross-border payments. One of the co-founders of Libra will participate in a discussion motivating how the cross-border payments market can be enhanced in Latin America and the Caribbean. After that session, we will be briefly informing on upcoming initiatives that may be of your interest.

- Without further delay, I wish you all fruitful discussions and once more, thank you for joining us in this digital Meeting.

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