



The impact of COVID-19 on digital financial inclusion

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Executive Summary

Digital payments have the potential to expand inclusive access to financial services. The global COVID-19 health crisis and government responses, such as lockdowns restricting economic activities, increased the need for contactless financial products and services, accelerating the shift to digital finance in many economies. Governments used digital payments to reach vulnerable citizens and customers increasingly used phones and cards to pay merchants. Measures also included regulations to support adoption of digital financial services during COVID-19. Data collected during the pandemic charts these positive shifts toward digital payment, but also highlights the unequal access to these services, especially among vulnerable groups. The adoption of digital finance includes risks such as those related to consumer protection and financial capabilities. Advances in digital financial inclusion are likely to be more sustainable and equitable when accompanied by policies that address the different circumstances facing consumers and provide for the skills development, regulatory protections and product designs suited to their needs.

I. Introduction

Over the course of the pandemic, governments have rushed to provide financial assistance to citizens, creating opportunities and challenges for expanding financial inclusion. Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit, and insurance – delivered in a responsible and sustainable way.

A basic measure of financial inclusion is the share of adults in a country who have an account at a formal financial institution or through a mobile money provider.ⁱ But account ownership is only the beginning. Financial inclusion is at its best when adults use accounts to save, make payments, obtain manageable credit, and mitigate economic risks. Increasingly, digital financeⁱⁱ has been creating opportunities to expand access by reducing costs, increasing convenience and allowing consumers to transact remotely, using mobile devices—which has been extremely important during the COVID-19 pandemic.

This report focuses on the impact of COVID-19 on digital financial inclusion for consumers by addressing both opportunities and risks. It identifies the channels for digital finance which are creating opportunities for greater inclusion during the COVID-19 crisis. This includes both access to new accounts opened to receive digital payments during COVID-19, as well as new opportunities to use accounts for additional digital financial services. It also presents new data on digital merchant payments collected by the World Bank's Global Findex database in Latin America and Europe and Central Asia in calendar year 2020, as well as new data collected by MicroFinance Opportunities on the increase in digital wage payments to garment factory workers in Bangladesh.

It is widely understood that the pandemic's impacts have been uneven across populations and disparities in financial access make it harder for vulnerable and excluded groups to recover from the crisis. While COVID-19 has prompted greater use of digital finance, not all communities or consumers were in a position to rapidly pivot towards digital financial products and services. Consumers needed connectivity, including ownership of a mobile phone, access to internet and digital skills to manage mobile apps and online applications to use digital financial services. These tools and skills are not evenly spread across communities – particularly among women, rural populations and poor adults, who tend to show gaps in access to digital technologies and skills. According to the GSM Association, which represents the global mobile communications industry, women in low and middle-income countries are 20 percent less likely than men to have a smart phone or to use mobile internet.ⁱⁱⁱ Even when they have access to technology, women use it less than men. Research conducted by the OECD indicates that in Mexico and China nearly one-third of women with mobile phones do not use mobile internet because of lack of digital skills, while this figure is only 15 percent for men.^{iv} Other factors limiting women's ability to take up digital financial services include gender gaps in ID ownership and poor product design.^v GSM Association data also indicate that there are 600 million rural consumers living in areas without mobile coverage.^{vi} Income also drives digital skill development; due to difficulty in affording access (purchase of mobile phone, data, or internet access) and also in terms of limited demand for and investments in digital skills building. Income volatility, precarious employment conditions and high opportunity costs can depress the willingness of low-income consumers to upgrade their own digital skills.^{vii}

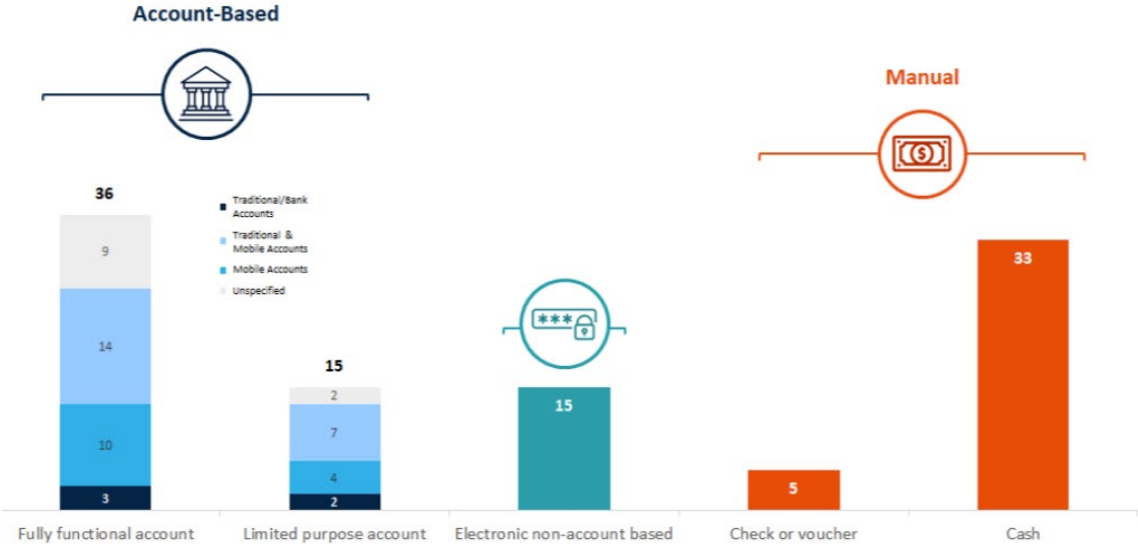
Bridging these gaps requires better access to technology, capacity building and intentionality, which can involve leveraging other parts of the digital finance ecosystem, such as government-to-person (G2P) payments, to accelerate uptake and support usage. In fact, digital payments, including government payments—which have been expanded in many countries as a response to COVID-19—have historically been an important driver of financial inclusion. Globally, 9 percent of adults (or 13 percent of account owners) opened their first account specifically to receive private sector wages, government payments, or payments for the sale of agricultural products (Global Findex, 2017). Evidence suggests that digital payments in particular have expanded as a result of the COVID-19 emergency and are helping to accelerate digital financial inclusion.

This report is organized as follows: Section 2 discusses the impact of COVID-19 on digital financial inclusion, with a focus on digital payments, and measures taken to support financial inclusion during COVID-19, based upon data collected by the World Bank and other partners. Section 3 presents case study examples of how digital financial inclusion has helped countries address the effects of COVID-19, including through digitized G2P payments, wage payments, and merchant payments, and the expansion of e-commerce. Section 4 discusses risks and opportunities of expanded digital payments ecosystems and identifies recommended policy actions and next steps.

II. Emerging evidence on the impact of COVID-19 on digital financial inclusion

A World Bank tally of policy responses to the pandemic finds that at least 58 governments in developing countries have used digital payments to deliver COVID-19 relief. At least 36 countries made these payments into fully functional accounts which can be used for saving or transactions in addition to simply withdrawing the sum in cash. Such advanced functionality is critical for financial inclusion. Other governments used accounts with limited functionality, or simply handed out cash (Figure 1).

Figure 1: Payment methods used in COVID-response social assistance programs across a subset of 58 low- and middle-income countries



Source: Gentilini and others (2021).

Governments using digital transfers drew on various tools to do so. Some deposited benefits into existing accounts, while others opened new accounts for recipients. Across developing countries, the preferred type of account varied by region. In Sub-Saharan Africa, the global mobile money hub, governments were most likely to use that technology, while standard bank accounts were more widespread in South Asia and Latin America, and some countries, like Jordan, used mobile wallets (Gentilini and others 2021).

The private sector also shifted to digital payments and digital finance during COVID-19. In spite of the contraction in economic activity, mobile money grew twice as fast as had been forecast for 2020, at 12.7 percent, reaching 1.2 billion accounts.^{viii} The global credit card giant Visa reported that more than 13 million users made their first ever online transaction in early 2020 (Bary 2020). At the pandemic's outset, Nigerian mobile money provider Paga reported that it doubled the number of merchants in its network and witnessed a 200 percent increase in quarterly users, while Orange, a mobile money service, saw worldwide merchant payments jump by a fifth, and PayPal cited a "tremendous surge" in business (Berger 2020). E-commerce also grew rapidly at 27.6 percent globally, especially in emerging markets – with the Latin America region leading the way with growth over 37 percent.^{ix}

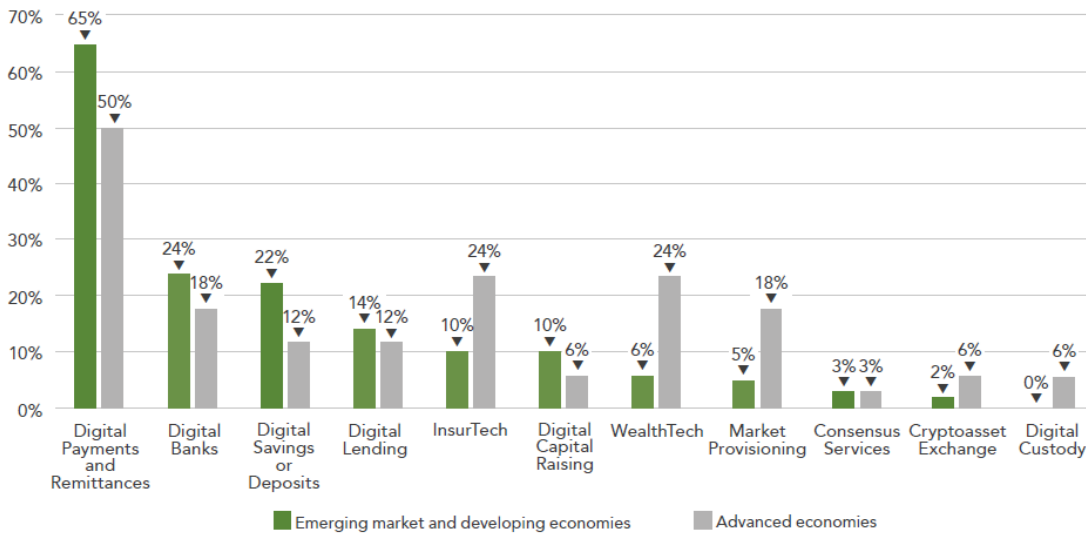
International remittances proved resilient in the pandemic's first year. When COVID-19 hit, experts feared that cross-border remittances—a critical financial source for low-income economies—would dry up. Formal remittance flows did drop in some regions—notably East Asia & Pacific, Europe & Central Asia, and Sub-Saharan Africa (driven by Nigeria). But on average, formal remittances to developing economies dropped by just 1.6 percent in 2020 compared to the previous year. A caveat, however, is that statistics on formal remittance flows might be inflated by the shift from cash to digital remittances and from informal channels to formal ones as traveling to carry money cash in-person became difficult during lockdowns and mobility restrictions enacted to contain the pandemic. According to the GSM Association, international remittances sent via mobile money channels increased by 65 percent in 2020^x; these trends appeared to play an important role in sustaining financial flows during the pandemic (World Bank 2021).

Data being collected in 2021 for the next Global Findex update, to be published in early 2022, will further document and quantify the increase in use of digital accounts and payments. Questions include the use of digital finance for COVID-19 relief and other government payments as well as shifts to digital remittances and digital wage payments.

Regulators surveyed during 2020 reported strong shifts to digital financial services, especially for payments. A study conducted in 114 jurisdictions worldwide by the World Bank and the Cambridge Centre for Alternative Finance (CCAF)^{xi} in mid-2020 asked financial regulators about market dynamics during COVID-19. Regulators saw the greatest increases in activity for digital payments (65 percent), followed by digital banking (24 percent), savings (22 percent) and lending (14 percent), with a stronger uptick across all these verticals reported in emerging markets (Figure 2).

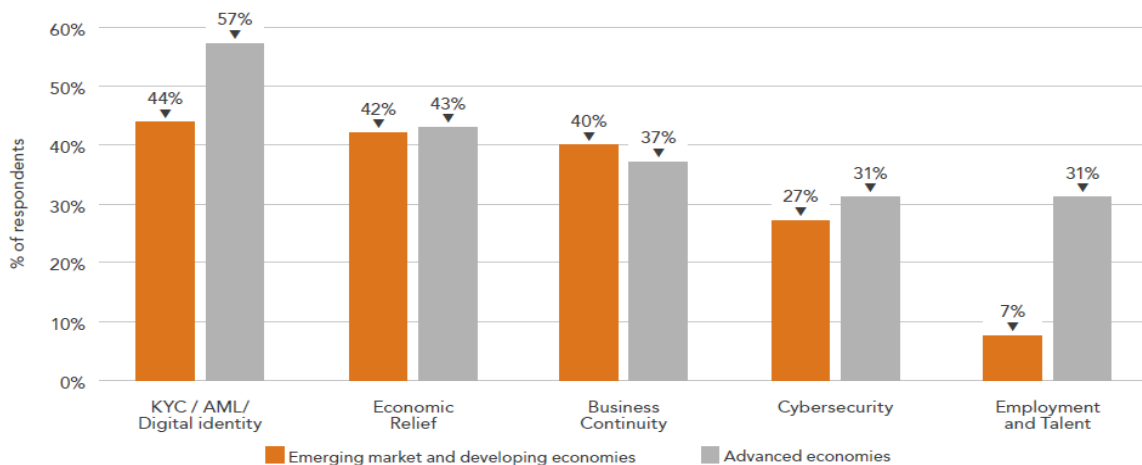
Regulators were also asked about their responses to COVID-19. Some of the most common actions taken includes increasing flexibility in e-KYC, expanding the use of digital ID and remote onboarding, increasing transaction limits, and suspending or reducing fees for digital payments. Albania, Jordan, and some countries that are part of the West Africa Economic and Monetary Union eased requirements to open accounts, either with mobile money providers or at banks. Policies to support economic relief payments, business continuity and cybersecurity also garnered significant attention (Figure 3). In Belize and India, business continuity plans for payments infrastructures were tailored to respond to the pandemic. In addition, the central bank of the Democratic Republic of the Congo promoted interoperability between banks and e-money providers to facilitate transactions for small merchants.

Figure 2: Percent of regulators who reported an increase in fintech usage or offering in light of COVID-19 in emerging and advanced economies (N=97)



Source: World Bank and Cambridge Centre for Alternative Finance, 2020.

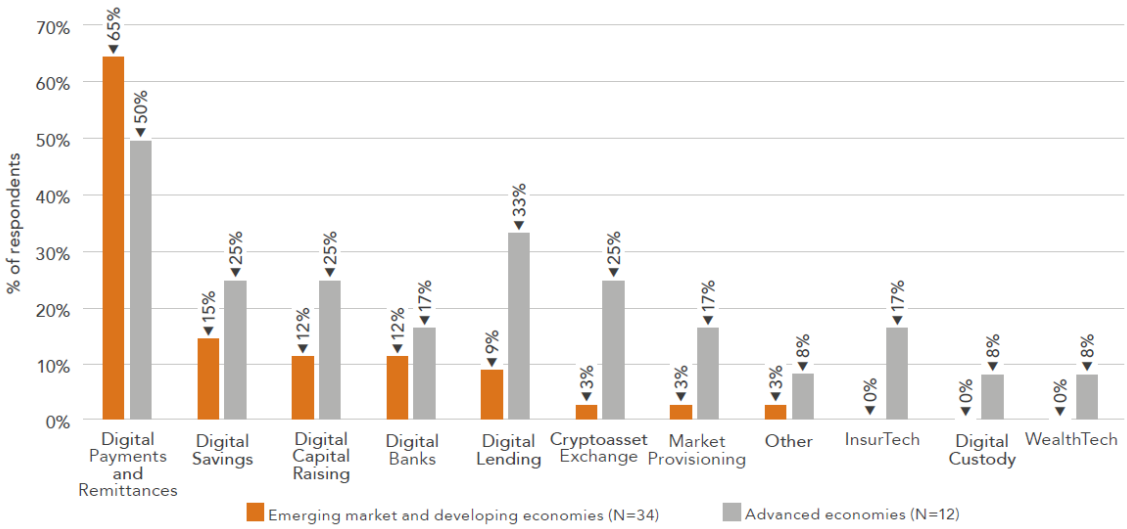
Figure 3: Regulatory measures taken in response to COVID-19 – emerging markets and advance economies (N=90)



Source: World Bank and Cambridge Centre for Alternative Finance, 2020.

Most regulatory measures adopted in response to COVID-19 and lack of mobility were in the digital payment space. Regulatory actions were taken in other markets segments, including digital savings, digital banking and capital raising. In advanced economies, regulators also paid attention to digital lending, cryptoassets, market provisioning (such as data analytics) and InsurTech (Figure 4).

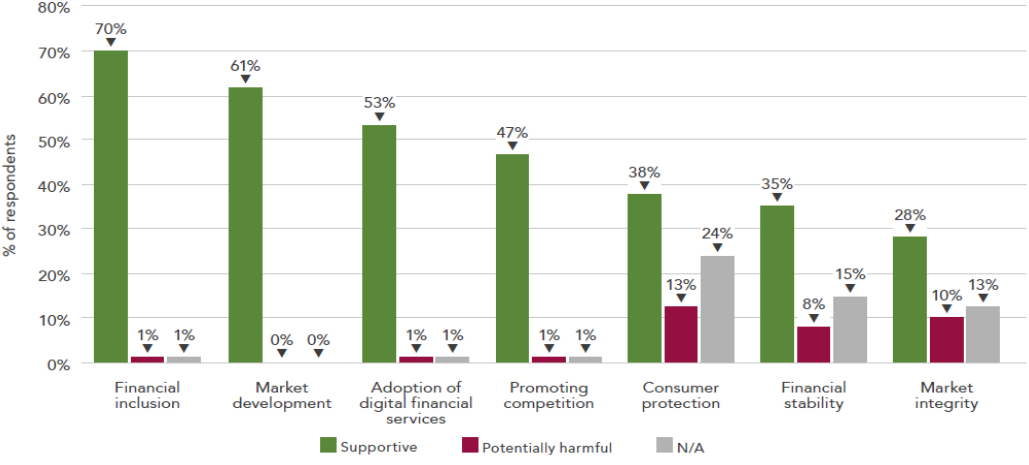
Figure 4: Fintech specific measures taken by regulators in response to COVID-19 by market vertical



Source: World Bank and Cambridge Centre for Alternative Finance, 2020.

Seventy percent of surveyed regulators saw financial inclusion benefitting from increased use of fintech and digital finance, followed by benefits for market development, adoption of digital finance generally and increased competition. More concerns were raised around consumer protection, market stability and integrity, although positive views still outnumbered concerns (Figure 5).

Figure 5: Perceived impact of fintech on regulatory objectives in light of COVID-19 (N=88)



Source: World Bank and CCAF, 2020.

Consumer protections are critical as people rapidly take up digital financial services for the first time. Users who lack financial experience or struggle with literacy and numeracy may be especially vulnerable to financial abuse. In the autumn of 2020, Innovations for Poverty Action conducted phone surveys with 793 digital finance users in Kenya. They found that 57 percent of respondents reported being exposed to attempted fraud or scams during the pandemic; in Nigeria, the share was 51 percent (IPA 2021). Strong consumer protections can help create the trust people need to transact digitally instead of in cash. Examples of good financial consumer protection practices include strong product transparency, robust redress mechanisms, appropriate incentive structures for service providers, responsible fee pricing, and banning predatory or deceptive sale techniques (CFI 2019).

III. Case studies of digital financial inclusion during COVID-19

There is limited data on how COVID-19 has impacted digital financial inclusion. There are examples, however, of country programs and policies which have been undertaken as a response to COVID-19 and which have already provided valuable insights, and initial data in some cases, on their effectiveness.

Using a case study approach, we analyze several examples of how countries are responding to COVID-19 through digital finance, in some cases providing an opportunity to accelerate progress toward broader use and acceptance of digital alternatives. There are also cases where digital finance has proven to be difficult to maintain in operation during the crisis; for example, where cash-in cash-out points closed in response to lockdowns making it more difficult to use digital tools in environments where cash was still needed for food, fuel and other essential transactions. The cases presented here include government to person payments (G2P), merchant payments, digital wage payments, and e-commerce. Particular attention is paid to reaching vulnerable populations including women, the elderly and rural consumers.

3.1 Government to person payments (G2P)

Across the world, most people who receive government payments report receiving them digitally, though cash payments predominate in some low-income countries. Research shows that development benefits often follow when governments use digital channels rather than cash. Digital government payments can reduce corruption because they are less prone to theft. In India, when a state government digitized social security payments, the government saved nearly \$40 million annually; theft of funds went down; people spent less time collecting payments; and recipients got more money because less was being leaked away (Muralidharan and others 2016). Cash is easy to spend—but digital payments can be easy to save. In Afghanistan, workers who automatically deposited part of their salary into a mobile savings account had higher savings and financial security than workers who received a mobile savings account but did not sign up for automatic deposits (Blumenstock and others 2018). For women, digital payments made directly into accounts can improve financial control and strengthen economic empowerment, including labor force participation (see JPAL 2021 for an overview).

Government payments are not without challenges. They are most effective when made in a financial ecosystem characterized by strong infrastructure, including reliable mobile network coverage. When digital payments are widely accepted at local retailers, people are more likely to transact with their accounts, rather than withdraw all their benefits in cash. And digital payments products must be easy to use for recipients.

Measures allowing to increase the total number of access points available have also been put in place. In contexts when G2P delivery heavily relied on cash-out points (Ecuador) efforts were made by the banking sector to expand the agent network. Internal eligibility requirements for existing agents who earlier did not offer cash-out services were adjusted by banks so that they could provide cash-out services. Furthermore, there were many countries that declared remittances services providers (RSPs) and agents of such institutions as essential services providers and allowed them to continue to provide remittances services during the pandemic. Governments in both send and receive countries moved to declare RSPs, mobile money operators and their partners essential services to keep remittances flowing as the pandemic took hold. The UK, Mexico, India and the Philippines were early movers in this regard while most countries across the G20 (including Russia, Argentina, Switzerland, Germany and India) permitted remittance service providers to remain open without explicit essential service declarations. Developing countries (including Rwanda, Pakistan and Vietnam) soon followed, urged on by international call-to-actions advocating for the same^{xii}.

Adults who used digital payments for the first time during the pandemic

The COVID-19 pandemic brought in a number of first-time digital payment users. A 2020 survey conducted for Global Findex - only in Argentina and Mexico - asked detailed questions about how adults collect government social benefits transfers, receive wages, or make utility bill payments. The survey also asked respondents if they made or received such digital payments for the first time during COVID-19. Among adults in Argentina who received government transfers or public sector pensions digitally in the past year, nearly half of recipients—or 10 percent of all adults—received them digitally for the first time during the pandemic. At the same time, nearly a quarter of all digital wage recipients were digital newcomers; in Mexico, the share was nearly a fifth. These two economies also saw an expansion of digital utility bill payments. In Argentina as well as Mexico, about 1 in 10 adults—or half of utility bill payers—reported paying their bills digitally for the first time.^{xiii}

In Brazil, COVID-related government payments for low-income informal workers were made through the state-owned bank Caixa Economica Federal (CEF) into fully digital accounts. Sometimes referred as “coronavouchers”, but officially named “Auxilio Emergencial” (Emergency Aid), these payments were sent to an estimated 68.3 million people through the COVID-19 emergency in 2020.^{xiv} An estimated 14 million people entered into their first relationship with the formal financial system as a result of this program^{xv}. Using the Caixa Tem app, recipients had a functional digital account which could be used to pay for public services or QR code payments, for transfers to other accounts or for cash withdrawals on a schedule to avoid crowds at ATMs. Initial preference for cash withdrawals led to a program change where funds

couldn't be withdrawn for cash or transferred to other accounts for approximately 30 days but could be used for digital payments. As a result, the share of digital transactions with these accounts through Caixa Tem jumped from less than 5% of coronavoucher funds to 63% between May and August, 2020.^{xvi}

Box 1: Ingreso Solidario: How Colombia rapidly expanded COVID-19 digital payments by leveraging technology, shared data, and regulatory simplification

The economic impact of COVID-19 rapidly expanded the need for government relief, but in countries with a large informal sector, identifying households that qualify for benefits and delivering the payments poses a huge challenge. In Colombia, the government instituted several innovative policies to reach people in need, including a program targeted to informal workers – Ingreso Solidario (Solidarity Income) and a VAT compensation payment for the poorest citizens. By mid-May 2020, just a few months after the effects of COVID-19 were initially felt, the Ingreso Solidario program had reached 1.6 million families through more than 20 financial institutions.^{xvii} By mid-2021, more than 3 million households have been reached through the program.^{xviii}

Committing to digital financial inclusion and focusing on **beneficiary needs** were two fundamental principles for COVID-19 relief in Colombia and it took unprecedented collaboration across government and with the financial services providers (FSPs) by:

- ***Utilizing data from across public and private sectors to identify citizens in need of support and reach them through mobile phones:*** The regulation creating the Ingreso Solidario program (Decree 518 of 2020) included an article on data sharing (Article 2) to facilitate the identification of potential recipients and delivery of digital payments. The System of Potential Beneficiaries (Sisbén) social registry was used and cross-referenced with the registries of beneficiaries from the country's largest cash transfer programs and with records from other public agencies (civil registry, social security and the financial regulator – SFC) to identify vulnerable citizens who were not already receiving benefits through other government programs. These citizens were directly contacted through their mobile phones via SMS to encourage them to enroll in Ingreso Solidario.
- ***Expanding the range of financial services providers who could deliver government transfers:*** Only ten banks were previously authorized to make G2P payments, but the Treasury enabled other players to participate in Ingreso Solidario, including national mobile network operators which could create mobile wallets specifically for the program.
- ***Fast-tracking simplified regulations:*** Authorization of mobile wallets and simplified and tiered KYC processes played a crucial role in onboarding new users remotely, in line with mobility constraints linked to COVID-19.
- ***Utilizing the low-value payment infrastructure and extensive last-mile agent network:*** A Private Fast Payment Clearing House, to which traditional bank and Fintech sector were connected, was vital as a means of promoting interoperability. With the extensive

last mile agent network, financial institutions were able to reach even far isolated and remote geographies.

- ***Providing non-digital alternatives where needed:*** While most recipients of Ingreso Solidario could use digital payments, this wasn't the case for everyone. For example, cash options were supported for the elderly and for citizens who lacked access to mobile phones.

Colombia's response to COVID-19 did increase the uptake of digital financial services. For example, research on households that were receiving the VAT compensation found that while only about one-third of households studied received their first payment in a mobile money account in April 2020, this share jumped to nearly 60 percent in May and was 75 percent by November 2020.^{xix} In another study, the likelihood of opening a bank account increased by 14 percentage points among Ingreso Solidario recipients, and use of digital finance went up by 7.7 percentage points.^{xx} Other early results related to measures of welfare suggest the payments improved parental spending on their children's education and reduced their likelihood of selling off assets, drawing down savings, borrowing money, and cutting spending.^{xxi}

There are also potential drawbacks to the rapid expansion of benefits using digital payments during a pandemic. Limited familiarity with mobile wallets and digital payments created barriers to use for new customers. Limited connectivity in some parts of the country also reduced consumer satisfaction with digital financial products. People who received the payments through mobile money were twice as likely as those using cash to report delays or difficulties with the payments. Further, Colombia had not had years of experience with mobile wallets – unlike other countries such as Kenya where they are well established. Since the digital finance ecosystem was underdeveloped, many merchants didn't accept digital payments and this reduced the benefits from a shift from cash to digital finance for relief payments, including in terms of social distancing behaviors.^{xxii}

In Jordan, the government appointed the National Aid Fund (NAF) and the Social Security Corporation (SSC) to distribute emergency aid to protect vulnerable households from the economic turmoil caused by the COVID-19 pandemic. The funds were transferred to recipients' mobile wallets and bank accounts. More than 250,000 beneficiaries received aid from NAF and more than 12,000 beneficiaries received aid from SSC, both, through mobile wallets. The digitization of payments has received strong support from the Central Bank of Jordan (CBJ) and Jordan Payment and Clearing Company (JoPACC). To facilitate the opening of mobile wallets, the government allowed online onboarding and JoPACC launched the Mobile Wallets Gateway with links for self-onboarding across the different mobile wallet providers. In addition, the CBJ and JoPACC increased financial education and awareness efforts including providing information through social media and launching a demo wallet. While the number of new wallets increased considerably, once the temporary aid was phased-out the number of transactions made through wallets went back to the pre-pandemic level.

Digitized government payments to the elderly (Kenya and the UK)

Providing support to the elderly during COVID-19 poses challenges due to their increased risk of contracting the virus and their relative lack of digital skills. As a GSMA study from before COVID-19 noted, “In general, elderly people and those with less education have a harder time using smartphones and electronic devices, such as PCs and tablets. The issue is more problematic for people with visual and cognitive impairments.”^{xxiii}

For countries which had already established benefit programs for their elderly populations which paid directly to bank accounts, extending support during the COVID-19 emergency has been rapid and secure. Table 1 below provides a few examples of COVID-19 responses using cash transfer programs which have involved elderly populations, based on data collected by the World Bank. Most of these programs have been one-off payments, often to complement existing support payments (pensions or other benefits for people with low income).

Kenya provides a unique example of the power that can come from harnessing digital platforms during a time of crisis. Private sector firms and non-profit organizations created Shikilia to raise money and advocate for monthly cash transfers for low-income households in Kenya to offset the impact of COVID-19. Working in collaboration with GiveDirectly, a non-profit organization that links online donors (including individual donors) with people in need, Shikilia sends monthly benefits to low-income households, many of which have lost income during COVID-19, using mobile money.^{xxiv} One of the noteworthy aspects of the Shikilia initiative is the analysis of geospatial, demographic and telecommunications data to identify communities at greatest risk and target them for support.^{xxv}

But there are limits to the ability to leverage digital payments for the elderly, even in high income economies. In the U.K. elderly residents were not able to easily switch from using cash to digital channels when COVID-19 lockdowns began. This is due to lack of digital skills, a lifetime of reliance on cash, and low digital access – one-third of the population age 70 or above live in a household without internet. Stringent lockdowns meant reduced access to ATMs and in some places a scarcity of cash in machines and stores. In 2020, the UK Government launched a “Call for Evidence on Access to Cash” to better understand the current and future place of cash in the economy, given that more than 50 percent of UK payments were already handled electronically pre-COVID.

For the elderly and other residents unable to quickly shift to digital payments, there are efforts underway to help smooth the transition. The Community Access to Cash Pilots (CACP) is working to support communities in the UK where access to cash may be challenging as branches close and movement is restricted due to COVID-19. A CACP spokesperson describes the organization’s objectives as follows: “Our aim is to keep cash viable and also to give people choice. Some solutions might be to help give people confidence making digital payments through support or training by a trusted provider.”^{xxvi}

Table 1: Examples of Cash Transfer Programs for COVID-19 Relief that Target / Include Elderly^{xxvii}

Country	Program name	Amount (\$US)	Frequency	Digital channel	Digital payment type	Other
Bolivia	Bono Canasta Familiar	58	One time	Yes	Deposit to bank account	
India	National Social Assistance (NSAP)	13	One time	Yes	Deposit to bank account	
Jamaica	CARE Compassionate Grant	70	One time	Yes	Deposit to bank account	40% chose to receive the benefit in cash at remittance office ^{xxviii}
Suriname	General Age-Old Provision (AOV) increase	16	Monthly	NA	NA	Top up for pension

3.2 Digital Merchant Payments During COVID-19: New Data from the Global Findex^{xxix}

Digital payments have a range of potential benefits for merchants as well as their customers. Digital payments are safer alternatives for cash collecting merchants who are more vulnerable to theft in their stores and on the streets. In Kenya, for example, a study found that adoption of mobile money by businesses reduced incidence of theft, boosted productivity, and sped up transactions between businesses and their suppliers (Beck and others 2017). Another benefit includes helping women entrepreneurs gain control over their money. A study in Uganda compared the effects of giving women microloans using cash versus mobile money. The mobile money group landed higher profits, and the strongest impacts were observed among women who previously had high family pressure on their finances (Riley 2020). The flexibility afforded by digital payments might also make it easier for firms to adapt to disruptions. For example, a study found that firms with a digital presence have been more resilient during the pandemic, possibly because online payments have allowed them to do businesses amid lockdowns and social distancing (Muzi and others 2021).

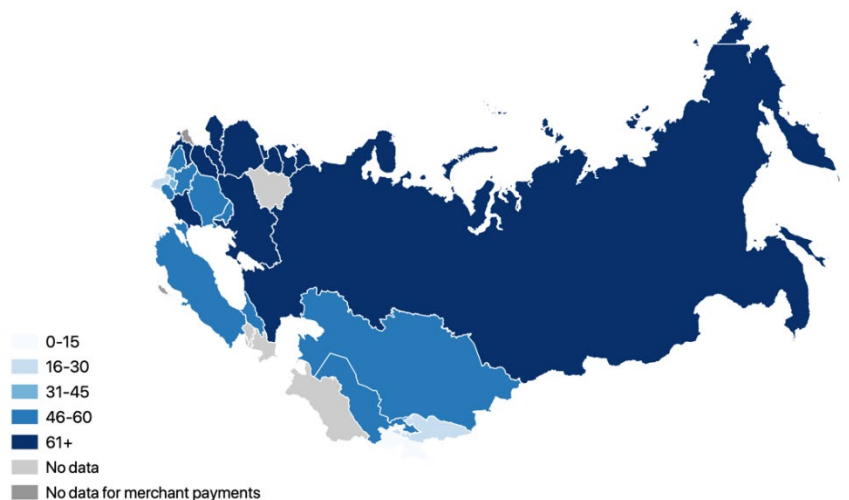
But digital payments also pose challenges for businesses. A survey of micro-merchants across India suggested that most merchants and their customers viewed cash as more convenient and reliable than digital channels, reasons include unreliable electricity, slow internet, and difficulties using point-of-sale terminals. Some merchants said that they tried adopting digital payments but later reverted to cash because demand was limited and the challenges outweighed any benefits (Adhikari and Agashe 2020). Such issues are common in developing countries.

New Global Findex data on merchant payments

In the calendar year 2020, the Global Findex survey asked adults if they used a card, mobile phone, or the internet to pay for an online purchase or to make a purchase in a store in the past year, and whether they made digital payments for the first time during the COVID-19 pandemic. The data presented here draws from nationally representative surveys of more than 40,000 adults in 14 economies in Latin America and Caribbean (LAC) and 25 economies in Europe and Central Asia (ECA).^{xxx}

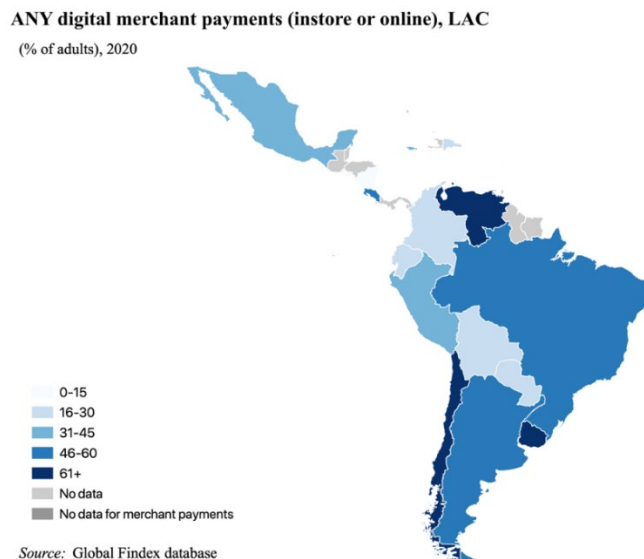
Use of digital merchant payments varies across regions. If an adult reported in the survey that they did use a card, mobile phone, or the internet to make an online or in-person store purchase in the past year, we consider that person to make digital merchant payments. According to this definition, at least half or more adults in most ECA economies make digital merchant payments, with higher numbers found in Croatia and the Russian Federation, and lower numbers in parts of the Balkans and Central Asia (Figure 6). Use of digital merchant payments varies more widely in LAC economies (Figure 7); they were relatively uncommon in Bolivia, El Salvador, and Nicaragua, while more than a third of adults use them in Argentina, Costa Rica, Peru, and Mexico. About half of adults make digital merchant payments in Brazil, as do nearly 70 percent in Venezuela.

Figure 6: Any digital merchant payments (instore or online), ECA (% of adults, 2020)



Source: Global Findex database

Figure 7: Any digital merchant payments (instore or online), LAC (% of adults, 2020)



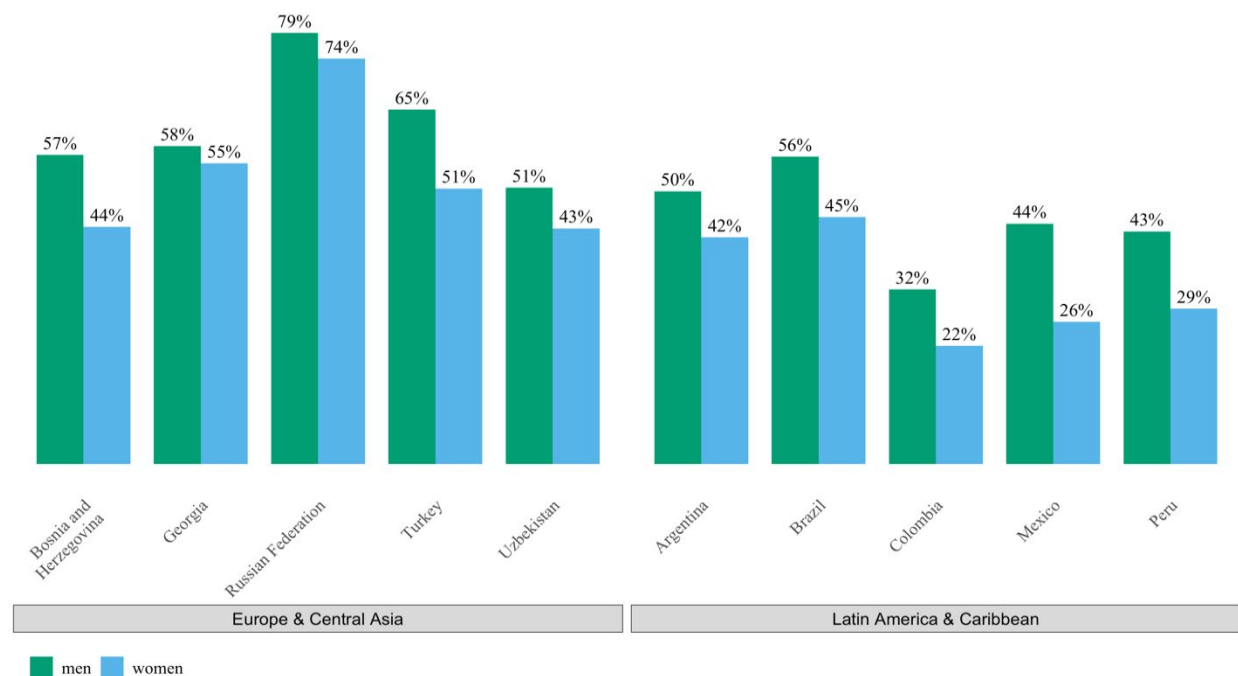
Men and wealthy people more likely to use merchant payments

In most of the economies surveyed, men are significantly more likely than women to report using digital merchant payments (Figure 8). In Turkey, for example, use of digital merchant payments is 14 percentage points higher among men than women, and in Mexico, men are nearly twice as likely as women to make such payments. Georgia is among the rare economies with no such gender gap.

There is also evidence of an income gap, with adults in the richest 60 percent of households using digital merchant payments more often than those in the poorest 40 percent of households. In Colombia, Mexico, and Peru, about a fifth of poorer adults use digital merchant payments; the share is two or three times higher among wealthier adults. Income gaps in ECA are pronounced but not as extreme. In Georgia, for example, 41 percent of poorer adults use digital merchant payments, as do two-thirds of wealthier adults.

Figure 8: Gender gaps in use of digital merchant payments

Adults who used a card, mobile phone, or the internet to make an online or an in-store purchase in the past year (% age 15+), 2020



Source: Global Findex database.

While digitization has taken off during the pandemic, cash still dominates merchant payments globally. And it is far from clear that people who adopted digital payments during COVID-19 will keep using them when the pandemic subsides. The best way to increase use of digital payments is to make them more convenient and affordable than cash. That means providing reliable payments infrastructure—including electricity and mobile connectivity—ensuring good product design and minimizing fees that might deter adoption.

For now, cash continues to appeal to merchants and customers—but people are clearly open to digital options. The Global Findex survey asked respondents if they had a choice of how to make purchases in stores, would they prefer to use a card or mobile phone or would they prefer to only use cash. On average, in economies for which data are available, customers were equally split between the two options.

3.3 Digitizing wages during COVID-19

Digital wages have a number of advantages over cash. Cash can be vulnerable to theft and may be easy to spend or give away. Digital wages are more secure, and they help users build savings because people tend to let the balances sit in their accounts. As part of an experiment conducted in 18 villages in eastern India, for example, researchers gave identical weekly payments to people in cash or accounts, and those who used accounts built significantly higher savings

(Somville and Vandewalle 2018). In Afghanistan, a study of 949 mostly male employees at a mobile network operator found that those who automatically deposited part of their salary into a mobile savings account had higher savings and financial security than workers who received a mobile savings account but did not set up automatic wage payments (Blumenstock and others 2018). And in Bangladesh, factory workers in greater Dhaka who took up digital wages as part of a field experiment accumulated higher savings, increased their ability to manage economic risks, and developed financial capability over time (Breza, Kanz, and Klapper 2020).

Digital wage payments are also an effective way to increase ownership of formal financial services. Among adults globally who have an account, roughly 80 million opened their first account to collect public sector wage payments, and another 200 million opened their first account to receive wage payments from a private sector employer, according to the Global Findex. Most people who earn wages get paid digitally, according to the Global Findex. Worldwide, about 1 in 3 adults report that they received wages in the past year, with about 62 percent of these wage recipients using a financial institution account to collect wages, and half as many receiving them in cash only.

Through the pandemic, inclusive fintechs have been critical to supporting this lower-income and often-overlooked population, continuing to provide their products and services safely and digitally. In the United Arab Emirates (UAE), NOW Money provides an example of a fintech firm that has contributed to financial inclusion by providing a digital payroll and payment solution for migrant workers, many of whom were unbanked and in need of an efficient way to remit funds to their families. NOW Money has helped tens of thousands of workers gain access to a formal financial account since its founding in 2016.

Box 2: Digitization of Garment Industry Wages during COVID-19

The ready-made garment industry is critical for Bangladesh's economy. It is an important source of formal jobs, employing roughly 4 million people, of whom about 80 percent are women. Between 2003 and 2015, the country's exports grew by 16 percent annually, driven overwhelmingly by the garment industry; at the end of that period, the export share of GDP had tripled, boosting a solid run of economic growth in the country (World Bank Group 2017).

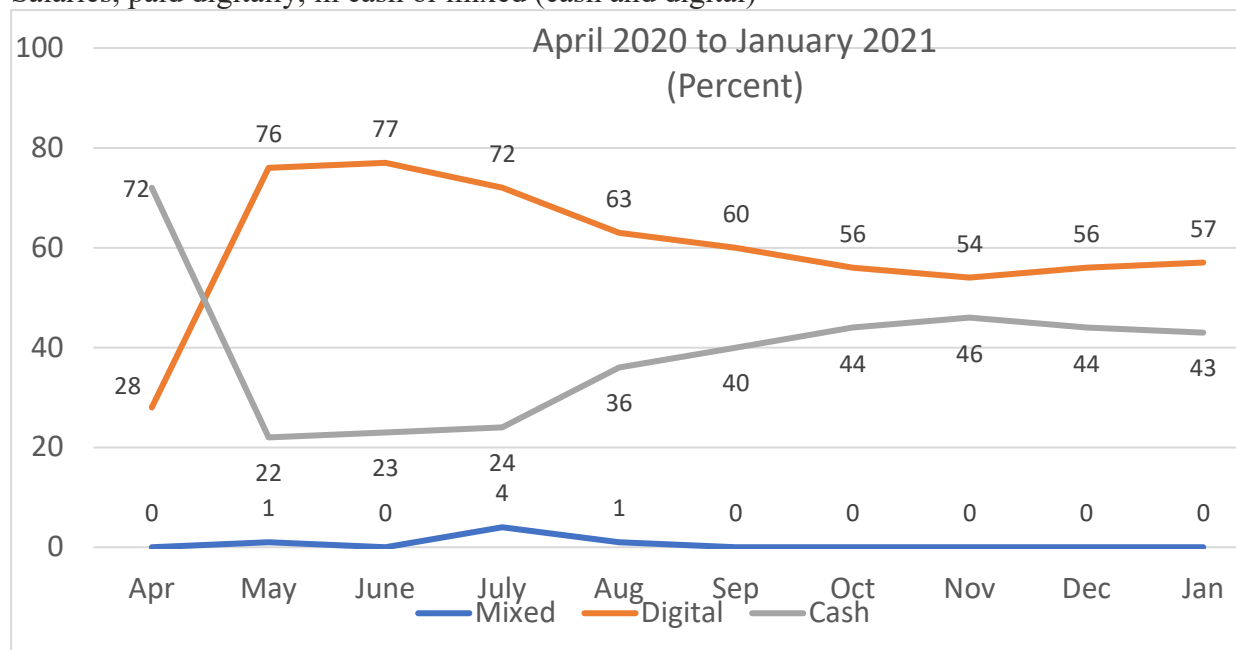
The COVID-19 pandemic negatively impacted the garment industry. When the virus arrived in 2020, many companies canceled export orders from Bangladesh, resulting in billions of dollars in lost revenue. Some factories which had completed orders had to wait longer than usual to receive payment following the start of the pandemic. Amid outcry from civil society, some brands paid up, but some buyers have not compensated their suppliers, resulting in factory closures and supply chain disruptions. A survey of garment workers in Bangladesh and other major exporting countries found that many were grappling with hunger and turning to informal loans following the collapse of formal employment during the pandemic (Chua 2021).

Bangladesh's government moved to support factories and workers as the pandemic's economic fallout took hold. In late March 2020, the finance ministry rolled out a stimulus package worth nearly US \$600 million. The funds were earmarked to support four million workers, with payments to be distributed by commercial banks using mobile money accounts

and bank accounts. The government also moved to provide support to five million needy households (not necessarily connected to the garment industry) via mobile money (IMF 2021; Gentilini and others 2021). At the same time, the finance ministry provided factories with subsidies to cover interest payments on working capital loans and introduced a stimulus for micro entrepreneurs. The central bank enacted various emergency measures, such as waiving credit card fees, suspending interest payments on loans, and delaying classification of non-performing loans (IMF 2021).

The non-profit Microfinance Opportunities documented a rapid increase in digital wage payments in Bangladesh’s garment industry. In March and April 2020, many workers stayed home as factories closed and struggled to adjust to the pandemic. Starting in May, workers quickly returned, and there was a noticeable shift in the share of workers receiving digital payments. Drawing on phone interviews with 1,337 garment workers—more than three quarters of them women—living in five cities in Bangladesh, Microfinance Opportunities reported that in April 2020, 28 percent of garment workers reported being paid digitally. By May 2020 the share had increased to 82 percent, with no difference between men and women. Use of digital wage payments later dropped, but one year after the pandemic's start, a majority of workers still reported being paid through digital channels (see Figure 9 below).

Figure 9: Bangladesh Garment Worker Salaries
Salaries, paid digitally, in cash or mixed (cash and digital)



Source: Microfinance Opportunities Garment Worker Diaries, January 2021 update.

The overwhelming majority of workers reported that they preferred to withdraw their entire salaries instantly. Few workers reported difficulty transacting: 95 percent were able to withdraw their salary on their first attempt, and nearly 80 percent reported waiting in line for less than ten minutes. The preference for cashing out salaries reflects the fact that factory workers overwhelmingly transact in cash.

Person-to-person remittance transfers are the most common type of digital transaction.

Many people who work in urban garment factories migrated from rural areas and send money to their families back home. Studies have found that using digital payments for these domestic remittances can have important development benefits. In Bangladesh, researchers did a field experiment with 815 households that included training in how to use mobile money services and assistance with opening accounts. They found that when urban migrants took up mobile money, their remittance volumes to rural areas increased by 26 percent; consumption rose in rural areas by more than 7 percent; extreme poverty dropped; and remittance-receiving households increased savings and consumption and reduced their reliance on borrowing (Lee and others 2021). The Garment Worker Diaries show that during the first summer of the pandemic, nearly half of domestic remittance transfers were sent digitally. But the use of digital transactions varied by how workers were paid, with women who received their salaries digitally being far more likely to use digital transfers than those who were paid in cash.

Experience is key to building financial capability and confidence with digital payments, according to a recent study of factory workers in Bangladesh.

Researchers did a field experiment with more than 3,000 workers in two garment factories in greater Dhaka to move employees from receiving wages in cash to receiving them digitally. The results show that over time, workers enrolled in digital wage payments conducted fewer transactions with the help of bank agents and carried out more transactions on their own. Compared to workers who received an account but were not enrolled in digital wages, the workers who received digital wages were 24 percentage points more likely to make a send-money transaction and 60 percentage points more likely to make a withdrawal from their account without receiving assistance. The workers also learned how to dodge illicit fees from banking merchants, built their savings, and increased their resilience to financial shocks. Overall, the findings suggest that the experience of receiving digital wage payments helped these workers build their financial capability (Breza, Kanz, and Klapper 2020).

The garment worker diaries collected by Microfinance Opportunities also speak to the importance of experience.

They suggest that workers who had experience using accounts and digital transactions prior to the pandemic were better able to manage the economic fallout and bounced back more quickly than those who were inexperienced. For example, experienced users were slightly less likely to be food insecure and were more likely to withdraw money from a digital account when they were experiencing food insecurity, which suggests that they were using savings to main consumption levels—an example of financial resilience (Stuart 2021).

3.4 Platform commerce and related digital payments (Argentina and Northern Nigeria)

With mobility restricted in many economies, e-commerce and related digital payment services have expanded during COVID-19. In Latin America, for example, e-commerce rapidly increased during 2020 in response to strict limits on mobility imposed in many countries to slow the spread of the virus. Data show that Latin America had higher than average growth in retail e-commerce (36.7 percent vs 27.6 percent globally).^{xxxix} The rapid growth in the region was necessitated by unusually widespread and long-lasting restrictions in movement enacted by national governments and possible due to the penetration of mobile phones which is estimated at 73 percent in 2020. Argentina was a particular standout in e-commerce growth with an estimated expansion of 79 percent - with Singapore in second place globally at 71 percent.

Expansion of e-commerce in Latin America followed global trends with third-party platforms benefitting from much of the shift to digital transactions.^{xxxv} The leader of these platforms in the region, MercadoLibre - headquartered in Buenos Aires, registered a 100 percent year-on-year increase for essential goods and pharmacy products.^{xxxvi} Fusing e-commerce with fintech helped to enable the firm's accelerated growth. MercadoPago supported the shift to e-commerce during COVID-19, with total payment volumes increasing by 97 percent year-over-year.^{xxxvii} MercadoPago is a stand-alone digital payment platform which was originally integrated into MercadoLibre but now also works with other online firms. MercadoCrédito, another related entity, provides credit to MercadoLibre merchants in Argentina and to MercadoPago customers in several markets including Argentina, Brazil and Mexico. Results from 2020 show fintech revenues reaching nearly \$400 million compared to \$725 million for commerce for MercadoLibre, Inc.^{xxxviii}

The crisis also helped to spur opportunities for second-generation “niche” platforms which target more narrow market segments to bring an online solution for sellers and consumers. In Kenya, for example, the country's main e-commerce platform – Jumia Kenya – partnered with the agricultural value-chain platform Twiga Foods to sell baskets of fruits and vegetables to consumers. In Brazil, customers were able to buy online from small businesses nearby through an initiative called Compre Local (Buy Local)^{xxxix}. In Argentina, Coca-Cola worked with Amazon Web Services to create Wabi, an App that allows customers to order beverages and other items and have them delivered by stores in their neighborhoods, arriving in minutes instead of hours. Digitizing orders through Wabi helped to increase the efficiency of deliveries by Coca-Cola to their retail partners so that products would go where demand was greatest and helped keep small merchants operating during lockdowns.^{xl} For consumers using these platforms, purchases that may have been made previously in cash are now captured and can be used to build payment histories that are useful in determining credit capacity and risk. See Table 2 below for examples of niche platforms and their responses to COVID-19.

Table 2: Examples of new and niche platforms that employ innovative business models and focus on traditionally underserved market segments

COUNTRY	PLATFORM	MAIN FOCUS	PAYMENT METHODS	CREDIT	COVID-19 RESPONSE
Kenya	Twiga Foods	Agriculture (business to business)	Mobile money	Digital credit (piloted with IBM Research)	Launched business-to-consumer solution in partnership with Jumia
Kenya	Sendy	Transport, deliveries, logistics (business to business)	Mobile money	-	Launched grocery deliveries in partnership with stores and supermarkets
Nigeria	FarmCrowdy	Agriculture	Cash on delivery, mobile money	Linked to crowd-funding platform CrowdInvest	Increased demand to participate in the platform. Had to discontinue mobile payments due to disruption in agency network
Kenya/Nigeria	Flutterwave	Payments	Online payments	-	Launched Flutterwave Market to help MSMEs digitize their business
Uganda	SafeBoda	Motorbike taxis	Prepaid e-wallet, cash on delivery	Loan for motorbike purchases in partnership with Finca Uganda	Launched grocery and restaurant deliveries via motorbike taxi fleet
Ethiopia	Helloomarket	General merchandise	Mobile money, cash on delivery, deposits at agents or bank branches	Plans to partner with banks for credit product	Increased interest from vendors and sale of essential items
Brazil	Compre Local	Local grocery stores and restaurants	Payment link via SMS and WhatsApp	-	Started to support local businesses affected by the lockdown

Source: Totolo, Baijal and Dean, 2020.

A rapid shift to e-commerce and digital payments is not a solution that can always work. At the beginning of the COVID-19 emergency, businesses which could have continued to sell online were sometimes hamstrung by the same limits on mobility as their customers, keeping them from producing and filling orders. Where the ecosystem for mobile money was not well developed, disruptions from COVID-19 could result in the lack of convenient and reliable cash-in cash-out points, reducing the ability to use digital payments. This was the case in Nigeria where the firm FarmCrowdy had to shift from digital payments to cash for their operations in rural communities where local agent networks stopped functioning. Similarly, in Ethiopia the low level of penetration of mobile money going into the COVID-19 pandemic meant that the online shopping platform Helloomarket had to enable cash on delivery and other forms of cash deposits in banks, post offices or with mobile money agents outside the capital.^{xli}

IV. Opportunities and risks

COVID-19 has created an environment for accelerating digital financial inclusion in markets around the world, led by a rapid expansion in digital payments to keep economies functioning while mobility is restricted. Taken together, a well-functioning digital finance ecosystem can increase competition in financial services and help to reduce costs and improve quality and convenience for consumers. However, there are also risks to a rapid expansion of digital financial inclusion, especially for consumers who have not previously used formal finance or who have limited digital access, skills and experience. Uptake of digital financial products and services may also be slowed by economy-wide factors from inadequate technological

infrastructure to high levels of informality which reduce the demand for digital – and more transparent – financial transactions.^{xlii}

Emerging experience from increasing reliance on digital finance across a spectrum of countries, client profiles and use cases, including examples provided in this paper, highlights good practices and critical enablers which are distilled here.

- 1. Increase regulatory flexibility:** Flexibility in financial regulations was instrumental in rapid expansion of digital finance in many jurisdictions. Regulations were adjusted to permit the entry of new providers, as in Colombia, where fintechs were added to the list of institutions allowed to deliver government payments. Other widely adopted regulatory responses included new options for remote on-boarding for accounts, simplified AML/KYC due diligence (including expanded use of digital ID) and increased limits on transactions and withdrawals to increase convenience.
- 2. Leverage Government-to-Person (G2P) payments:** More than 100 countries have announced plans to scale up social assistance payments to mitigate the economic impact from COVID-19. Combined with a need to minimize movement to reduce contagion, digital government payments (G2P) have rapidly expanded worldwide. Ensuring that this expansion leads to sustainable gains in digital financial inclusion requires attention to account design, involvement of a wider array of private sector partners and incentives that help to strengthen the digital ecosystem and increase use of digital payments, savings and other services rather than simply withdrawing cash.
- 3. Prioritize infrastructure and connectivity:** Growth of digital payments and digital finance is linked to infrastructure, including reliable electricity, mobile phone penetration and internet connectivity. While beyond the scope of the financial sector, infrastructure problems can make digital payments less effective and this needs to be taken into account when solutions are deployed, whether by government or the private sector. In particular, strategies designed specifically for rural and remote communities may need to be developed to account for infrastructure gaps. This includes designing products that work on feature phones and creating an ecosystem which accounts for gaps in connectivity. In the medium to long term, the ability to conduct financial, commercial and government transactions remotely, supported through digital finance, provides further justification for investments in infrastructure.
- 4. Encourage interoperability to make digital payments more convenient:** In some contexts, interoperability between agents facilitates choice for recipients of social protection payments and helps the agent to obtain liquid resources – but this is not always the case. Particularly in remote locations, interoperability may overwhelm agents, as these are areas where the digital payments acceptance network is less developed, and there is scarcity of other cash-out points, such as ATMs and branches. Hence, interoperability needs to be paired with many other measures to work, including: data-based tools to identify areas where agents may be overwhelmed by liquidity requirements from customers and social protection payments' recipients; a sustainable business model for agents funding cash withdrawals with their own resources or through external resources such as credit; tiered agent arrangements that monitor

and provide cash facilities to agents; a strong digital payments acceptance network, as well as convenient ways for consumers to use such means; and a thorough liquidity planning capacity in the context of delivery of large volume payments, such as G2P payments.

- 5. Focus on the customer experience with particular attention to women and other underserved and vulnerable populations (elderly, low-income, rural):** The design of digital payment products and services is also critical. Products should be convenient, affordable and easy to use, especially for people who struggle with literacy and numeracy. Particular attention should be focused on women consumers, who have consistently lagged men in adoption of digital finance. Strengthening gender disaggregated data – and detailed data to follow access and usage of other target populations - is an important starting point for identifying gaps and monitoring the effectiveness of policies and programs. Other successful approaches for women have included financial capability interventions, making digital payments into accounts that provide women with greater control and the ability to save and using wage payments to introduce digital finance. For the elderly, adoption of new technologies, including digital finance, can be especially challenging and may require continued support of cash-based services, even in advanced economies. Other vulnerable populations such as refugees may also face significant challenges in adopting digital finance, especially if they lack the ID to access mobile technology or meet e-KYC standards, requiring attention to their unique circumstances in the shift to DFS. Furthermore, digital identity initiatives need to be tailored for low-income users, without access to smartphones or internet. Financial institutions need to rethink ways of obtaining and validating critical information of new customers in order to address these challenges. Coordination with other sectors and authorities regulating these sectors is crucial. In particular, the telecommunication sector holds valuable information that can help validate the identity of new customers that do not have a smartphone, internet connectivity or capabilities to use sophisticated onboarding solutions.
- 6. Promote responsible finance by building financial capability and enforcing financial consumer protection:** Improving financial literacy and capability can increase uptake and usage of digital financial services, and this is especially true for underserved consumer groups such as women. Leveraging digital platforms to provide information and training and incorporating insights from behavioral economics such as nudges and reminders or the use of entertainment, can increase the impact of these interventions. Consumer protection regulations can also help to build trust and avoid abusive practices such as aggressive marketing of high-cost credit products. For example, governments can require providers to clearly inform customers about costs, fees, and what to expect from digital wages. Laboratory experiments have shown that simplified statements of key facts can positively impact financial behavior (Cuellar, Gine, and Mazer 2017).

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