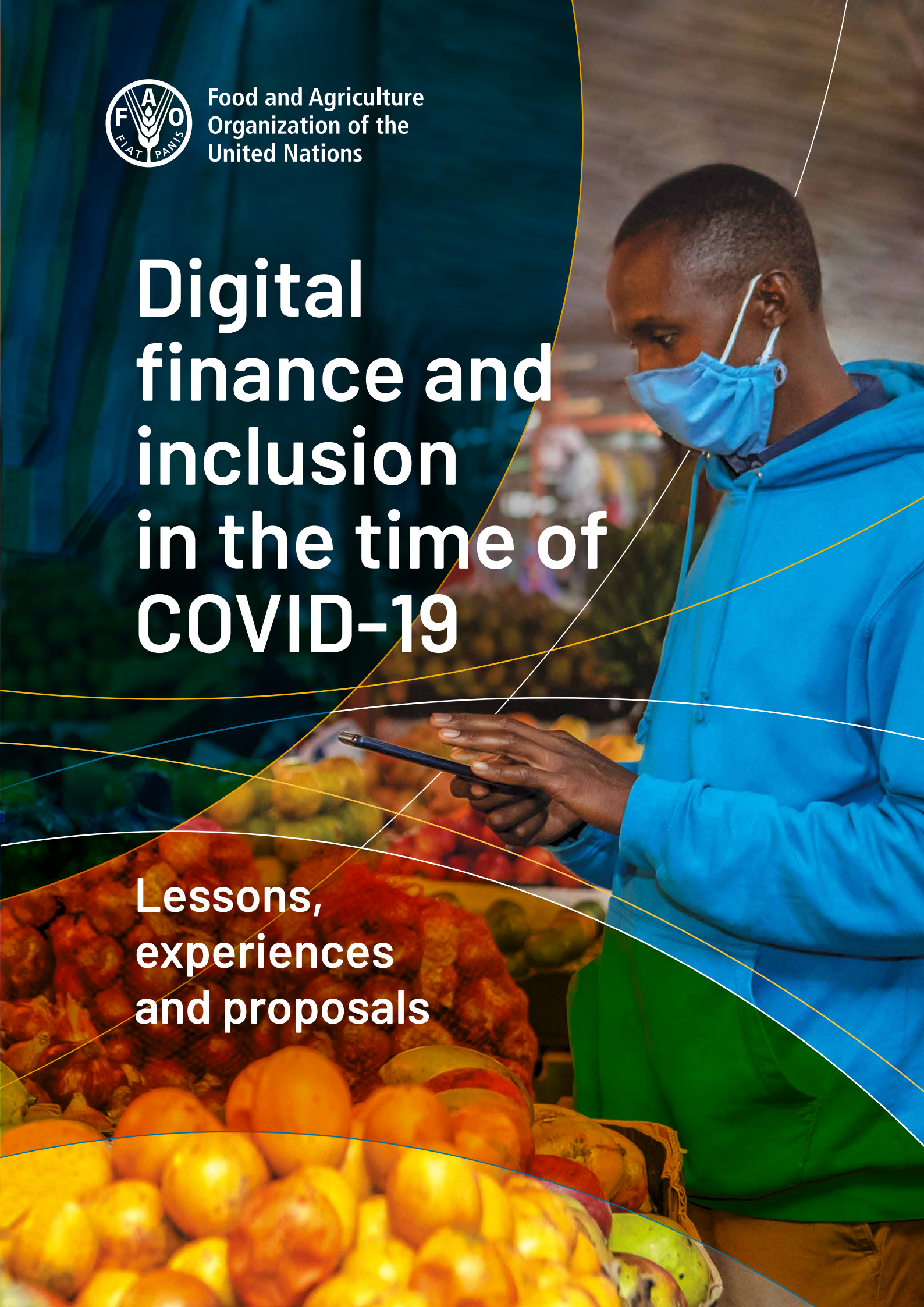




Food and Agriculture
Organization of the
United Nations

Digital finance and inclusion in the time of COVID-19

Lessons,
experiences
and proposals



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Rome, 2021

Required citation:

Benni, N. 2021. *Digital finance and inclusion in the time of COVID-19: Lessons, experiences and proposals*. Rome, FAO. <https://doi.org/10.4060/cb2109en>

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ISBN 978-92-5-133623-6

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Paying for groceries in the time of COVID-19, Nairobi, Kenya
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Acknowledgements

This publication was developed by the Rural Institutions, Services and Empowerment (RISE) Team of the Inclusive Rural Transformation and Gender Equity Division (ESP) of FAO. The study was authored by Niclas Benni, Rural Finance Specialist, under the supervision of Azeta Cungu, Policy Officer.

The study was developed in the frame of the CABFIN Partnership, a collaborative effort in the field of rural and agricultural finance carried out by leading development agencies that include FAO, UNCDF, GIZ, WFP, IFAD, and the World Bank. Specifically, the study has benefitted from the financial and technical contributions of the Partnership, through materials, feedback and reviews.

The development of this working paper wouldn't have been possible without the essential support and contributions provided by several colleagues and friends. Within FAO, the author would like to thank Azeta Cungu, Silvia Storchi, Adriano Campolina, Jun He, Lixia Yang, Yahor Vetlou, Massimo Pera, Federico Spano, A'kos Szebeni, and Frank Hollinger, for their invaluable inputs and feedback. A special thanks goes to Jamie Anderson, Ivo Jenik, Silvia Baur-Yazbeck, and Eric Duflos from CGAP, for reviewing the publication and providing their important insights.

The author would also like to thank Kim Des Rochers for proofreading and editing this publication, and studio Bartoleschi for providing the layout design.

Acronyms

B2B	Business-to-business	LMICs	Low- and middle-income countries
B2C	Business-to-client	MENA	Middle East and North Africa
CDD	Customer Due Diligence	MMO	Mobile Money Operator
CICO	Cash-in Cash-out	MNO	Mobile Network Operator
CGAP	Consultative Group to Assist the Poor	MSME	Micro-, Small-, and Medium-sized Enterprise
COD	Cash-on-delivery	NERC	National Ebola Response Committee
FI	Financial Institution	OTC	Over-the-counter
G2P	Government-to-person	P2G	Person-to-government
GSMA	Global System for Mobile Communications	P2P	Peer-to-peer
ICT	Information and Communications Technology	UNCDF	United Nations Capital Development Fund
ILO	International Labour Organization	UUBI	Universal ultra-basic income
KYC	Know-your-customer	WFP	World Food Programme



Paying for
groceries
in the time
of COVID-19,
Nairobi, Kenya

Introduction

The COVID-19 pandemic has resulted in severe and protracted disruptions to the livelihoods of people all around the world, both in developing and developed countries. The pervasive effects of this pandemic, which have ended up affecting every aspect of our societies, keep unfolding as the crisis progresses, leaving profound marks on people's livelihoods and countries' economies that are expected to last for many years after the pandemic has ended.

As part of the global response to COVID-19, **the digital finance industry has been playing a key role** in developing and providing services and innovations that have mitigated, at least partially, the disruptions brought about by the pandemic on multiple aspects of people's lives. In developing and emerging contexts, especially, there has been a strong surge in interest for the ample potential that fintech (i.e. financial technology) carries in preserving people's livelihoods and businesses that have been, and continue to be, threatened by the pandemic, thereby enabling and sustaining – within societies – the flow of cash, credit, deposits, investments, salaries, government-to-persons (G2P) and peer-to-peer (P2P) transfers, among others, at national and regional levels.

The public and private sector's response to the COVID-19 crisis has been promoting **an overall acceleration of the digital financial inclusion process** in developing contexts, especially in a number of countries (such as West African ones), where it was still lagging compared to regional trends (Peyton, 2020). On the side of the demand for finance, both developed and developing countries have experienced substantial growth in the subscription and use of digital financial services, as people have looked for alternative ways to run and manage the financial aspects

of their lives, in light of extended periods of lockdown, physical distancing, and livelihood disruptions. On the side of the supply, traditional financial institutions (FIs) have been forced to radically re-think their business models and delivery mechanisms, by investing heavily in their digital channels, often ending up accelerating a process of gradual digitalization of their financial offer that was already in the making.

From a developmental perspective, this accelerated shift towards a digitalization of financial services can prove to be an unexpected boon for financial inclusion amid the disruptions brought about by COVID-19. Before the crisis, digital finance (and chiefly mobile money) had already proven to be a fundamental enabler of financial inclusion in developing and emerging economies, especially when it came to reaching and serving the most isolated and financially underserved individuals. In the wake of the pandemic, this rapid surge in interest for fintech solutions (on the part of governments, businesses and the general public) is bound to have substantial implications in terms of **an increased potential for digital channels to promote financial inclusion on a global scale**.

Serious concerns, however, exist on the implications of such an accelerated shift towards a cashless, digitally banked society. First and foremost, the risk of **further widening the divide** between those already capable of accessing digital financial services and those who – depending on the context – might not be able to such as rural people, women, the ultra-poor, migrants and refugees, indigenous people, the elderly, and the scarcely literate, especially considering that these categories often intersect. Furthermore, a series of related, critical concerns

exist over issues of data privacy and security, transparency, predatory lending, and market monopolization, among others, all of which will be analyzed in-depth throughout this study.

Overall, even after the pandemic is over, the trajectory of digital financial inclusion on a global level is bound to be forever altered by this event, as the rapid surges in innovation and uptake of digital finance solutions are expected **to leave lasting marks**, not only on the fintech industry, but also on the overall attitude and approach that populations and governments have towards these types of technologies.

In light of these premises, **this working paper has two main objectives:**

- 1** To provide a comprehensive overview of how the COVID-19 pandemic has been impacting on the digital financial ecosystems of low- and-middle income countries (LMICs), by accelerating, overall, a process of **widespread digitization of financial services** that was already partially ongoing in developing and emerging contexts. It aims to illustrate the advantages and risks associated with this surge in uptake and use, providing ideas on how to leverage the paradigm changes affecting the overall approach and perspective towards digital financial services – on the part of various stakeholders – to advance financial inclusion and development.
- 2** To showcase how digital financial services have been used – in both traditional and innovative ways – **to mitigate the impact of the COVID-19 crisis** on LMICs' economies and societies, by both public and private actors, while also establishing a foundation for the longer-term digital financial inclusion of vulnerable citizens. It seeks to present not only innovations that have already been implemented and brought to scale, but also new proposals from key thinkers from the fields of development finance and fintech,

which can inspire both policymakers and the industry towards new solutions that can aid in responding to this and future crises.

The **intended audience** for this study is quite broad, given the vast numbers of both public and private stakeholders engaged in response efforts against this crisis, as well as the myriad uses that digital financial services can have to mitigate the impact of the pandemic and keep vital services functioning during lockdown.

Target audience categories include:

- **Policymakers** at the country and regional level can use this research to analyze the policy responses implemented by their counterparts in the context of the COVID-19 crisis, drawing inspiration for the design of their own bundle of policy interventions and collaborations in the digital finance arena. Policymakers can also draw from this study to anticipate and mitigate possible bottlenecks and constraints associated with their current policy approach to the crisis, in an attempt to curb potential side effects and inequalities in terms of financial inclusion, stemming from their initiatives.
- **Development practitioners (and their agencies)** can use the findings of this study to inform their own programmes, research, and capacity building associated with the pandemic response, as well as the overall promotion of digital financial inclusion, in developing and emerging contexts.
- **Mobile money operators (MMOs), fintech companies and other FIs** can use this information to identify the critical gaps in current and future demand for services generated by the pandemic, and subsequently respond to these gaps by expanding their offer of tailored digital financial products, taking inspiration for product design (or re-design) from the private sector's experiences detailed in this study.

In order to achieve the aforementioned objectives, and assist the different target audiences in identifying the content most relevant to their work, the study has been structured into seven sections:

- 1 **The impact of the pandemic on digital payments and transfers.** This section provides a general overview of the current and expected impact of the pandemic on digital payments and transfers around the world. It showcases the various measures adopted by policymakers and MMOs to promote the use of digital channels for payments and transfers at the country level, both as an alternative to the use of physical cash and as an overall tool for livelihood strengthening when faced with lockdowns and physical distancing.
- 2 **Fostering the use of digital payments to enable e-commerce and door-to-door delivery services.** This section focuses specifically on the promotion of digital payment modalities to enable e-commerce and door-to-door delivery in the context of the response to the pandemic, as an instrument of livelihood resilience, provision of essential

goods, and MSME (micro, small- and medium-sized enterprise) sector promotion.

- 3 **Ensuring timely payments of response staff through digital channels.** The merits of digitizing payments for response workers active in the first line against the COVID-19 pandemic are examined in this section. The advantages that can be derived from such a process in terms of increased precision, safety and timeliness of salary payments to response workers, as well as the resulting benefits in terms of a strengthened field-level response to the pandemic are also examined.
- 4 **Transitioning to fully digital remittances during COVID-19.** The specific focus of this section is on the impact of the pandemic on remittance flows sent by migrant workers from all around the world to their home countries. The challenges associated with developing fully digitized remittance transfer chains that can facilitate such flows in a global scenario characterized by extensive lockdown measures and widespread economic paralysis are illustrated.



Food vendor in Kampala, Uganda, shows the SafeBoda app on her phone

© UNCDF

- 5 Enabling social safety nets by digitizing G2P transfers.** This section focuses on the diffused implementation of digital government-to-people (G2P) cash transfer schemes in various countries of the world; these are mainly directed at vulnerable citizens that have lost their main sources of income due to the pandemic. It seeks to illustrate how the digitization of social safety nets can have extremely beneficial effects in terms of outreach, timeliness, precision and transparency of social cash transfers, thereby guaranteeing a basic layer of protection to the most vulnerable segments of the population.
- 6 Providing digital credit solutions to mitigate the impact of the pandemic.** The focus of this section is on the use of innovative and tailored digital credit products to assist small businesses critically affected by the pandemic

in weathering its worst effects, as well as to promote a longer-term process of business digitization that can help them to remain competitive in a post-COVID world.

- 7 Final considerations and recommendations.** This section provides a series of final considerations on the role of the COVID-19 crisis in influencing the evolution of digital financial inclusion in developing and emerging contexts. It also provides a series of general recommendations directed at policymakers, development agencies and MMOs, which can assist them in developing a strategic response to the crisis that focuses on leveraging and promoting digital financial services as a fundamental tool for inclusion and resilience. The majority of these recommendations are also bound to be valuable in future large-scale, catastrophic events.

SECTION

1

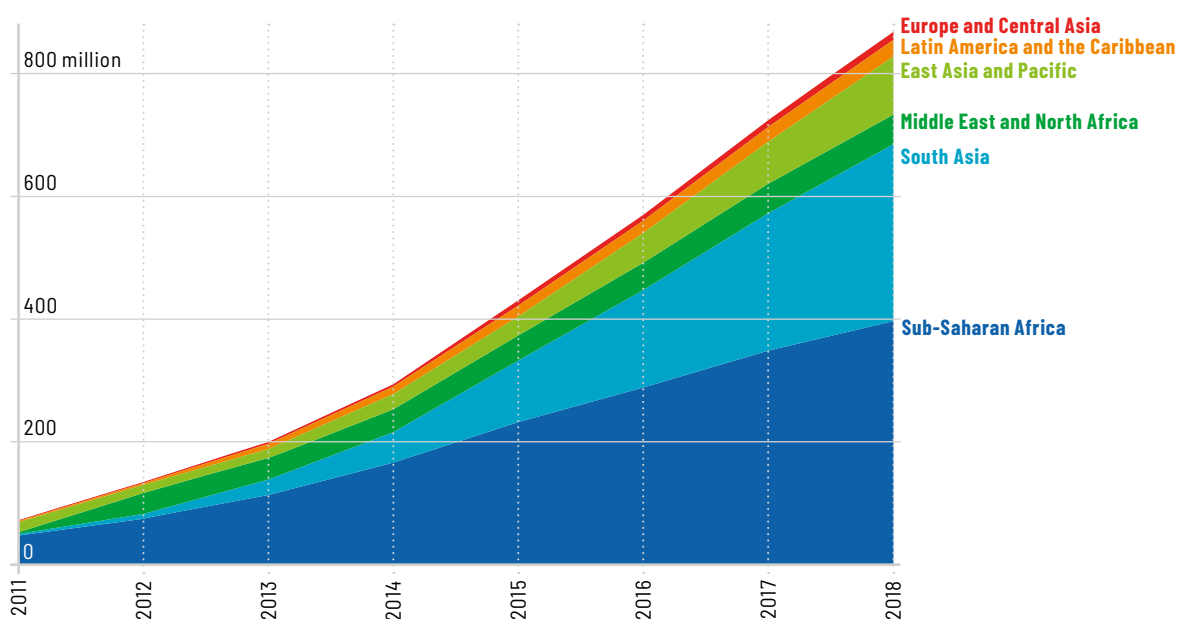
The impact of the pandemic on digital payments and transfers

1.1 An accelerated process of financial digitization induced by the pandemic

Over the past 15 years, digital financial services have emerged as critical enablers of financial inclusion in both developing and emerging countries, allowing an increasing amount of

previously unbanked individuals to save, borrow, pay and transfer money remotely. In particular, **mobile financial services** have emerged as an essential instrument for the promotion of financial inclusion, poverty alleviation and economic growth in LMICs, experiencing a meteoric rise in the past decade. To give an idea of the magnitude of this phenomenon, Figure 1 below shows the growth in

FIGURE 1
Registered mobile money accounts by region, 2011 to 2018



Source: GSMA, 2019 - Adapted from ourworldindata.org - CC BY 4.0

the number of registered mobile money accounts across macro-regions, from 2011 to 2018. While the growth in accounts has been substantial all around, the largest increases have been registered in Sub-Saharan Africa (almost 400 million registered accounts as of 2018) and South Asia (287 million).

According to the latest “State of the Industry Report on Mobile Money” from the Global System for Communications (GSMA), which provides a snapshot of the global mobile money landscape one year before the pandemic, mobile money accounts around the world totaled over 1 billion as of 2019. Mobile money services are available in 96 percent of those countries **where less than one-third of the population has an account at a formal FI**, which showcases the extreme importance of such services for financial inclusion. For the first time in 2019, the total value of digital transactions constituted the majority of mobile money flows (57 percent), higher than the value associated with cash-in cash-out (CICO) transactions. In other words, in 2019 a larger share of money had been entering and leaving the system in digital form, rather than through a cash conversion (GSMA, 2019). As will be seen throughout this study, this gradual shift towards cashless – or “cash-lite”¹ – societies carries a range of positive implications with regards to the response to the COVID-19 pandemic.

Despite this promising scenario, it should be noted that the digital divide in LMICs **is still extremely strong**, especially because of the significant ICT (information communications technology) infrastructure gaps that still exist, especially in the most remote areas. According to data from the GSMA (2019), only 47 percent of the world’s

population is connected to mobile internet (3.54 billion people), while 43 percent lack access, although it resides within the footprint of a mobile broadband network (i.e. a “usage gap” of 3.38 billion people), and 10 percent neither have access nor could benefit from coverage in any case (i.e. a “coverage gap” of 750 million). The combined coverage and usage gaps are highest in South Asia (77 percent), Sub-Saharan Africa (76 percent), and the Middle East and North Africa (60 percent).

The **gender gap in mobile ownership and access to mobile-enabled financial services** is a particularly critical component of the digital divide. According to GSMA (2020a) data, women in LMICs are 8 percent less likely than men to own a mobile phone (165 million less women than men), and are 20 percent less likely to access the internet through a phone (300 million less). According to the 2018 ID4D Global Dataset², there is a 16-point gap between women and men in LMICs in the rate of access to formal identification (ID), which is a critical enabler to mobile account registration and financial inclusion in general. Finally, the latest data from the 2017 edition of the Global Findex³ shows that there is a 7 percent gap between women and men who reported making or receiving digital payments through a mobile account (Bill and Melinda Gates Foundation *et al.*, 2020).

These data provide some interesting glimpses into the state of digital financial inclusion in developing and emerging contexts prior to the pandemic. But how has this catastrophic event affected the scenario we just presented? First and foremost, **the COVID-19 pandemic has been accelerating a widespread process of**

1 As illustrated by Mas and Porteous (2013): “Inclusive cash-lite is not necessarily a cashless world, but a world where cash is increasingly relegated to the ‘edge’ of the electronic grid, and used predominantly within local communities for small, face-to-face payments. In a cash-lite world, physical and digital money compete, each finding its own niche applications, with a gradual diminution in the role of physical cash over time. The logical transition toward a cash-lite world starts with people transporting less cash, then storing less cash, and finally using less (or no) cash in daily payments and transactions.”

2 The Global ID4D Dataset, compiled by the World Bank Group’s Identification for Development (ID4D) initiative, provides a global estimate for the number of individuals without proof of legal identity.

3 The World Bank’s Global Findex is the world’s most comprehensive dataset on how adults save, borrow, make payments and manage risk. Launched with funding from the Bill and Melinda Gates Foundation, the database has been published every three years since 2011. The data are collected in partnership with Gallup, Inc., through nationally representative surveys of more than 150 000 adults in over 140 economies.

digitalization of financial services in LMICs that was already ongoing – with varying degrees of velocity – prior to the outbreak. Citizens have been embracing digital financial products in an effort to mitigate the severe restrictions and challenges that the pandemic (and subsequent public response measures) has brought to their personal and professional lives. Financial institutions have been investing heavily in their offer of digital financial services to respond to this widespread increase in demand, seeking to adapt to and withstand the effects of the crisis. Governments have been promoting the use of digital financial services (and especially digital payments and transfers) through targeted policies and interventions, both to mitigate the spread of the virus and, more broadly, as an instrument for social protection, livelihood strengthening, and improved resilience in the face of the pandemic.

From the perspective of financial inclusion, one of the main risks associated with this overall acceleration in the financial digitization process is **leaving behind large categories of individuals who are particularly exposed to the effects of the pandemic** (such as the elderly and those living in rural locations), who are also those less likely to be able to access and use these services. As will be illustrated throughout this study, this push towards an accelerated financial digitization should be balanced with appropriate inclusion considerations and adequate customer protection measures. This, in fact, should be a common concern for all stakeholders in the digital finance ecosystem, including policymakers, MMOs, fintech companies, international development agencies, and many others.

In the next sections, this study will provide a comprehensive analysis of the various facets and aspects associated with this scenario of increased financial digitization in the time of COVID-19; the different ways in which public and private actors have promoted and leveraged this process; and the associated implications that this scenario carries – from the perspective of financial inclusion – for developing and emerging contexts.



Money changer in Daykundi, Afghanistan

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1.2 A surge in the use of digital payment and transfer services

Surges in the use of digital payments and transfers have been registered on a global scale, and in widely different contexts, in the aftermath of the outbreak. Even countries that registered considerably high levels of access and use of digital financial services prior the pandemic have witnessed a spike in their subscription and use, as population segments that had so far eschewed this market (such as the elderly and those living in rural areas) have been forced to transition to these systems out of necessity.

Several factors, which will be further analyzed in the following sections, have contributed to an overall increase in the use of digital payment and transfer services in both developing and developed countries: a higher reliance on digital financial services due to forced confinement and the need to respect physical distancing; a diffused, albeit unproven, concern that cash could act as a carrier of the COVID-19 pathogen; the implementation of large-scale, digital social transfer schemes on the part of governments that have sought to provide economic relief to millions of vulnerable citizens; and the surge in use of digital remittance services on the part of migrant workers sending money home.

The impact of the pandemic on digital payments and transfers has not been uniformly positive, however. Evidently, industries that have been critically affected by the outbreak have registered **substantial decreases in the volume of incoming digital payments**, such as tourism, education and hospitality. Nevertheless, it can be assumed that these reductions in volume will slowly rebound as the world adapts and recovers from the initial impact of the pandemic, with the most recent data appearing to confirm this. On the other hand, the positive changes that the crisis will have on the uptake, use and familiarity of digital payment and transfer services at the global level are expected to be long-lasting, as these services become increasingly assimilated into the financial behaviours of entire populations, and with the potential to shape the trajectory of the industry for years to come.

In any case, deeper changes to digital payment trends around the world **will take considerable time to unfold and consolidate**, a process that will depend chiefly on the overall duration of the pandemic, the measures taken to mitigate its impact on the economy, and the slow, gradual shifts in financial consumers' habits and behaviours.

The following snippets of data can help to gain a sense of the changes to digital payment use that have been registered in different countries, in the first months following the outbreak:

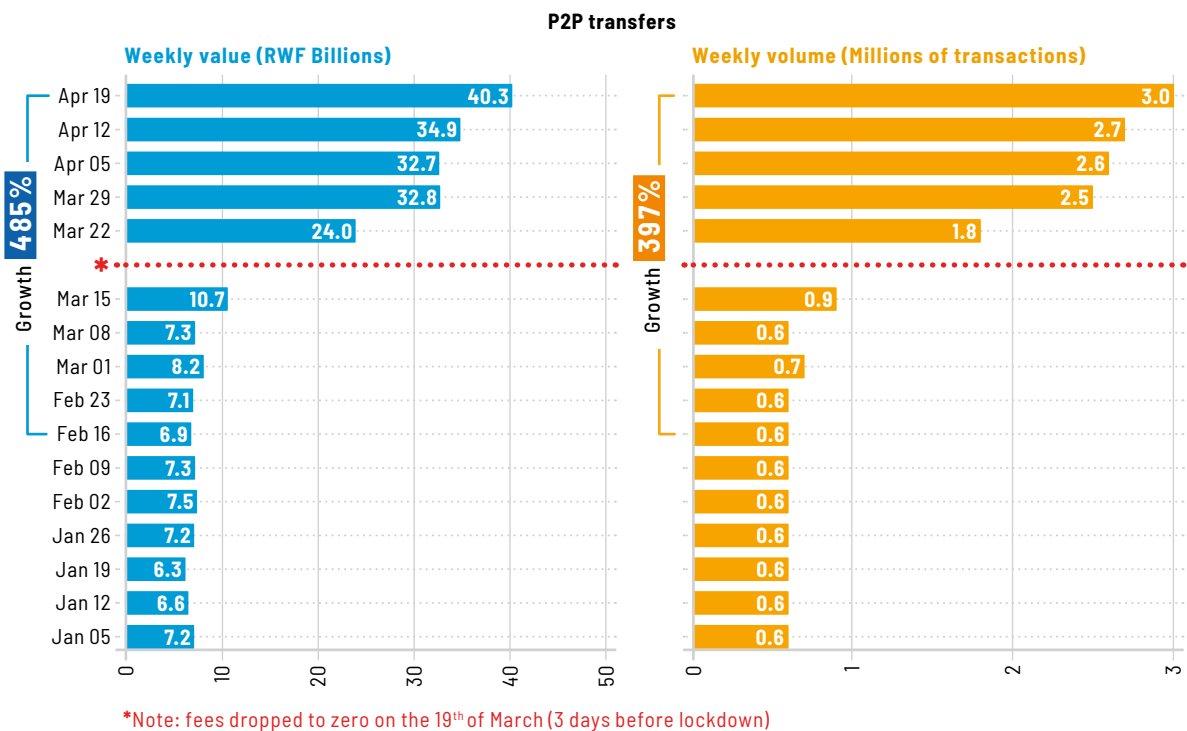
- According to a survey by the Capgemini Research Institute (2020) of 11 countries,⁴ 46 percent of consumers were expecting that **their use of digital payment channels would increase in the six months following the beginning of the pandemic**, with the greater shift registered in consumers aged 18 to 45.

4 The survey, carried out in April 2020, encompassed a sample of 11 200 consumers across China, France, Germany, India, Italy, the Netherlands, Norway, Spain, Sweden and the United States of America.

- A survey by Indian consultancy firm Local Circles (2020) found that **42 percent of Indians had increased their use of digital payments** in the three weeks following the outbreak, mainly to buy essential items, both at physical vendors and on e-commerce platforms.
- In **Kenya**, the impact of the COVID-19 outbreak on the flows of digital payments varied widely from sector to sector, according to data from FSD Kenya (Mburu, 2020). On one hand, a number of merchant segments saw the volume of incoming digital payments increase substantially following the outbreak of the virus, such as food and groceries (a 35 percent increase), pharmacies (18 percent) and agribusinesses (54 percent). On the other hand, specific merchant segments registered a substantial (and understandable) reduction in digital payment volume: education-related digital payments dropped by 94 percent due to school closures, for example, while digital payments in the tourism industry dropped by 56 percent in April (although the decline was already reduced to 39 percent the following month).
- One of the leading mobile money platforms of **Pakistan**, Easypaisa, reported a 35 percent increase in new customers during lockdown, a 17 percent increase in daily transactions, and a 185 percent increase in bank transfers via mobile wallets (Kumar and Shah, 2020).
- In the **Philippines**, the largest MMO in the country, GCash, reported a 150 percent increase in mobile money account registrations in the first month following the outbreak, reaching a total of 20 million registered users (Endo, 2020). It also reported that the total amount of payments made through its platform in May 2020 was eight times higher compared to what was registered in the same month in 2019 (Endo, 2020).
- In **Rwanda**, according to data from Cenfri, the value and volume of mobile-powered P2P

FIGURE 2

Weekly value and volume of peer-to-peer (P2P) transfers in Rwanda before and after the lockdown on 21 March 2020



Source: Carboni and Bester (2020)

transfers have risen sharply following the lockdown implemented in the last week of March 2020, stabilizing onto new and higher levels that have continued to rise slowly throughout April (see Figure 2) (Carboni and Bester, 2020). The number of unique subscribers that sent peer-to-peer (P2P) transfers doubled from 600 000 in the week right before the lockdown to 1.2 million in the week after, rising to 1.8 million at the end of April. Mobile-powered digital payments, as exemplified by the data provided by the mobile money operator MTN, have also witnessed a sharp rise in value (700 percent in the month following the lockdown), driven by a higher number of subscribers transacting greater amounts (Carboni and Bester, 2020).

1.3 The promotion of digital payments to reduce dependency on cash exchanges

There is currently no conclusive scientific evidence that the COVID-19 virus can spread through contaminated currency notes or coins. Various recent studies have shown that the virus can survive on various materials for a considerable amount of time, including currency notes.⁵ Nevertheless, **the actual risk of infection through note handling (if any) is still**

⁵ A study by Chin *et al.* (2020), published in *The Lancet*, reported that trace infectious amounts of the COVID-19 virus could still be detected on the surface of a paper currency note up to two days following contamination in laboratory conditions. Another study by van Doremalen *et al.* (2020), published in the *New England Journal of Medicine*, showed that the two strains of the COVID-19 virus remained in trace amounts on cardboard up to 24 hours following contamination, and up to 72 hours on plastic.

unknown, and no clear linkage between note handling and virus diffusion has been proven so far. Financial sector regulators at the country level have adopted different stances on this matter, either attempting to restore faith in cash as a safe medium of exchange, or actively discouraging its use to avoid a possible risk of infection.⁶ Despite the lack of a definitive answer on the matter, in both developing and developed countries, a strong surge has been registered in the use of digital payment instruments, both as a way to avoid handling cash⁷ and, more broadly, to facilitate purchases in a time of extended lockdown. Governments and regulators worldwide have supported this process by designing and implementing **integrated strategies to promote digital payments in their markets**, combining regulatory reforms, recommendations to the public, and targeted collaborations with fintech companies and MMOs.

The majority of such response policies have been implemented by policymakers **on a strictly temporary basis**, although a number of them (e.g. those related to know-your-customer, or KYC, requirements) might spur more permanent changes to financial regulatory frameworks. Furthermore, there have also been noteworthy examples in various countries of MMOs implementing similar measures on their own shortly after the outbreak, without being forced by the regulator. Some of the most common measures implemented in this regard have been:

- **Waiving or reducing fees on digital transactions.** These types of temporary

6 The Central Banks of Canada, Germany, Luxembourg and New Zealand, for example, have declared that the risk of infection from currency notes is minimal, and that cash should be viewed as a safe medium of exchange. The People's Bank of China and the Bank of Korea, however, have gone as far as sterilizing currency notes before circulating them in the economy, while the Central Banks of Kuwait and Hungary quarantine newly printed notes for two weeks (Auer, Cornelli and Frost, 2020; Lepecq, 2020).

7 Aside from the exchange of possibly contaminated notes, a mobile transaction also makes it possible to completely eliminate any physical contact between buyer and seller.

measures have encompassed full or partial waivers of both P2P transactions and wallet-to-bank and bank-to-wallet transactions, with the aim of promoting the use of digital payments and transfers over physical cash. In a number of countries (e.g. Kenya), fees were waived for transactions under a certain threshold, to encourage the use of mobile money, especially for low-value, everyday transactions, thereby reducing the circulation of physical notes in the market.

- **Lowering the minimum amount required for a transaction.** This also encourages the digitalization of low-value, routine payments.
- **Increasing transaction limits and maximum wallet balance.** These measures are meant to facilitate trade and purchases of both essential and non-essential items, allowing mobile wallet owners to avoid having to resort to cash in case they exceed their daily, weekly or monthly thresholds, or if the item in question is too expensive.
- **Reducing interchange fees.** In light of the pandemic, temporarily reducing interchange fees, (i.e. the transaction charges that a merchant's bank account must pay whenever a customer uses a credit/debit card to make a purchase from their store), makes sense when **seeking to incentivize payments through a contactless card** over cash. Nevertheless, it is safe to say that such measures are less effective in terms of promoting physical distancing than mobile or online payments.
- **Relaxing KYC requirements for new customer enrolment and self-registration.** The rationale for these kinds of measures is to fast-track new customers' entry into the mobile money system, while also reducing the need for contact between customers and agents (GSMA, 2020b). See Section 5.2 for a more in-depth discussion related to the challenges and tradeoffs related to such measures.

The list below provides a few concrete examples of the application of these and other measures, as part of the public and private response to the COVID-19 crisis in LMICs from different regions of the world. Note that, unless otherwise noted, all these measures have been implemented on a temporary basis.

- **Ghana:** The Central Bank announced in March 2020 that all banks and MMOs had to temporarily waive fees for mobile transactions under GHS 100 (USD 18) and also ease KYC requirements to allow citizens to open low-tier, mobile wallet accounts through existing mobile phone registration details; all without having to provide additional documents. Daily and monthly transaction limits, as well as maximum account balance limits, were also increased in a scalar manner, depending on the tier of the account owned (Bright, 2020).
- **India:** The Indian Central Bank (Reserve Bank of India) has encouraged Indian citizens to use digital payment services rather than cash, and this was echoed by the National Payments Corporation, which launched a fully-fledged awareness campaign (“India Pay Safe”) to promote the same message. The commercial banking sector has temporarily waived fund transfer charges on digital banking platforms to encourage digital payments.
- **Kenya:** Following a directive from President Uhuru Kenyatta to “explore ways of deepening mobile-money usage to reduce risk of spreading the virus through physical handling of cash”, the Central Bank of Kenya has implemented a bundled policy response to encourage digital payments usage in the country. These temporary measures have included: a fee waiver on all mobile money transactions up to KES 1 000 (USD 9); increasing transaction limits for mobile money to KES 150 000 (USD 1 400); waving charges for transfers between mobile money wallets and bank accounts; increasing the daily limit for mobile money transactions to KES 300 000 (USD 2 800); and eliminating monthly limits (Benni, Berno and Ho, 2020).
- **Nigeria:** Although the Central Bank has only limited itself to recommending the use of digital money over cash to the public, several initiatives were taken unilaterally by leading MMOs in the country to promote this change: the telecom company MTN Nigeria, for example, waived fees for all mobile money transfers made through its MoMo agent network; the mobile payment company Paga waived fees for merchants to receive e-payments from their customers through its platform; and Jumia, a leading e-commerce provider, discounted the purchase price of all items by 10 percent for customers who paid using a Mastercard through its JumiaPay portal (Adesina, 2020).
- **Pakistan:** In March 2020, the State Bank of Pakistan temporarily waived the requirement for customer biometric identification in order to register for online and mobile banking account, and all fees are waived on fund transfers through online channels. Banks were also recommended to ensure that their customer support mechanisms, such as help desks, were operational and available full time to aid customers in the use of alternative delivery channels such as mobile and internet banking, ATMs, and so forth.
- **Rwanda:** In March 2020, the National Bank of Rwanda waived fees on mobile money transfers, transfers between bank accounts and mobile wallets, and merchant fees for payments using mobile transactions. The bank has also increased – by three times – the limit on individual transfers using mobile money wallets, from RWF 500 000 to 1 500 000 Rwandan francs (USD 520 to 1 560) (Carboni and Bester, 2020).
- **West African Economic and Monetary Union:** The Central Bank of West African States has introduced a number of measures to promote

digital money use among its member states, in addition to those adopted at country level: a fee waiver for all P2P transactions under CFA 50 000 (USD 86); increasing daily and monthly recharge limits on mobile wallets; waiving fees on utility bill payments under CFA 50 000 made through mobile money; waiving fees paid by merchants on purchases made with mobile money; and easing KYC requirements to allow for remote registration of mobile money users (GSMA, 2020b).

Despite these promising initiatives, it is important to underline that this process of accelerated payments digitization, for entire LMICs' populations, **carries its own set of risks**

and challenges. Existing gaps and imbalances in LMICs' socioeconomic fabric, from the perspective of inclusion, access, education and regulation, are all factors that are bound to influence the impact of the public policies mentioned above, with potential distortions and negative effects on people's resilience, social and economic empowerment, and overall development. The following are the main risks associated with an accelerated payments digitization process:

- **Widening the digital and financial inclusion divide:** From a developmental perspective, a transition towards digital payments and transfers at the country level can only be

A QR code used to encourage clients to pay contactless through their phone, in a grocery store in New Delhi



achieved sustainably if policymakers and private FIs ensure that this process does not **further increase the divide** between those already capable of accessing and using digital financial services, and those who are not. Public-private efforts to promote the use of such services in countries that are still lacking, for example, an adequate IT infrastructure, inclusive levels of mobile ownership, digital and financial literacy, an enabling sector regulation, **risk widening the existing gaps in digital and financial inclusion** that traditionally affect underserved people, such as rural and indigenous people, women and youth.



- **Issues of privacy and surveillance creep:**

An accelerated process of financial services' digitization is bound to make available massive amounts of citizens' personal data to both governments and the private financial sector, not only because of the sudden rise in clients' registrations and use of digital financial products, but also due to the associated implementation or expansion of digital identification systems at the country level, geolocation and other features. Several governments in both developing and developed countries **have begun to use these data to orient and inform the health response strategy against COVID-19** by, for example, limiting people's movements and narrowing their targets for COVID-19-related public messaging, in the name of public health management (see Section 2.1 for more information on this).

Several observers, also from within the United Nations System,⁸ have pointed out that extensive governmental use (or misuse) of these data on citizens' financial identities and behaviours, especially when triangulated with other digital sources of private information such as contact tracing apps or private travel histories, risks paving the way to widespread state surveillance and **prolonged abuse of executive emergency powers**, even after the end of the crisis. It would be a mistake to think that this risk is only circumscribed to countries that already showed authoritarian tendencies prior to the pandemic, as it also applies to established democracies in which the debate around the limits of citizen surveillance on the part of the government is currently ongoing.

- **Increased risk of fraud, data theft and scams:** The sudden surge in the use of digital payment and transfer services carries a considerable higher risk of digital fraud, data theft and scams, as the number of individual

⁸ See, for example, WHO (2020); Berman *et al.* (2020); and UNDESA (2020).

transactions increases exponentially due to the fewer number of alternatives available to carry out purchases, and as thousands of people unfamiliar with these services begin using them for the first time out of necessity, due to pandemic-related restrictions. New and old users risk falling prey to both mobile and internet scams, as well as **fraudulent and misleading commercial practices on the part of the FIs providing digital services.**

Companies can be subject to ransomware attacks, by which the company's files are encrypted by malware, making them inaccessible, with a ransom payment being demanded to decrypt them. Especially in developing and emerging contexts, where digital and financial literacy levels can be notably low, consumers and businesses can turn out to be especially vulnerable to these kinds of risks.

Some initial data collected in the aftermath of the COVID-19 outbreak, in fact, appear to **reflect a growing concern among digital finance users over the increased risk of fraud and scams** due to the higher reliance

of people in lockdown on these services. According to a survey by the payment systems company ACI Worldwide (2020), for example, 46 percent of Indian consumers stated they were considerably more concerned about digital payments fraud following the COVID-19 outbreak, while 28 percent declared they were exercising considerably more caution when using these services.

There are **several layers of interventions that policymakers can enact** to mitigate such risks, including the introduction of transparent and impartial redress mechanisms; adequate regulation and supervision of FIs in the digital finance space; strengthening IT security within FIs' internal structures; training agents; expanding consumers' choice in FI selection; digital and financial education for consumers; incentivizing ease-of-use and customer-centricity in the design of apps and digital platforms; and several more. These different types of policy and programmatic interventions will be analyzed in-depth in the various sections of this study.

Fostering the use of digital payments to enable e-commerce and door-to-door delivery services

2.1 General overview

The COVID-19 pandemic and consequent lockdown measures have resulted in a strong shift towards online buying from home and a higher reliance on door-to-door delivery services at a global scale, as people, forced to remain in their houses, had to adjust their purchasing and consumption patterns to adapt to the new scenario. Aside from developed countries, this scenario also presented itself in those LMICs that had invested substantially, prior to the pandemic, **in the development of a solid e-commerce infrastructure at the country level**. In Peru for example, as of April 2020, almost 50 percent of all private purchases were carried out online because of the lockdown, a fourfold increase compared to a few months before (Peru Retail, 2020). In Brazil, a survey carried out in June by Visa (2020) showed that 56 percent of consumers had started shopping online whenever possible, as a response to the pandemic. Daraz, the largest e-commerce platform of Pakistan, reported a 40 percent increase in online sales of essential items in the month after the lockdown (Niazi *et al.*,

2020). It is important to note that this growth has not only encompassed business-to-consumer (B2C) sales, but also business-to-business (B2B) e-commerce.

On one hand, online purchases, especially of essential goods, have initially increased following the global COVID-19 outbreak. On the other, the growth in e-commerce has been partially offset **by the complex combination of operational and economic challenges** that the pandemic has created for international and regional trade, in terms, for example, of supply chain disruptions, over-demand for specific articles, as well as widespread order cancellations due to the uncertain economic situation. To give an example, **Jumia**, the largest e-commerce operator in Africa, had to temporarily suspend deliveries of consumer electronics and fashion items following the outbreak on the continent, due to supply chain disruptions registered in China (Kazeem, 2020).

While it is too early to gauge the effects that a pandemic-induced economic recession can have on e-commerce at a global level, it is evident that



Vegetable market during COVID-19, in Antananarivo, Madagascar

the crisis has already brought to light both the potential that e-commerce holds for LMICs (not just from an economic perspective, but also from that of livelihood resilience and social protection), and the **many challenges faced in these contexts to build and maintain profitable and sustainable e-commerce systems**, such as the digital divide excluding millions of vulnerable people from accessing such services; customers' fears of possible scams and frauds; the inefficient supply chains and challenging logistics of delivery; the widely different and fragmented markets and regulatory frameworks, which make it challenging to serve customers in different countries; and several other factors.

Despite these considerations, the current global trends are pointing **to an exponential rise in new food delivery and e-commerce startups** in both developed and developing countries, as well as in existing brick-and-mortar retail businesses transitioning to the digital marketplace in an effort to meet the rapid rise in demand for online purchases. The crisis has resulted in consumers who were traditionally unfamiliar with

e-commerce and door-to-door delivery services (such as the elderly and the rurally located) to embrace these services out of necessity, a scenario that also carries evident associated risks in terms of data privacy concerns, cybersecurity, and vulnerability to deceptive practices, to name a few. In this sense, from the perspective of the regulator, **issues of financial consumer protection and e-commerce consumer protection are destined to intersect**, and therefore should be approached in a holistic manner.

Within this widespread scenario, **digital payment services stand as a core enabler of e-commerce and door-to-door delivery services**, a foundation block in the user experience that allows people to purchase an extremely wide variety of products from their homes while complying with lockdown and physical distancing measures. Although cash-on-delivery (COD) is still the method of choice for customers in many developed and developing countries to pay for online purchases (such as in Pakistan and in countries in the Middle East and North Africa, or MENA), this payment modality has registered an understandable decline in

the wake of the COVID-19 pandemic, due to the increased risk of contagion and reduced reliance on cash. Both governments and the private sector, all over the world, have implemented temporary measures to facilitate the use of digital payments to promote e-commerce as a response to the outbreak, such as lowering or removing transaction costs on digital payments, increasing network capacity, and improving delivery services and other aspects of logistics (WTO, 2020; Fallouh, 2020).

Overall, several advantages associated with using digital payments as a way to promote e-commerce at country level can be highlighted:

- 1 There is an overall reduced risk of infection as people do not have to visit brick-and-mortar vendors for their purchases**, or an ATM to withdraw cash. For concerns about the risk of contact with the delivery person, several door-to-door delivery platforms around the world, such as Appetito24 in Panama and Cheetay in Pakistan, have begun offering **contactless deliveries** during the pandemic (i.e. leaving the goods at the buyer's doorstep), for which digital payments are an essential enabler.
- 2 People are able to acquire the basic necessities they need to weather the lockdown period**, such as food and hygiene products, especially when considering that most brick-and-mortar retailers are bound to be closed due to response measures, or their stocks might be empty. Being able to pay through a mobile phone is crucial in this sense, especially considering that exiting the house to withdraw cash at an agent, branch or ATM is usually not an option. A strong e-commerce network capable of reaching even the most remote rural areas is critical in this sense, as the pandemic might leave **entire rural communities with very few alternative options**, such as brick-and-mortar shops or stalls, capable of providing them with essential goods.

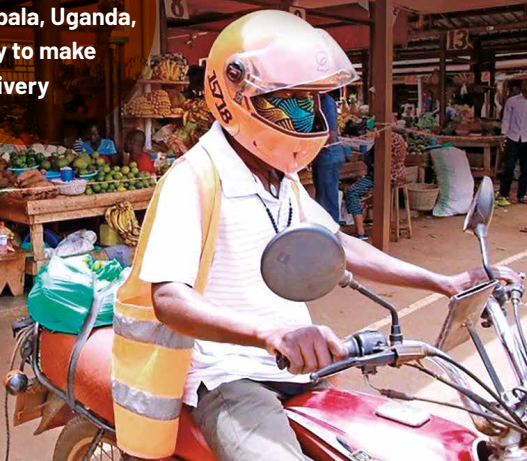
- 3 Retail businesses that are able to shift to an e-commerce model can keep selling even when their physical premises are closed.** For small businesses that are forced to close their physical premises due to the lockdown, shifting to an e-commerce platform to guarantee at least part of their sales can turn out to be a lifeline that allows them to avoid bankruptcy during the pandemic. Ensuring this transition can represent a **critical determinant** for the capacity of the MSME sector (and of the job market as a whole) to weather the crisis.

From the perspective of a retail business, managing this transition successfully is evidently predicated **on a wide range of contextual and enabling factors**, such as an established ICT infrastructure in place; a regulatory environment (including temporary, pandemic-related policy measures) that enable this shift; sufficient levels of digital and financial literacy; and adequate government support (both financial and technical), among many other factors.

Despite these premises, it should be noted that **accessible and affordable e-commerce is still a distant reality for many LMICs**, due to a variety of constraining factors, including: a weak or absent ICT infrastructure; low levels of internet penetration and computer/smartphone access; the lack of an adequate regulation of the e-commerce and digital money industry; low consumer trust and scarce familiarity with the concept; and scarce public support (technical and financial) for e-commerce start-ups. Even in those developing countries that have already substantially invested in the enabling elements of an e-commerce infrastructure, it is doubtful that large shares of small-scale retailers, producers and rural customers will be able to access it with ease (and benefit from it) in a pandemic, given the various endemic inequalities and gaps that are registered in these contexts (e.g. in terms of mobile penetration, sufficient means to purchase, digital literacy, road infrastructure, and many other aspects).

Nevertheless, some interesting examples can be mentioned of **mobile money technology being used to enable basic forms of e-commerce**, as a specific response to the pandemic, even in developing contexts that cannot yet rely on an established e-commerce infrastructure. In a number of African countries, for example, with the aim of encouraging the remote purchase of basic food items, local governments have begun to compile and make available to the general population the telephone contacts of coordinators of different food products in local markets, through various channels such as social media and text messages. This has enabled consumers to call the coordinators and order groceries directly, paying for the products through their mobile phones and having them delivered to their home by a motorcycle taxi or a similar delivery method (WTO, 2020). The example of the partnership between the United Nations Capital Development Fund (UNCDF) and SafeBoda in Uganda, described in Box 1, shows how this idea can be formalized and expanded, through the development of a dedicated mobile app. Although still a far cry from established e-commerce networks, these kinds of “pandemic-induced” solutions are showing considerable potential to be further developed into more established mobile-powered systems in the future.

SafeBoda driver at a market in Kampala, Uganda, ready to make a delivery



Aside from these early considerations, there is hope that this forced shift towards digitalization induced by the pandemic will end up boosting in the medium and long-term, the development of **a stronger e-commerce market and associated digital payments networks** in several LMICs, similarly to what happened in China in 2003, in the aftermath of the SARS epidemics (see Box 2).

BOX 1

The United Nations Capital Development Fund (UNCDF) and SafeBoda Uganda are developing e-commerce as a response to the pandemic

In April 2020, a collaboration between UNCDF and SafeBoda Uganda, a motorcycle taxi e-service with a network of 18 000 riders, led to the creation of an e-commerce platform that connected small, local businesses to households in lockdown due to COVID-19. Through the SafeBoda app, customers in lockdown can purchase goods (such as food and essential items) from a network of 800 vendors, which are delivered to them by SafeBoda riders (in exchange for a fee). The app also has a wallet function that customers can top up with mobile money, allowing them to avoid having to pay customer due diligence (COD) and have a contact-free delivery experience.

UNCDF collaborated on the project by providing technical and financial support required to develop the platform, whose analysis will be extremely relevant from the perspective of developing e-commerce services to respond to the pandemic. A projected 50 000 customers are expected to be reached daily through the platform. There are also plans to expand the available offer to include food items from market vendors, as well as increasing the network of vendors and customers (UNCDF, 2020b).

BOX 2

The rise of e-commerce and digital payments in China following the SARS epidemic

The SARS epidemic of 2003 was a key event in promoting e-commerce in China, as millions of people in self-imposed lockdown for fear of contracting the virus **started turning to the internet to shop** for essential and non-essential items. Some of today's largest platforms of the Chinese e-commerce industry (e.g. Alibaba's Taobao and JD.com), which were founded around that time, soon experienced a meteoric rise. By 2006, Taobao already held a larger share of China's consumer-to-consumer (C2C) e-market than eBay, resulting in the latter towards pulling out of the country altogether.

The Chinese digital payment ecosystem grew alongside e-commerce, as the latter moved from a cash-on-delivery model to a modern **"mobile payment upon delivery system"**, which is safer and more convenient during an epidemic. This growth in mobile payments was built on a strong collaboration between the government and the private financial sector, and focused on building essential infrastructure in the areas of identity proof, internet access and interoperable payment systems.

Although this episode holds interesting parallels for what could potentially happen in several low- and middle-income countries (LMICs) on the impulse of the COVID-19 pandemic, it should be noted that the surge of e-commerce in China following the SARS epidemic **was built on the foundation of a series of already present, critical enabling elements**: 960 million Chinese had access to formal identification in 2003; 500 million credit cards were in circulation; and nearly 67 million people had access to the internet (Xiao and Chorzempa, 2020). Furthermore, while it is true that the SARS epidemic had positive aftereffects on the promotion of digital payment modalities in the country, the real boost to the Chinese digital finance ecosystem came in the aftermath of another crisis, **the 2007/08 global financial crisis**, when a multitude of fintech start-ups rose to fill the increasingly more evident gaps in the

traditional banking sector's offer, leveraging the advances in digital technology to offer cheaper, faster and easier-to-use services to a larger pool of customers.

Today, China has become a leading innovator in all aspects of the fintech domain, a country where the use of digital payments, transfers, credit, savings, insurance, wealth management, and a host of other services, is endemic to everyday life. More than 86 percent of Chinese citizens use mobile services to pay for any kind of expense. Alipay, the world's largest mobile payment platform whose parent company is Ant Financial (the fintech conglomerate part of the Alibaba Group), was serving 1.2 billion users as of 2019.

The most controversial aspects of the meteoric rise of digital finance in the country, chiefly the concerns relative to data privacy and surveillance creep, have also been evident in the context of the government's response to the COVID-19 outbreak. Regional Chinese governments, for example, have been tracking digital purchases of fever medicines on the part of individual citizens to organize relief efforts (Shevchenko, 2020). The government of Hangzhou, in collaboration with Ant Financial, introduced in March 2020 **a compulsory "health code"** embedded in the Alipay digital wallet, which was adopted nationwide a month later. Alipay users are assigned one of three codes – red, yellow and green – based on their travel history and other information submitted by users, such as their own test status and recent contacts with any confirmed cases of COVID-19. Local authorities then cross-examine the information with financial and transport data collected by various departments, such as users' past bank card transactions and public transport they used. Depending on the code assigned, the user is told whether he/she is free to go out and work, or has to self-quarantine for a variable amount of time (Huang, Sun and Sui, 2020).

2.2 Policy recommendations to foster digital payments as enablers of e-commerce

While a series of general recommendations related to the promotion of digital payments in response to COVID-19 have already been illustrated in Section 1.3, the following are specific suggestions that focus on the use of digital payments from an e-commerce perspective.

Account for inclusion gaps in policies promoting digital payments. Although governments can employ a variety of measures to promote the use of digital payments as an enabler of e-commerce at the country level, there is a considerable risk of widening the current digital divide if such policies do not make adequate considerations for inclusion concerns during both design and implementation. The risk, in other words, is leaving behind the most vulnerable small businesses, producers and consumers (i.e. those who are unable to adequately make the transition from a brick-and-mortar marketplace to a digital one). Several of the **traditional inclusion gaps** that are endemic to developing countries can aggravate this inability to shift to digital, in what relates, for example, to gender, location (rural-urban), age (in many developing countries, youth show lower rates of mobile ownership), and literacy levels (both financial and digital), among others.

Foster a digital payments culture. In many developing and emerging countries, there is still a strong COD culture that is deeply rooted in consumer behaviour, and which stands as an important barrier to the uptake and acceptance of mobile payments services. In many Sub-Saharan African countries, for example, while the growing popularity of mobile money has helped to facilitate e-commerce, **especially for smaller payments**, larger payments are still transacted in cash, both due to cultural reasons (i.e. consumers prefer to inspect the item in person before paying) and the set limits in most mobile wallet systems. In Pakistan, more than 90 percent of e-commerce

purchases are paid through COD, both due to customers' greater trust in this modality, as well as the relatively low levels of mobile money usage and high dependence on original credit transactions (Fitch Solutions, 2020).⁹

⁹ It is important to note that the presence or absence of a cultural attitude towards carrying out digital payments is usually inextricably tied to other, critical enabling elements at the country level such as the regulatory framework, rule of law, contract enforceability, and logistics. In this sense, before implementing awareness campaigns and other forms of education, the first and most important step for a policymaker to encourage a shift in cultural attitudes is to address the most critical flaws in regulation and infrastructure that impede digital payments adoption among the overall population.



With the COVID-19 pandemic, COD purchases have dropped considerably on a global scale, spurred by customers' fears of contagion, as well as the specific restrictions enacted both by e-commerce companies and national regulators. In India, for example, e-commerce companies such as Amazon and Flipkart temporarily suspended the option to pay COD for online purchases following the outbreak. In the MENA region, where 80 percent of the e-commerce transaction volume is paid by COD, the Saudi government forbade e-commerce companies to provide this option (Fallouh, 2020; Go-Gulf; 2017). Although it can be anticipated that this decreased

tendency towards COD payments **is bound to partially stick for the duration of the pandemic** (and possibly beyond), there is no assurance that with the passing of time customers will not relax their vigilance and go back to favoring COD as their preferred option for online purchases.

Two core lines of public action can be highlighted when seeking to foster the development of a digital payments culture at the country level. One is **policy-related**, involving the creation of safe, transparent ways to pay digitally without fear of fraud or scams; providing adequate redress and complaint resolution mechanisms;



A fruit seller
in the Marcory
district of
Abidjan,
Cote d'Ivoire

loosening balance and transaction restrictions on mobile wallets (as presented in Section 1.2); and implementing a series of financial incentives that encourage making all sorts of payments, both large and small, through digital channels. The other one is **cultural**, and encompasses a series of public communication and advocacy initiatives (e.g. awareness campaigns, public champions) aimed at breaking the deep-seated mistrust that citizens, especially those less familiar with digital payments services in general, including the elderly and the rurally located, might feel towards these kinds of payment modalities.

Promote collaborations between e-commerce companies and MMOs. Collaboration between e-commerce companies and mobile money providers is essential in order to develop an ecosystem that can propel both industries forward in a mutually beneficial manner. On the one hand, e-commerce companies can aid MMOs in developing a stable customer base that relies on its services to make its purchases online. On the other hand, MMOs assist the work of e-commerce companies by enabling digital purchases (instead of only COD), providing customer care for the resolution of payment issues and similar complaints, and reducing delays in the realization of sales. MMOs can also collaborate as logistical partners for e-commerce

companies, assisting them in enabling last-mile deliveries in more remote areas, in exchange for gaining an additional source of income (GSMA, 2018a).

While there are different measures that can be adopted by policymakers to foster these types of collaborations, a fundamental starting point would be the establishment of a **public-private working group** that promotes dialogue among MMOs, e-commerce companies and the regulator, with the objective of smoothing the regulatory and logistical barriers to digital purchases, as well as encouraging last-mile collaborations and innovations that can reach the most remote and underserved rural clients. As will be further illustrated in Section 7.2, several countries in recent years have introduced “innovation offices” that seek to facilitate regulator-innovator engagement in the digital finance ecosystem and help the regulator identify emerging issues in this space. In this sense, these platforms could represent an important starting point to foster collaboration between digital financial providers, e-commerce companies and the regulator, with a view to promoting the development of technical and financial innovations capable of reaching the most vulnerable and financially underserved people and businesses affected by the pandemic.

Ensuring timely payments of response staff through digital channels

Given the disruptions that a pandemic-induced economic crisis can have not only on the private sector, but also on public budgets, it is obvious that governments in developing contexts are bound to face challenges, as the crisis progresses, in ensuring that the frontline personnel engaged in the fight against the pandemic (e.g. doctors, nurses, and hospital staff), **are paid in a timely and regular fashion**. This issue is particularly critical for response staff who are employed in more remote, rural areas. Payment service breakdowns lasting weeks or months can put frontline staff in very difficult situations, damaging their motivation and increasing the risk of strikes.

Recent experiences have shown that digitizing payments for response personnel can go a long way in mitigating or solving these issues by enabling the mobilization of a large-scale workforce quickly, effectively and in a sustainable manner. A case study by the Better Than Cash Alliance (2016) describes how the government of Sierra Leone, during the Ebola epidemic of 2014/15, developed and implemented a **"Payments**

Programme" to digitize salary payments for **26 600 Ebola response workers** across all 14 districts of the country, with support from various United Nations organizations. As a result of this process, response workers were able to receive their monthly pay directly on mobile wallets, expressly set up for this goal.

The Payments Programme achieved a series of noteworthy results. First, it resulted in **more than 2 000 lives of Ebola patients being saved**, as it put an end to payment-related strikes on the part of response workers caused by the frequent delays, errors and thefts associated with providing salaries in cash. Second, delivering payments via mobile also generated substantial cost savings by eliminating double payments, reducing fraud, removing the costs of physical cash transportation and security, and cutting travel and transaction costs for response workers. In fact, the case study estimated that digitizing salary payments resulted in almost USD 11 million being saved in security costs and other costs related to moving cash. Third, the time it took response workers to be paid was reduced from one month to one week,

with 98 percent of response workers receiving their payments on time. Finally, shifting to digital payments also put a stop to the diffused practice among managers to carry out **unauthorized deductions of up to 50 percent of the response workers' hazard pay**, which was common when salaries were given in cash (Better Than Cash Alliance, 2016).

Several important lessons can be learned from this case. First, it should be noted that the digitization of payments for Ebola response workers became possible because of **a range of enabling factors** already present on the ground, which were the result of a series of substantial investments that the country had carried out prior to the crisis.

- **High levels of mobile penetration:** Sierra Leone entered the Ebola crisis with a rate of mobile phone access and coverage of 90 percent across the country, and a strong

network of more than 5 000 mobile money agents. As a result, all response workers – at the beginning of the salaries digitization process – owned a mobile phone that could be used to set up a digital wallet.

- **An established digital payments infrastructure:** Prior to the beginning of the crisis, the Sierra Leone government had invested in the necessary digital payments infrastructure that could be leveraged by response workers to pay for food and other essential goods and services directly with their mobile accounts, without having to cash out. Although a tendency towards cashing out was still strong among response workers – both prior and during the project's implementation due to ingrained behaviours – **substantial consumer education** carried out during the project made them more aware of the benefits of keeping their transactions fully digital.



Member of an Ebola decontamination team in Makamie, Port Loko District, Sierra Leone

Beyond the foundational elements that were necessary to enable this process, it is important to analyze the **design features of this digitization intervention**, which were an integral component for its success, with a view to providing useful recommendations for possible replications of this experience in other LMICs during the COVID-19 pandemic:

- **Fast-track KYC requirements and consider biometric technology to overcome gaps in ID access.** The Payments Programme worked in coordination with local MMOs to ease KYC requirements for response workers so that they could be quickly registered and start receiving their salaries digitally. This involved agreeing on a minimum set of KYC checks to keep in place, as well as providing support to MMOs in carrying out the required controls. A fundamental element that enabled easing these requirements and setting up the mobile wallets was the **adoption of biometric technology to identify each response worker**, and specifically facial recognition. The choice of using this technology was due to the challenges faced in identifying response workers in the traditional way in the Sierra Leone context, as most of them lacked any type of conventional form of ID that could be used as a basis for account registration. In fact, only 15 percent of Sierra Leone citizens are covered by the national identification system, while more than 90 percent of the population shares the same 10 surnames, which complicates the identification process. The choice to use facial recognition technology over fingerprint scanning, the most common and easy-to-implement alternative, was due to the possible risk of Ebola transmission associated with physically touching an interface.
- **Promote consumer education and protection among response workers.** A lack of consumer education can make any initiative to digitize payments quite short-lived, as programme recipients are often unable to perceive the

advantages¹⁰ associated with keeping cash digital and using the mobile account they own to access different financial services. At the beginning of the Payments Programme, **response workers tended to cash out immediately upon receiving their payment on their phones**, and then went on to transact in cash. As a result, the benefits of avoiding cash transactions were lost, with response workers eschewing the possibility of saving money digitally or use other financial services through their mobile wallets. Following the introduction of a consumer education course in the Payments Programme, a few months after its start, an initial 20 percent of response workers started maintaining balances in their mobile wallets, instead of cashing out immediately.

With regards to **consumer protection**, this study has already shown that payment digitization comes with its own risks. Fraud, scams, lack of contract transparency, and poor customer recourse options can critically impair the success of such an initiative. That is why it is fundamental to guarantee that: 1) proper complaint redress mechanisms are in place to deal with response workers' claims; 2) adequate public supervision of the MMOs enabling the mobile payments is provided, in order to ensure that they are behaving correctly; 3) adequate communication is provided to all customers, to inform them clearly of what happens if something goes wrong and what the channels are for correcting the situation.

At the beginning of the digitization process in Sierra Leone, for example, there were no

¹⁰ Note that this is not always the case; especially in situations where the digital financial ecosystem is still considerably underdeveloped, consumers might appreciate the advantages of keeping transactions fully digital, but tend to use mainly CICO transactions because of the inherent limitations of the ecosystem. In this case, more than promoting consumer awareness, the policymaker should focus on addressing those specific infrastructural and regulatory barriers that impede greater levels of adoption of digital financial transactions.

complaint redress mechanisms available for response workers even though they were facing all sorts of issues with the new mobile payment system, such as backlogs of payments they were owed or failures in transactions due to an incorrect phone number or bank account being inputted incorrectly. In February 2015, the National Ebola Response Center (NERC) instituted a comprehensive complaint redress mechanism (i.e. a **Help Desk for response workers**), through which payment-related issues could be resolved in the span of one day. In the first two months since its introduction, the Help Desk had helped solve over 4 000 payment issues – close to a 100 percent resolution rate – substantially increasing the efficiency of the system (Better Than Cash Alliance, 2016).

- **Digitizing the preliminary processes to enable mobile payments.** Digitizing the preliminary processes that are required to enable response workers' mobile payments, such as worker identification, registration, and payee list management, is a fundamental step to overcome the main challenges that can critically affect this process, such as double payments, ghost recipients, fraud, duplications of processes, and delays in payments to recipients. That is why, in the initial phases of such initiatives, governments and supporting agencies should **focus first on the digitization of the very foundations** on which an efficient and transparent mobile payments system can be built (Better Than Cash Alliance, 2016).
- **Manage liquidity issues.** Given that the network of Ebola response workers was spread across 14 districts of Sierra Leone and mainly in rural areas, it was necessary to actively manage liquidity among agents, ATMs and points of access to ensure that workers could easily cash out their salaries when they needed and wanted to. This situation was complicated by the fact that in the whole of Sierra Leone at the time, there were fewer than 50 ATMs and 50 points-of-sale (POS) terminals, located

mostly in urban areas. This issue was solved **by deploying the agent network** of the 13 community banks affiliated with the Central Bank of Sierra Leone, which are FIs expressly tasked with extending financial services to local communities that cannot access the commercial banking system. This agent network was able to mitigate the weakness of the banking infrastructure in rural districts, thereby allowing response workers to cash out their pay with ease.



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This is an important lesson for LMICs that seek to replicate Sierra Leone's experience in their contexts during the COVID-19 pandemic. Digitizing payments for response workers without ensuring that there is a **comprehensive and readily accessible agent network** available for them to cash out can be a major factor for failure in such an initiative. It is interesting to note that low liquidity in national banking branches (especially in rural areas), coupled with a weak agent network, was one of the main factors that impeded the replication of

Sierra Leone's experience in Liberia and Guinea during the same Ebola crisis of 2014/15 (Better than Cash Alliance, 2016).

- **Implement clear mobile money guidelines.**

At the beginning of the digitization process, there was no regulatory framework formally established in Sierra Leone to regulate the activity of MMOs, which were responsible for delivering the digital payments to response workers. The central bank initially tried to push forward the process through a bank-driven



COVID-19 testing center in Madagascar

model, meaning that **telecom companies could only provide mobile money services in partnership with a licensed commercial bank**, and had to face substantial administrative and operational hurdles to enter this market. Nevertheless, the reality on the ground was that mobile network operators (MNOs) were the only real drivers of the digital payment activity, as establishing partnerships with local banks was a cumbersome and still untested process. As a result, given the need for immediate action brought about by the Ebola crisis, the Bank of Sierra Leone introduced a new regulation for mobile money in November 2015 that allowed MNOs to register new mobile wallets and provide mobile money services independently. This became a key enabler for the smooth transition towards mobile payments for response workers, with three MMOs contracted and engaged in the system.

- **Promote public-private collaboration as a key enabler.** The digitization process of response workers' payments in Sierra Leone was the result of a harmonized effort between NERC and **more than 18 public, non-profit and private organizations** that provided their technical and financial contributions for the

success of this initiative. The United Nations Development Programme, UNCDF and Better than Cash Alliance, for example, provided technical assistance and implementation support to NERC for the realization of the initiative. Several non-governmental organizations (NGOs) coordinated with NERC to enable payments for response workers, while establishing a common information management system to avoid overpayments. Three different MMOs were contracted by NERC to deliver the payments into mobile accounts.

Considering the complex challenges associated with enabling the digitization of response workers' payments, especially those working in the most remote areas, it stands to reason that different angles of technical expertise and financing are required to overcome the various bottlenecks that are bound to emerge, both during the design and implementation phases of this process. In this sense, **the ability to tap into the coordinated expertise and contributions of different stakeholders** – both public and private – should be viewed as a primary enabling factor to replicate the Sierra Leone experience during COVID-19.

Transitioning to fully digital remittances in the frame of COVID-19

4.1 The impact of the pandemic on remittance transfers

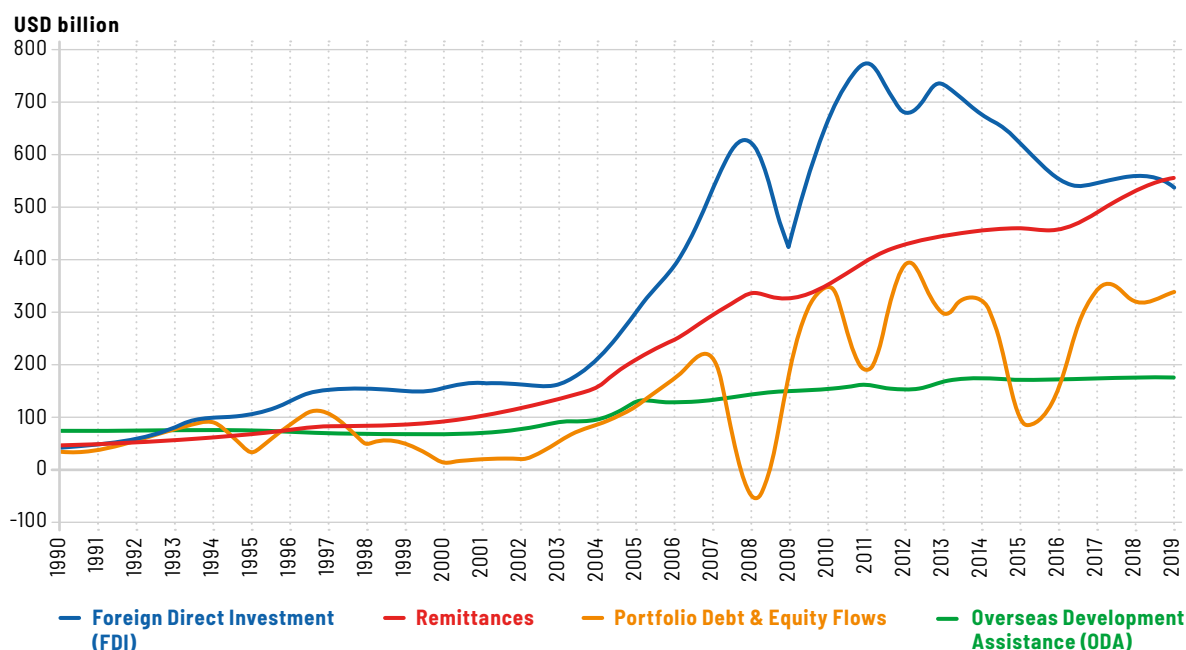
At the global level, the impact of the pandemic on remittance flows – both in the present and the future – is expected to be catastrophic in the medium- and long-term, given the widespread economic damage caused by the outbreak, which is bound to affect the position of millions of vulnerable migrant workers, especially those working on an informal or seasonal basis. Considering that in 2019 the **global remittance flows to low-income and fragile states reached a record USD 554 billion** (see Figure 3), higher than the inflows of foreign direct investment, equity, and official development assistance, it is easy to see how this expected decline is bound to have critical consequences on economies and societies that strongly rely on this external support (Ratha *et al.*, 2020).¹¹

¹¹ There are 24 countries in the world that register a remittance-to-GDP ratio above 10 percent. In eight of these (Armenia, Haiti, Kyrgyzstan, Lesotho, Liberia, Nepal, Tajikistan and Tonga) this ratio is over 20 percent (IFAD, 2015).

Shortly after the outbreak, the only players in the remittance market that registered a short-term uptick in volume and frequency of transfers have been **digital money transfer platforms**: service providers that allow workers to send cross-border transfers through digital-only channels without having to rely on a physical agent to cash in. This has been most likely due to: 1) migrant workers sending more money home to support their families forced into lockdown; and 2) the same workers being unable to go to a physical money transfer agent¹² to carry out the transfer, again due to the lockdown. To give a few examples of this growth, World Remit, a mobile-to-mobile international remittance service linked to key mobile money platforms around the

¹² It is worth noting that on a global scale, remittance flows are still heavily dependent on cash-to-cash transactions via physical agents, due to several factors, including the regulatory challenges associated with enabling cross-border mobile money transfers, the complexity of navigating KYC requirements without the help of an agent, and overall convenience and reliability. As an example, over 90 percent of the remittances sent home by the African diaspora in the United Kingdom of Great Britain and Northern Ireland are enabled by a physical agent (FSD Africa, 2018).

FIGURE 3
Inflows to low- and middle-income countries, 1990 to 2019



Source: adapted from Ratha et al., 2019

developing world (such as M-Pesa and Bkash), reported a double-digit growth in the aftermath of the COVID-19 outbreak. Another similar service with more than 1 million customers, Remitly, has reported a 40 percent increase in transaction volume between February and March 2020, and a 100 percent increase in customer additions from March to April (Balch, 2020).

Although digital remittance platforms can play an essential role during COVID-19, it is a fact that **the flow of remittances enabled by these services are still relatively small¹³** compared to “conventional” remittance transfers (i.e. a migrant worker relying on an agent to cash out a specific sum for cross-border sending).

¹³ In 2019, the global transaction value for digital remittances was USD 79.3 billion, representing 30 percent of the total remittance market, for a total user base of more than 7 million. This share of the market is expected to increase at an annual compound growth rate of 17.9 percent for the 2020–2026 period, according to a COVID-adjusted analysis by KBV Research (2020).

Nevertheless, in a pandemic these kinds of transactions are both infeasible and inadvisable due to widespread mobility restrictions, business closures, reduced agent networks, and the overall added risk of infection associated with cashing out through an agent.

In fact, in the medium- and long-term, the widespread lockdowns and overall economic paralysis brought about by the pandemic **are expected to heavily impact on outgoing remittance flows** generated by migrant workers all around the world, as the economic crisis and expected global recession places employment and hiring at considerable risk. To give a sense of perspective, 75 percent of the world’s migrants work in countries where three-quarters of the global cases of COVID-19 cases have been registered, as of June 2020 (UNCDF, 2020a). According to data from the World Bank, global remittance flows to LMICS are expected to

drop by approximately USD 110 billion in 2020 (a 20 percent drop compared to the previous year), with the highest drops expected in Europe and Sub-Saharan Africa (Ratha *et al.*, 2020).

This is bound to be particularly catastrophic for developing and emerging countries **whose economies depend heavily on incoming remittances from the diaspora**, and where remittances represent essential lifelines¹⁴ for thousands of vulnerable households. In Nepal, for example, a country where remittances account for 26 percent of the national gross domestic product (GDP), the World Bank has estimated that the incoming remittance flow for 2020 will decrease by 14 percent – a loss of approximately USD 1.2 billion. In Bangladesh, the World Bank projects a remittance inflow decrease of 25 percent from 2019, a USD 4 billion loss. It is too early to gauge with accuracy the impact that the crisis will have on international remittance flows, as the magnitude and effects of the pandemic on the global economy are still unfolding (Finnish Ministry for Foreign Affairs, 2020).

From a financial inclusion perspective, it should be noted that this drop in incoming remittance flows can also have critical consequences on people's ability to access credit from formal FIs. Banks in remittance-dependent countries rely on remittance inflows as a cheap source of deposit funding. Due to the impact of the pandemic, it is highly likely that **operational costs for commercial banks** in LMICs (and other brick-and-mortar FIs) will increase, while their capacity to provide credit to self-employed

individuals and small- and medium-sized enterprises will be substantially reduced – thus worsening what constitutes already a dire scenario of constrained economic activity and substantially lower demand for products and services (Sayeh and Chami, 2020).

To what extent have private FIs that are engaged in the remittance market already been impacted by the crisis? According to a survey by the UNCDF (2020a) among high-level representatives from various FIs active in the remittance industry, 69 percent of providers (primarily currency exchanges and remittance network providers) stated having been affected by the decrease in remittance volumes, caused by lockdowns, loss of income, and workers' repatriations to home countries. Almost half of the survey respondents stated they would struggle financially if the pandemic lasted after 2020, which could lead some competitors to step out of the market and, ultimately, counteract the recent efforts from the global development community to reduce remittance transaction costs. Finally, when asked what measures they planned to implement to respond to this crisis, **more than two-thirds of the FIs interviewed stated that they planned to strengthen their digital channels**; for example, by developing a dedicated app or by seeking a partnership with a digital solutions provider (UNCDF, 2020b).

Hence, on the wave of the impact of the pandemic, **there is a clear push on the part of providers towards further digitization of remittance transfers**, with considerable and understandable support from policymakers and regulators. Nevertheless, this shift is made challenging by the lack of readiness for a digital transition in many LMICs' remittance markets, compounded by issues already illustrated throughout this study such as low levels of digital literacy, a weak ICT infrastructure, and non-enabling regulatory frameworks. In the frame of this scenario, it is interesting to analyze the various strategies that private financial

14 There is an ongoing debate over whether remittances constitute important lifelines for migrants' home countries also because of their countercyclical nature, as they would tend to increase during economic downturns in home countries (brought about by natural disasters, political conflicts, financial crises, and other shocks) and thus provide a better buffer to consumption against short-run fluctuations in income. Nevertheless, the evidence that remittance flows in migrants' home countries are truly countercyclical is still disputed. Refer to De *et al.* (2016), Ratha *et al.* (2015), Constantinescu and Schiff (2014), Frankel (2011), for a more in-depth look at the existing evidence.



institutions and policymakers have put in place to digitize and adapt remittance receival processes, as a response to the pandemic:

- **Nepal:** Following the outbreak, commercial banks have set out to digitize the remittance receival process, so that clients do not have to get out of their houses to receive the money they have been sent. The process now involves proving your identity as the receiver to the bank through a code number (sent by the remittance sender) and a scanned form of ID, through a mobile phone or computer. The money can be received on any bank account that is part of “ConnectIPS”, the single payments platform developed by the Nepal Clearing House, with most commercial banks being ConnectIPS members (Shreshta, 2020).
- **Bangladesh:** In the wake of the outbreak, the government of Bangladesh allocated BDT 30.6 billion (USD 361 million) to provide a 2 percent cash incentive to all migrant workers sending money home to Bangladesh through

formal channels (which include digital ones) in an attempt to bolster remittance inflows in the country. Some banks began providing an extra 1 percent incentive for remittance beneficiaries receiving money by digital means, further increasing the appeal of such channels for remittance senders. The Central Bank also tripled the ceiling on the maximum remittance value that provides a small cashback to senders (up to BDT 500 000, or USD 5 000) (Aneja and Islam, 2020). Remittance flows into the country made through digital channels (e.g. mobile phones, online) were 150 percent higher in April 2020 compared to the beginning of the year (ADB, 2020).

Despite these promising examples, it should be noted that **it is extremely challenging to transition to fully digital remittance transfer chains**, in which migrant workers receive their wages directly into a digital account, then send a part of it through a digital cross-border transfer to their families, who also receive the

money in a digital account. To enable such a digitization process, there would be a need for a substantial, prolonged effort of collaboration among policymakers, MMOs, FIs, and other stakeholders, in both sending and receiving countries. Remittance users and their families would need to be encouraged to move away from agent-based transfers, through financial incentives, regulatory easing, awareness campaigns and education. Ideally, beyond the remittance transfers themselves, it would also be necessary to **incentivize the digitization of other use cases** to avoid cashing in or out at all stages of the transfer chain, such as encouraging employers to pay migrant workers digitally, or allowing families to pay utility bills through such channels (Gravesteijn, Aneja and Cao, 2020).

Given these premises, it should be noted that the long-term effects of the COVID-19 pandemic do not have to be uniquely negative for global remittance flows. If leveraged properly, through the collaboration between policymakers and private financial stakeholders, this event holds the potential to act **as a catalyst in accelerating the digitization of global remittance transfer chains**, both through immediate action and longer-term investments in infrastructure and regulation. The next section provides a series of general recommendations aimed at supporting this process.

4.2 Recommendations to foster digital remittances in the frame of COVID-19

Simplify and adapt regulatory requirements:

Policymakers should ensure that the national frameworks regulating remittance services are solid, transparent and non-discriminatory, capable of incentivizing the shift towards, and scaling up of, digital channels for cross-border transactions. As pointed out by Okai (2020), during the COVID-19 crisis, an effective regulatory framework on remittances **should achieve a**

balance between innovation and risk during the long-term process of digitization.

Arguably, one of the most critical bottlenecks to the expansion of digital remittances is the adequateness of KYC regulations for digital financial service providers, which act as a barrier to the registration and ownership of mobile wallets or online bank accounts. Most LMICs' regulatory frameworks, for example, require **face-to-face customer verification** to open a mobile wallet or online bank account, having the customer provide a physical ID and a signature, which is a strong limiting factor in a pandemic. Another issue lies with the widespread lack of conventional types of formal ID (e.g. ID card, passport) among lower-income and rural clients. Thus, there is a strong need for both regulators and FIs to collaborate on simplifying these requirements. Regulators, in particular, should focus on implementing **tailored and risk-based guidelines and regulations on digital KYC**, to ensure that formal FIs, MMOs and other providers adhere to the same set of rules and requirements. A few examples from different LMICs provide an idea of the possible measures that can be adopted as part of a tailored KYC regulation:

- In Ghana, Pakistan and Sri Lanka, regulators have ruled that **KYC controls conducted during a SIM card registration** (to register a phone number) can also be valid to open a mobile money account, which facilitates due-diligence checks on the part of MMOs.
- **Adopting a tiered KYC regulation**, with the possibility of carrying out remote registration with looser requirements in the case of lower-tier mobile money accounts, is a regulatory option that can be implemented to strike a balance between risk and opportunity in a pandemic. In Tanzania, for example, a low-tier mobile money account can be opened remotely and by providing alternative forms of ID, such as a letter from a ward or village executive (Glenbrook Partners, 2020).

- **Deferring ID verification** is a regulatory option adopted to temporarily provide limited mobile money accounts to individuals that do not have formal ID at the time of registration, granting them a window of time they can use to obtain and send in the required identification that will allow them to advance to a “full” account. Before the user provides the required ID, these temporary accounts can be limited in terms of maximum balance or transactions¹⁵ (Glenbrook Partners, 2020).
- Allowing customers to provide their **digital signatures** to open low-value transaction accounts and send or receive transfers has the potential to increase both ease-of-use and compliance costs.

In those LMICs that have invested in comprehensive digital identification system for their populations (such as India), **linking national ID databases and digital payments systems** can greatly assist in streamlining KYC controls on the part of providers, and facilitate remote registration (Gravesteyn, Mensah and Aneja, 2020).

Provide incentives to customers to move away from CICO transactions: Overcoming the preference (or the necessity) for agent-assisted CICO transactions among migrant workers requires multiple angles of intervention, both on the part of policymakers as well as remittance service providers. Several measures –ideally introduced as part of a bundle or policy package – can be suggested in this sense, including:

- **Enabling interoperability** among digital financial accounts, whether online banking

accounts or mobile wallets. This is a fundamental step, as it partially mitigates the need for CICO transactions, and it establishes a foundation on which migrant-centric financial products can be developed and offered.

- **Temporarily waiving fees on cross-platform transactions**, such as from a mobile wallet to an online bank account and vice versa, allows recipients to transfer the remittances they receive directly to their preferred medium of savings, at no added costs. As will be further illustrated in Section 7.2 on recommendations, given that transaction fees represent a vital lifeline for many digital financial service

¹⁵ In India, for example, the lowest KYC tier of a mobile money account gives the user a maximum time limit of 12 months to provide some type of formal ID to complete the due diligence process. If no such document is uploaded within 12 months, or if the ID provided is rejected by the FI, the account is frozen and the user will only be allowed to withdraw or transfer the funds it contains. In Mexico, tier 1 accounts do not require any ID to be created, while tier 2 accounts allow for an 18-month period to provide identification, during which all account-related thresholds (e.g. maximum balance, maximum transfer amount) will be 50 percent lower (Glenbrook Partners, 2020).



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providers (especially those that do not offer or intermediate credit or deposits), policymakers should consider implementing adequate concessions to compensate for their losses, such as subsidies and tax exemptions, while making sure to avoid longer-term market distortions.

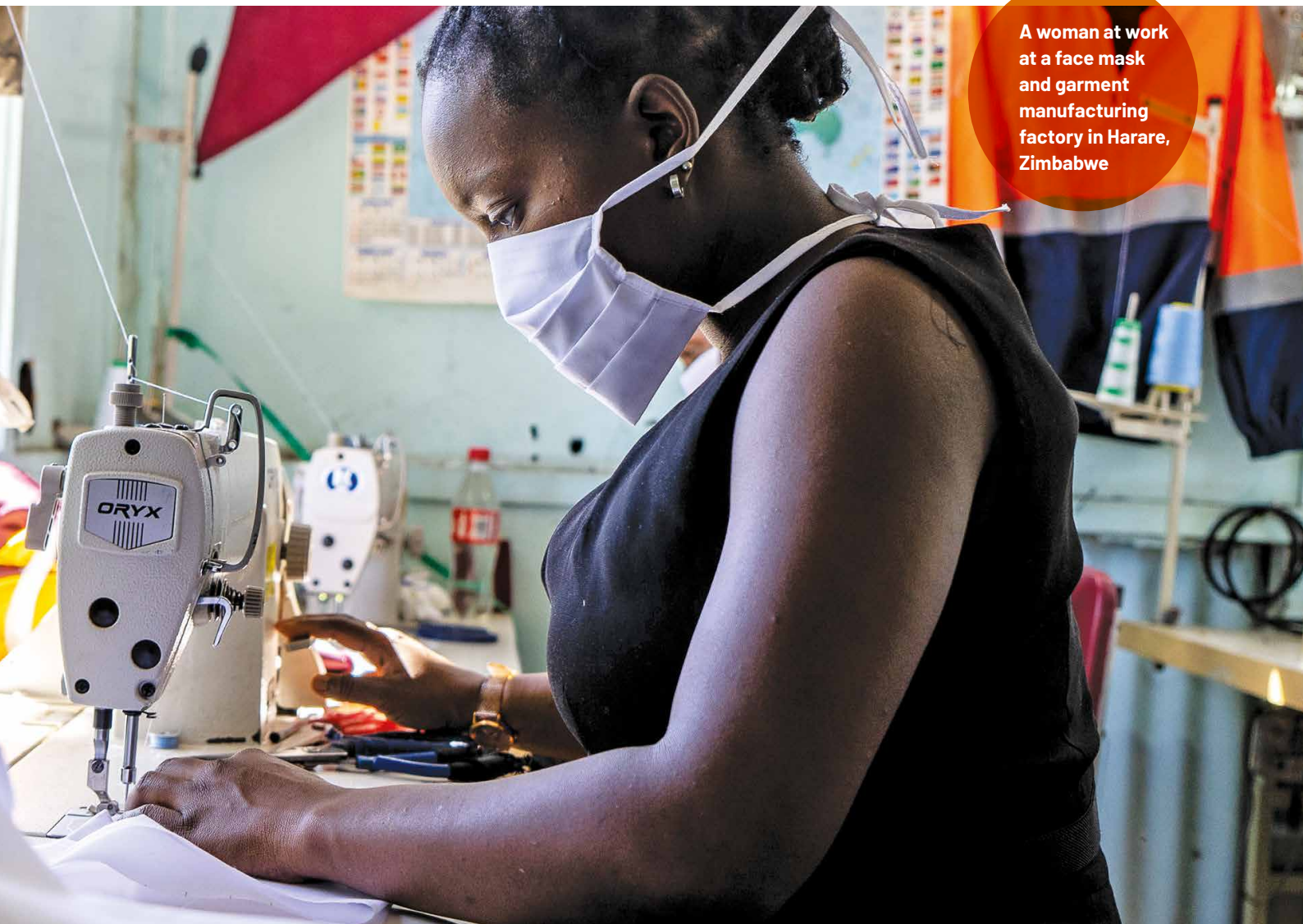
- **Providing complementary, value-added services** together with the cross-border transfer service. This can be achieved, for example, by linking remittance sending with savings, credit, insurance, digital payments of utility bills, and a host of other digital financial services.

Foster digital literacy and awareness among users:

One of the major constraints to the use of digital remittance services for both senders and recipients is the lack of awareness and familiarity with these kinds of services.

Promoting ease-of-use in the design of the digital remittance platform, for example, as well providing step-by-step remote support to new users, are only two examples of a wide series of initiatives that remittance providers can take to increase the uptake of digital remittance services on the part of migrant workers and their families, besides more traditional interventions such as awareness campaigns and targeted trainings. Overall, past experiences have

A woman at work at a face mask and garment manufacturing factory in Harare, Zimbabwe



shown that these types of capacity building interventions have been most effective when implemented in public-private collaboration between remittance providers, policymakers, and development agencies and/or donors.

Implement public support packages for remittance providers: Given their critical roles as enablers of massive volumes of cross-border transfers, ensuring that remittance service providers are put in the condition to properly weather the COVID-19 crisis **should be viewed as an immediate priority for policymakers**, especially in the case of those providers that rely primarily on physical agent networks to run their businesses and do not have the resources to invest in a comprehensive digital transition process. A wide range of measures could be contemplated as part of these support packages, including:

- Concessional lines of credit, both for the short-term to adequately weather the crisis, as well as for the longer-term to promote

a process of back-office and front-office digitization;¹⁶

- Temporary tax breaks and waivers on operating expenses;
- Technical assistance to the remittance service providers, aimed at supporting both the institutional and product digitization processes; and
- A regulatory increase of the set limits for withdrawals and transactions, which can help to entice customers towards sending more transfers (Gravesteijn, Mensah and Aneja, 2020).

¹⁶ Back-office refers to the combination of activities that support and enable a company's operations, and which do not imply a direct contact with the customer or end user. These include, among other things, database management; internal archive management; budgeting; human resources; and in-house technical support. Front-office refers to all the activities and tasks carried out by the company that imply an interaction with the client, such as product provision, customer care, and marketing.

Enabling social safety nets by digitizing G2P transfers

5.1 Overview of governments' responses to the pandemic

Even before the COVID-19 pandemic, several developing and emerging countries were already initiating or strengthening national efforts to digitize government-to-people (G2P) transfers. These included **delivering a wide range of social transfers** within both contributory and non-contributory schemes (e.g. pensions, unemployment benefits, social assistance), and **through digital channels** such as e-banking, smart cards and especially mobile networks. Several of these country-scale digitization initiatives, which are often carried out with the support of international development agencies, have been shown to generate important results in terms of increased outreach, cost efficiency, transparency, and timeliness of G2P payments. In fact, in recent years, digital solutions for delivering social transfers have been slowly replacing traditional, manual-based cash delivery methods. According to the World Bank's Global Findex, in 2017 39 percent of G2P recipients

in low-income countries received a payment through digital channels (Baur-Yazbeck, Chen and Roest, 2019; Amundsen, 2020).

In the wake of the COVID-19 pandemic, the ability to channel G2P payments through digital channels has been shown to be a **critical advantage in the deployment of an effective response strategy**. This is particularly so, given the pressing need to increase and strengthen existing social protection systems to counteract the effects of the pandemic in a rapid and transparent manner, as well as to guarantee the efficacy of social safety nets for entire populations whose livelihoods are being deeply threatened by the crisis. This, of course, needs to occur in a situation that is made considerably more complex by the need to respect physical distancing and lockdown measures.

That is why various developing and emerging countries (e.g. Morocco, Pakistan, Peru, the Philippines, Togo) have responded to the crisis by implementing direct cash transfers for vulnerable households and businesses **at an unprecedented**

scale,¹⁷ with the objective of supporting recovery, rebuilding livelihoods, and preparing for future adversities. These cash transfers have been channeled both by expanding existing social protection programmes (*horizontally* by extending coverage, and *vertically* by increasing the amount provided), as well as through *ad hoc*, temporary initiatives launched outside of traditional social protection schemes. The majority of these temporary programs have sought to deliver unconditional cash transfers in an effort to put money in the hands of vulnerable segments of the population in a rapid and comprehensive manner.

As will be seen from the examples below, those countries that had invested heavily in their mobile money ecosystems prior to the COVID-19 outbreak have proven to be able to deploy massive amounts of payouts for millions of vulnerable individuals **at a very rapid pace**, building on the databases and structures of existing social protection programmes¹⁸ to identify and reach the most vulnerable population segments (Rutkowski *et al.* 2020). Enabling elements such as a unified digital payment system and social registry, a national digital identification database (preferably with biometric data), far-reaching CICO distribution networks, and interoperability among MMOs, are all vital components of a mobile money ecosystem that have assisted a number of LMICs in delivering social cash transfers rapidly and efficiently in the wake of the outbreak.

Beyond channeling temporary cash transfers through digital means, the ability to digitize,

at least in part, the vast net of **existing social security transfers** (e.g. pensions and unemployment benefits) has proven to be a gamechanger in a lockdown, where the risk of contagion and the extreme disruptions to mobility have made it considerably more challenging for most people to cash in their benefits at a physical agent or branch. This is compounded, of course, by the “conventional” benefits associated with digitizing G2P transfers for both senders (i.e. the governments) and recipients, such as increased efficiency, safety and transparency of payments, substantial cost savings,¹⁹ and increased control and agency on the part of vulnerable segments over personal and household finances (e.g. women receiving social transfers directly to their accounts, outside of their husbands’ reach).

Given these premises, several examples can be mentioned regarding **mobile-powered G2P payment schemes deployed to respond to the crisis**, from all around the globe:

- **Bangladesh**: The government of Bangladesh, under the supervision of the Ministry for Disaster Management and Relief, implemented in April 2020 a mobile-powered cash assistance programme for 5 million families impacted by the pandemic, **in collaboration with the four largest MMOs in the country**: bKash, Nagad, Rocket and SureCash. The government has targeted to pay out BDT 2 500 (USD 29) per family, for a total amount of BDT 12.5 billion (USD 147 million). The vast majority of these mobile transfers are cashed out through the MMO’s agent networks, with the government taking charge of all related fees.

17 As reported by Gentilini *et al.* (2020a), as of July 2020 cash transfer programmes represented half the number of the total safety net measures implemented by governments as part of the global response strategy against the pandemic. Cash transfers (both conditional and unconditional) were provided through 298 programmes in 139 countries, a number that rises to 323 programmes in 153 countries if social pensions are included in the count.

18 Please note that while this section focuses mainly on governments’ responses in providing mobile-powered social safety nets to vulnerable populations, the same considerations and risks apply to international development agencies running these types of large-scale cash transfer programmes, such as the World Food Programme, the United Nations High Commissioner for Refugees, and the Red Cross.

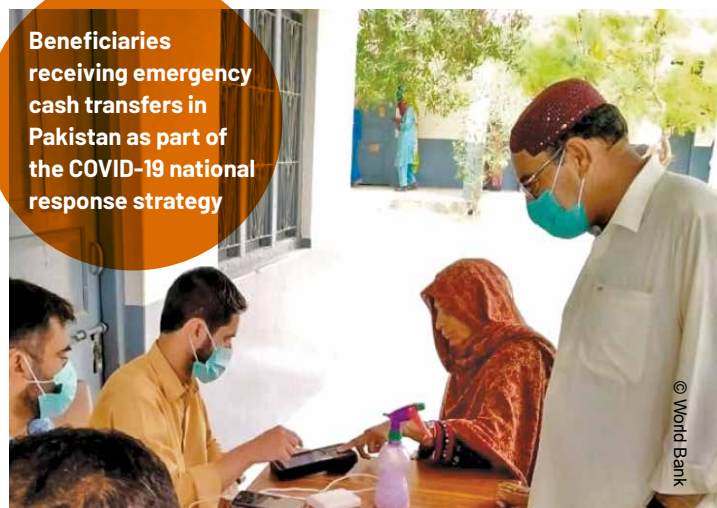
19 Substantial research has been carried in recent years to estimate the extent of possible cost savings that can be derived from digitizing G2P payments. A study by Babatz (2013), for example, estimates that the Mexican government’s shift to digital payments reduced its spending on wages, pensions, and social welfare by 3.3 percent annually, or nearly USD 1.3 billion. Aker *et al.* (2011) carried out a randomized evaluation of a social transfer programme in Niger, which showed that variable distribution costs were 30 percent lower for mobile-powered transfers than for manual cash transfers.

Interestingly, the largest MMO in the country, bKash, reported a spike in new mobile account registrations at the rate of 7 million new accounts as of July 2020, which it attributes to two main causes: 1) new accounts being opened to receive governmental G2P transfers, and 2) new accounts being opened to receive digital remittances from abroad (LightCastle Partners, 2020; TBS, 2020).

- **Brazil:** In March 2020, the Brazilian Congress has approved a cash transfer programme that provides monthly transfers of BRL 600 (USD 107), at least until August, to informal, autonomous and seasonal workers affected by the pandemic. To be eligible for the transfer, a worker's gross household income must be lower than three times the minimum wage, and he/she cannot be a beneficiary of any other social assistance programme, except for Bolsa Família²⁰ (in which case, the worker must choose between the two). Registration is carried out either through an online platform or a dedicated mobile app ("Caixa Tem"), while each installment can be sent either to an existing bank account or to a mobile account linked to the Caixa Tem app expressly created to this end. According to governmental estimates, the programme will cover 30.5 million citizens (14 percent of the total population), for a total cost of USD 11 billion. As of August 2020, however, only half of the 63.5 million workers that had applied for the assistance have managed to receive the funds, mainly due to faulty execution and bureaucratic delays. Moreover, weak or absent internet access, coupled with several more poverty-related factors, might result in millions more workers being unable to apply at all (Moreira, 2020; CGAP 2020a; and WIEGO, 2020).
- **Chile:** Since April 2020, the Chilean government has provided a "Bono COVID-19"

²⁰ Bolsa Família is a conditional cash transfer programme focused on health and education that has been implemented by the Brazilian government since 2003. It provides a series of benefits to vulnerable families whose monthly per capita income is lower than BRL 154 (USD 28).

Beneficiaries receiving emergency cash transfers in Pakistan as part of the COVID-19 national response strategy



for vulnerable families, whose application can be carried out completely online. This is a one-time transfer of CLP 50 000 per family (USD 60), sent directly to the bank accounts of more than 2 million vulnerable Chileans. To deliver the payments, the government was able to leverage a wide network of ID-linked bank accounts (CuentaRUT) hosted by the only public bank in Chile (BancoEstado). Families that can benefit from the voucher are those already included in national social protection programmes, such as the *Subsidio Unico Familiar* (Lump-sum Family Allowance) and the *Sistema Seguridades y Oportunidades* (Security and Opportunities System).

- **Colombia:** The government has created a digital cash transfer programme for families of workers (both formal and informal) affected by the pandemic, called *Ingreso Solidario* (Solidarity Income). The only prerequisite for a family to access the programme is not being already a beneficiary of any other social assistance program run by the State. *Ingreso Solidario* consists of a monthly transfer of COP 160 000 (USD 42), whose first round began in April and is expected to run at least until December 2020. **The application is fully online and requires only a national ID number.** Receiving the money does not require any face-to-face interaction with any agent: those families that are already included in the formal financial system will see the money



People leaving Antananarivo, Madagascar, and returning to their villages due to the lack of work resulting from the prolonged lockdown

deposited directly in their bank account.²¹ For those people who do not have an account, the government has partnered with the main national MMOs to have the money deposited in a mobile wallet associated with the beneficiary's phone number, expressly created to receive the transfer. As of June 2020, more than 2.5 million households have already benefitted from the programme (El Expectador, 2020).

- **Morocco:** A (partly) digital cash transfer programme was instituted by the government in April 2020 to support workers in the informal sector affected by the lockdown. The programme provides workers' families with monthly payments ranging from MAD 800 to 1200 (USD 80 to 120), depending on the number of dependent children. The money comes from the USD 3.2 billion Special Fund for the Management and Response to COVID-19, which was expressly created to mitigate the impact of the pandemic.

Although the application process can be carried out fully online, **cash receipt is not**

digitized; those who have been approved to receive the transfer receive an SMS message redirecting them to the nearest bank or money transfer agency to withdraw the allowance. At the time of drafting this study, the programme has already covered more than 4.3 million households, with a total allowance of USD 427 million (Hatim, 2020).

- **Peru:** In March 2020, the government launched the "Bono independiente", a direct cash transfer of PEN 760 (USD 212) for vulnerable informal and autonomous workers affected by the pandemic who are not already beneficiaries of other public social assistance programmes managed by the government. An online platform manages registration, which requires the applicant to upload a scan of a national ID card, in order to check whether he or she is part of the beneficiary population selected by the government according to data provided by the Ministry of Development and Social Inclusion.

If the worker already owns a bank account at the Banco de la Nación (a government-owned bank), the transfer can be received directly there. Otherwise, the worker can enable his or her mobile phone to receive the voucher digitally, which can then be cashed out through the ATM and agent network of the Banco de la

21 This was made possible through an exchange of information with the financial sector regulator, who shared information on who among the targeted recipients already had an account at a regulated FI.

Nación. As of August 2020, government figures showed that 700 000 informal workers had already benefitted from the voucher, which represent roughly 10 percent of all informal workers in the country (CGAP, 2020a).

- **Togo:** In April 2020, the government of Togo launched a USD 17.8 billion mobile cash transfer scheme called “Novissi” (which means “Solidarity” in Ewé) that provides a basic monthly income to informal workers across the country who lost their daily income sources due to the pandemic. **Beneficiaries must be over 18 and able to present a voter’s ID** – the most common form of ID available in the country – **to apply**. Under the scheme, women have a right to receive XOF 12 250 (USD 21) on a monthly basis on their mobile wallets, while men receive XOF 10 500 (USD 18), which constitutes approximately 30 percent of the national minimum wage. Two of the largest MMOs in the country (TMoney and Flooz) are charged with channeling these payments into mobile wallets. As of June 2020, 1.3 million people had registered to the scheme through a dedicated mobile app (representing a notable 16 percent of the population), while 581 000 had received a transfer. The programme was estimated to have costed the country approximately XOF 11 billion (USD 19.5 million)(Novissi, 2020).

The high number of countries that have instituted cash transfer programmes to mitigate the effects of the COVID-19 pandemic on informal workers and their families²² is not surprising, considering the critical and diverse aspects of vulnerability registered by this specific segment in the frame of this crisis. A recent brief from the International Labour Organization (ILO) in 2020 estimates **that the pandemic has affected the families of 1.6**

22 Aside from the already mentioned examples of Colombia, Morocco and Togo, we can cite several more developing and emerging countries have instituted some kind of cash transfer programmes that target informal workers in particular in: Brazil, Burkina Faso, Cabo Verde, Costa Rica, Ecuador, Egypt, El Salvador, Guatemala, Kazakhstan, Mauritius, Philippines, Tunisia (see WIEGO, 2020).

billion informal workers worldwide, people who have lost their capability to generate an income due to the full or partial lockdown measures declared to fight the outbreak, and are left with few or no alternatives in terms of support and relief measures to weather the pandemic (ILO 2020a). This wide segment of the global population comprises informal workers engaged in widely different sectors of the economy (e.g. manufacturing, accommodation, food services, wholesale and retail), including also over 300 million subsistence farmers. According to ILO estimates from the same brief, lost labour income caused by this scenario is expected to generate, in lower- and low-income countries – a 56-point increase in relative poverty for informal workers and their families.

Another important point to note is that, beyond the short-term response to the pandemic, mobile-powered G2P schemes can also be leveraged by governments **as longer-term instruments for the digital financial inclusion of vulnerable population segments**. This is the example of the “Ehsaas Emergency Cash Programme”, launched in May 2020 by the Government of Pakistan, which was conceived both as a channel to provide short-term economic relief to households impacted by the pandemic, as well as a tool to set up mobile money accounts for the programme’s beneficiaries (see Box 3).

Despite the promising cases described so far, it has to be underlined that most developing countries still lack a suitable digital finance ecosystem that could be leveraged to channel G2P transfers towards vast shares of their populations. This can be due to a variety of interconnected constraints, including: a weak mobile payment infrastructure and agent network (especially in rural areas); low levels of digital and financial literacy; a weak regulatory environment; and the lack of a digital identification system. Given the substantial upfront investment required to establish the necessary enabling elements for large-scale digital cash transfers, **a real process of G2P digitalization in these contexts isn’t likely to happen in the short-**

term, or during this specific crisis. Nevertheless, as pointed out by Rutkowski *et al.* (2020), there are a number of LMICs that could expand in the short term their existing mobile money infrastructure **by introducing simple regulatory reforms**, such as allowing existing non-bank, e-money providers to provide cash-out services (thereby expanding the

network of agents that social transfer beneficiaries can use to convert their e-money into cash), or fast-tracking the entry of new MMOs in the market, provided that adequate financial consumer protection and interoperability among providers can be guaranteed.

BOX 3 Digital G2P transfers as a tool for financial inclusion: the EEC Programme in Pakistan

The Ehsaas Emergency Cash (EEC) Programme was launched in April 2020 by the Government of Pakistan to provide **immediate economic relief** -in the form of a transfer of PKR 12 000 (USD 72) to 18 million of vulnerable households that had lost their main income sources due to the pandemic-induced lockdown, an estimated 100–120 million individuals, or approximately 47–56 percent of the population of Pakistan. The EEC beneficiary base is composed of households with an income of less than 20 000 rupees, those already benefitting from another, pre-existing government scheme (“Ehsaas Kafaalat”), and other vulnerable households identified through the national socioeconomic registry and an SMS survey. The total budget assigned under the programme so far amounts to PKR 153 billion (USD 910 million) (Bourgault and O’Donnel, 2020).

The EEC case is particularly interesting because of two main, interconnected reasons: 1) the programme was conceived from the start as a tool to foster the longer-term financial inclusion and social protection of vulnerable households; and 2) **the specific features of Pakistan’s mobile money ecosystem**, in which mobile ownership levels are overall low, fully digital mobile transactions (i.e. from a mobile wallet to another digital destination) are uncommon, while cash-in cash-out (CICO) transactions constitute the norm (i.e. digital money in a mobile wallet is converted to/from physical cash through a vast network of mobile money agents). Furthermore, almost all adult citizens own a biometric identity card provided by the National Database and Registration Authority (Nishtar, 2020).

As a result of this scenario, the EEC has been designed to deliver a cash transfer even if the beneficiary doesn’t own a mobile phone. EEC beneficiaries have to register on an online portal, providing the number of their biometric identity card and a phone number (which might or might not be registered under their names). They are then assigned a **Limited Mandate Account (LMA)**, which they can use to cash out the transfer from a network of more than 18 000 cashpoints (i.e. agents, ATMs and banking branches), all of which have been provided with fingerprint scanning (biometric) technology. The beneficiary is identified by matching the fingerprint scans with those registered at the NADRA. Local governments are tasked with ensuring that physical distancing and safety measures are respected during the cash out process, including disinfecting beneficiaries’ hands before and after fingerprint scanning.

There is also an option to convert the LMA into a **fully functional, biometric-enabled mobile wallet account**, provided that the beneficiary owns the phone and the necessary due diligence checks have been carried out, granting beneficiaries access to a wide range of digital financial transaction capabilities. In this manner, it is possible to foster the digital inclusion of a high number of previously financially excluded or underserved households. Furthermore, the process contributes to shifting the focus of the mobile money ecosystem of Pakistan from the current CICO-dependent, agent-assisted model to one of **full mobile wallet ownership** and primarily digital transactions.

5.2 Risks and recommendations associated with an accelerated G2P digitization process

The following list seeks to highlight a series of specific risks associated with accelerating the

digitization of G2P transfers, on the part of governments and donors, as a swift response to the COVID-19 pandemic. It also aims at providing a number of recommendations or suggestions that could be implemented to mitigate these risks.

Risks

► Leaving behind digitally excluded segments.

The most apparent negative side of strengthened G2P digitization is, as already stated throughout this study, **the risk of excluding people that lack access to digital channels from the social protection system**, in line with what has already been highlighted in Sections 1.2 and 1.4. The digital divide in most developing and emerging countries is still very strong, brought about by a variety of factors such as insufficient mobile penetration, scarce digital literacy, as well as lack of access to the electric grid, the internet, and mobile data.

The result is an accelerated transition towards G2P digitization risks that which leaves behind segments of the population that are also particularly vulnerable to the pandemic (e.g. the elderly and those in rural locations). To avoid this, the digitization process should be complemented with either measures aimed at facilitating the uptake of the digital G2P transfer scheme on the part of these segments, or by complementing digital channels with alternative “analogic” measures to distribute cash that ensure that adequate protection is extended to these individuals. During a pandemic, this last option is made challenging **by a lack of suitable alternatives** to hand out cash: manual cash distribution, for example, poses a risk of contagion, while cash cards need to be delivered to recipients, and retailers or points of sale need to have the technology to process them. If such modalities are selected, local administrations overseeing the transfers have to ensure that all possible safety measures are taken to mitigate the risk of infection (Amundsen, 2020).

► An increased risk of fund diversion and embezzlement.

A rush from governments and donors to digitally deliver money to mitigate the impact of the pandemic, **strongly increases the risk for corruption, diversion, fraud, and embezzlement of funds**, brought about especially by clientelism and elite capture, with mobile-powered social transfers presenting their own set of risks in this regard. As pointed out by the U4 Anti-Corruption Center, the risk of embezzlement and corruption is stronger during **four key stages of the cash transfer value chain**: 1) when funds are allocated to and managed by recipient governments; 2) when decisions are made on who will be the recipients; 3) when funds are handled by the distributing agencies; and 4) when the funds are given to the end users. (Amundsen 2020). Aside from diverting resources from the real targets, high levels of corruption will result in beneficiaries losing faith in the system, potentially jeopardizing the uptake and the longer-term sustainability of the scheme itself and other similar, future initiatives. Although it is true that digital G2P payments schemes have considerable advantages in terms of the increased transparency of cash transfers, especially when delivered directly into online accounts, it is fundamental that appropriate grievance redressal mechanisms are established to identify and mitigate instances of fraud and corruption.

Recommendations

● Invest in digital ID databases at national level.

When analyzing successful cases of governmental responses in deploying digital G2P transfers in the wake of the COVID-19 pandemic, it becomes clear that the ability to leverage a pre-existing national digital identity system represents one of the key enablers of efficiency. A digital ID system can assist in identifying and enrolling into a G2P programme, allowing for precise targeting of transfers to individual household members (with important benefits, for example, in terms increased agency and empowerment of women and youth), while mitigating issues such as double payments, embezzlements, and ghost beneficiaries. It can also serve as a digital authentication system that strongly reduces transaction costs associated with G2P transfers (Thapliyal and Goti, 2020).

Those LMICs that heavily invested in developing national digital identity systems (as well as linking digital identity to the digital payments ecosystem) have been able to leverage this innovation extensively to enable digital G2P transfers. Arguably the best-known example in this sense is India, where **roughly 80 percent of all bank accounts (numbering 1 billion) are linked to Aadhar**, the national biometric ID system first implemented in 2009. Over the years, the Indian government has been able to employ the Aadhar system as a critical enabler for the digitization of all types of G2P transfers, from social assistance payments to food subsidies, with an estimated USD 9 billion in savings from the reduction in the instances of fraud and double payments (World Bank Group, 2020a).

In responding to the pandemic, the Indian government has deployed more than USD 10 billion in cash transfers to almost 400 million bank accounts linked to Aadhar. Although the system has faced several challenges and setbacks, such as failures in processing payments and issues related to registration, the

sheer scale of the social protection package implemented to respond to the crisis (which amounts to half of the combined package of all middle-income countries) gives an idea of the potential that digital identification systems hold to enable massive and rapid deployment of cash (and other types of assistance) to large portions of the population (Thapliyal and Goti, 2020). Nevertheless, as already mentioned multiple times throughout this study, **issues of privacy abuse and public profiling** linked to the establishment of national ID systems should be a strong concern for both public and private stakeholders, especially in the frame of the COVID-19 pandemic and the associated, widespread use of emergency executive powers on the part of governments.

Citizens queuing in front of a local bank to receive emergency aid from the government, in Paudalho, Brazil.



● Consider biometric recognition to identify and reach beneficiaries

Biometric authentication, i.e. using a biometric feature of a person to verify his/her identity when trying to access an authorized device, is becoming an increasingly more common security measure to enable mobile payments. An issue with this technology during the COVID-19 pandemic is that the most common form of biometric identification, fingerprints, poses an additional risk of contagion. Nevertheless, there are number of alternatives, such as voice recognition, iris scanning, and **facial recognition**, which are already gaining more traction in the contactless era of COVID-19. According to research by Markets and Markets, the biometric facial recognition market has been boosted considerably by the pandemic, driven by government spending on public safety and increased demand on the part of mobile clients (Burt, 2020).

In the context of digital G2P payments, biometrics can be used to register new beneficiaries into a scheme, allow them to provide proof of their identity to cash out²³ their transfer at an agent or branch, as well as give regular evidence of proof of life²⁴ to continue benefitting from the scheme coverage. Biometrics can be used to overcome the common challenge of lack of ID availability at

²³ Cash-in cash-out (CICO) transactions, as illustrated in Section 1.2, carry additional risks and challenges during a pandemic, due to the possible risk of infection and the disruptions caused by confinement measures. Nevertheless, G2P transfer schemes based on a CICO model are unavoidable in LMICs whose digital financial ecosystem are not advanced enough to enable the full digitization of payments and transfers, such as in the case of the EEC Programme in Pakistan described in the previous section.

²⁴ For an interesting case study of a digital G2P payments scheme that uses biometric technology to provide regular evidence of proof of life for its beneficiaries, refer to the analysis made by McKay *et al.* (2020) of the Inua Jamii social safety net programme in Kenya.



the country level, or, if high levels of ID ownership are presented, conventional ID could be used in combination with biometrics as part of a **two-factor authentication** method.

Enabling a biometrics option from a G2P perspective requires a substantial initial investment on the part of governments, donors and MMOs, both in terms of infrastructure as well as customer education. The quality of the technology implemented is also an important enabling element. As recent experiences have shown, frequent failures in the biometrics technology (e.g. at the registration phase) can be a cause of great frustration for G2P beneficiaries, and leads to weaker uptake and lack of coverage (McKay *et al.*, 2020). Finally, and most importantly, the widespread use of biometric identification carries substantial risks in terms of possible **privacy violations and surveillance creep**, as already illustrated in Section 1.3 and Box 2.

- **Adopt a tier-based simplified customer due diligence (CDD) model.**

Introducing a tier-based CDD model for financial service providers can facilitate the remote registration of small-value, low-tier mobile accounts for vulnerable individuals (who lack access to ID or other due-diligence requirements), **thus promoting the rapid onboarding of beneficiaries in digital G2P schemes** implemented to respond to the impact of the pandemic. It should be noted that introducing a tier-based CDD model in a digital financial ecosystem can represent a major shift and effort on the part of policymakers, FIs, and other relevant stakeholders, especially because they are required to navigate the often complex web of anti-money laundering and counter-financing terrorism rules (both national and international) to ensure that low-tier accounts, albeit of lower risk, still qualify under these regulations. Nevertheless, there are several examples of LMICS that have successfully introduced a tiered digital account model in recent years, with widely

different variations, such as Mexico, Pakistan and Tunisia. Moreover, as illustrated by CGAP (2020b), some LMICS' regulators have actually set out to implement a **temporary, simplified CDD model** in the wake of the outbreak, with the main objective of facilitating customer onboarding in digital G2P payment schemes:

- In the **Philippines**, the Central Bank announced in April 2020 that CDD requirements for mobile money account opening would be simplified for the three months of enhanced community quarantine, to facilitate the delivery of digital G2P transfers. Customers residing or working in quarantined areas were able to open a low-tier or low-risk account with a financial service provider without providing formal identification, although the provider still had to perform all other required risk-based CDD checks imposed by national and international standards, as well as carry out regular monitoring of these accounts' activities. These accounts also had a maximum daily threshold of USD 985 for transactions.
- In **Ghana**, as already illustrated in Section 1.3, the Central Bank has allowed MMOs (since May 2020) to use existing phone registration details of customers to open minimum-tier mobile money accounts, without having to meeting additional CDD requirements.
- In the **West African Economic and Monetary Union**, the Central Bank of West African States temporarily allowed MMOs (for a period of three months starting from April 2020) to open mobile money accounts for customers by using their phone registration data provided by telecom companies. In order for this to be done, the customer must agree beforehand, the necessary due diligence for the remote registration process still have to be carried by the MMOs, and the pre-existing regulatory thresholds for mobile money accounts have to be respected.

- **Implement gender-sensitive considerations in digital G2P schemes' design and delivery.**

Digital G2P payments carry widely acknowledged benefits from the standpoint of gender-sensitive social protection compared to traditional G2P schemes, in terms, for example, of increased agency, control, influence and convenience for women. This, of course, provided that appropriate design and delivery features are implemented in the scheme to ensure that the combination of barriers and biases to account ownership and registration that women face, especially in rural areas, do not limit their ability to benefit from it. Some of these barriers, which are complex and multidimensional, include:

- **Gender-based gaps in access to official IDs**, a suitable guarantor, proof of ownership or income, and other discriminatory CDD requirements towards account ownership that, depending on the regulatory framework of a specific context, can represent a key barrier to enrolling in the scheme.
- **A gap in mobile phone ownership**, which is both a potential reason for scheme failure, as well as a consequence of the other gender-based gaps mentioned here. Any digital cash transfer scheme that does not take this gap in mobile ownership²⁵ into adequate consideration risks not being able to reach women effectively, especially those residing in rural areas.
- **Resource and time constraints**, stemming from social, cultural, and economic factors, that can reduce women's ability to afford a mobile phone, limit their opportunities to open an account, and access funds. In fact, affordability was identified as the single most important barrier to mobile phone ownership for women in LMICs, according to a GSMA (2020b) survey.

25 According to the latest GSMA (2020a) data, women in LMICs are 8 percent less likely than men to own a mobile phone, and 20 percent are less likely to access the internet through their mobiles. In absolute terms, 300 million fewer women than men have access to the internet through their phones.



- **A gender-based gap in financial and digital literacy.** The lack of knowledge, awareness, and familiarity on the part of women with digital technology and financial services can create barriers to mobile phone ownership, as well as account registration and usage. It can also make women more vulnerable to frauds and scams, limiting the impact of the cash transfers on women's livelihoods and agency.

In the frame of the COVID-19 crisis, there is a strong risk that governments will **put considerations of urgency and immediateness of response** before those of fair and balanced targeting when developing digital G2P schemes, which can result in these schemes underserving women, especially the most vulnerable and underserved among them. Although an in-depth analysis of the various gender-sensitive design and delivery features that can improve the targeting of a digital G2P scheme goes beyond the scope of this study, we can highlight the following recommendations.²⁶

26 Note that these gender-sensitive recommendations compound with others illustrated throughout this section that also carry a strong potential to enhance scheme access and use on the part of women, such as expanding recipients' choice, easing KYC requirements, and promoting ease-of-use in the design of digital G2P platforms.



Mobile money agent in Zanzibar, Tanzania

- **Make women the default recipients of digital G2P payments:** Sending money directly to women's accounts, instead of to the head of the family (which is usually male) can increase women's agency and control over these funds, while ensuring that basic family needs are better taken care of. In the Peru digital G2P scheme described in the previous section, transfers are automatically made to the oldest women under 60 in the household, although there is flexibility to appoint a man instead (Bill & Melinda Gates Foundation *et al.*, 2020).
- **Reach women in their places of work and living:** To account for existing societal and cultural norms that reduce women's time and ability to open accounts, alternative solutions could be envisioned to enable their access to the digital G2P schemes, such as setting up temporary registration and cash-in points close to their places of work and living, or enable agents to carry out door-to-door registrations. These solutions, of course, would have to be carefully designed to balance the tradeoff between the increased onboarding of women in the scheme, and the higher risk of infection.
- **Complement scheme delivery with adequate capacity building:** To account for the possible gender-based gap in financial and digital literacy, a well-designed scheme should provide women with the necessary skills required to understand the scheme function and access requirements in order to manage their accounts, and to properly make use of existing grievance redressal mechanisms (Bill & Melinda Gates Foundation *et al.*, 2020).
- **Adopt a holistic approach to develop sustainable digital G2P delivery systems.**

Beyond the short-term public effort geared toward scaling up existing digital G2P channels as a response to the pandemic, it should be noted that this crisis represents an opportunity for all stakeholders in the digital finance sector to come together and collaborate towards the **longer-term development of a sustainable, resilient digital finance ecosystem**, capable of

reacting to large-scale, external shocks such as the COVID-19 outbreak by deploying aid in a tried-and-tested manner.

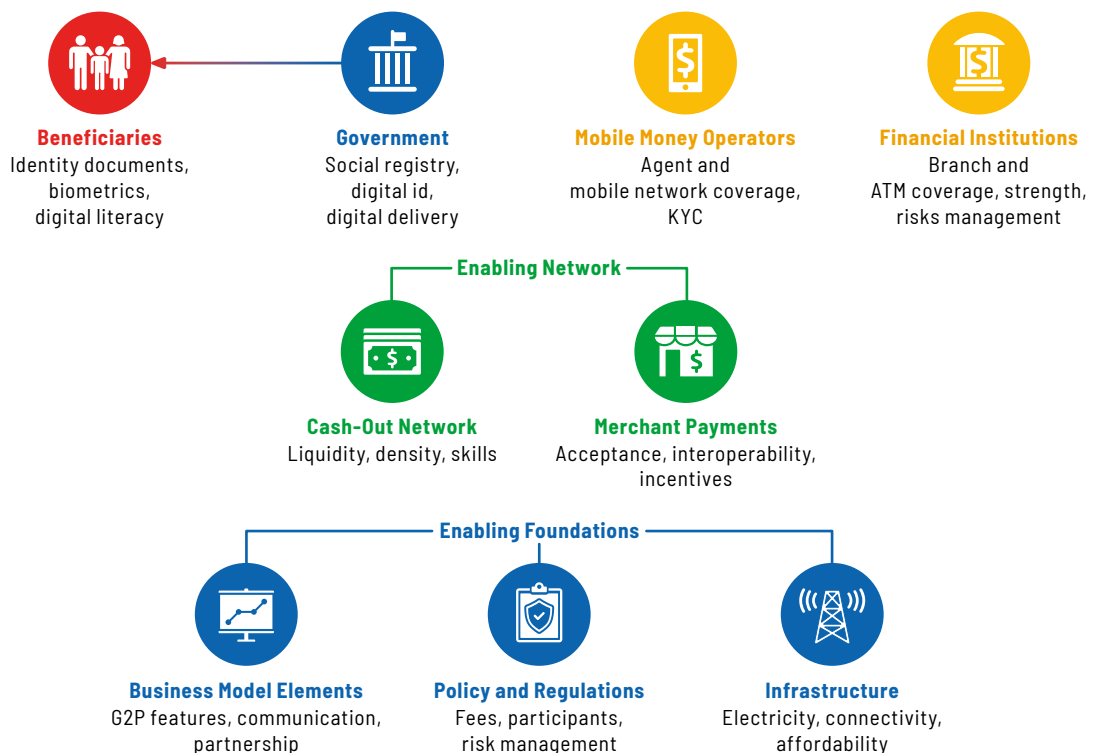
As pointed out by Davidovic *et al.* (2020), developing such an ecosystem requires a **harmonized effort on the part of all stakeholders** in the digital finance sector (e.g. the government, FIs, MMOs, and beneficiaries themselves), with important investments required in terms of infrastructural development, regulatory reforms, interoperability, establishment of a digital ID database, consumer education, incentives to the private sector, adequate connectivity, and several others. Figure 4 provides a schematic blueprint for a successful digital G2P transfer system, highlighting both the “foundation blocks” as well as the core stakeholders that are necessary to establish cost-effective and efficient digital channels for large-scale cash transfers, while minimizing risks for all parties involved.

● Expand G2P recipients’ choice.

As illustrated by Baur-Yazbeck, Chen and Roest (2019), while digitizing G2P payments has already resulted in considerable advantages for customers, **allowing them to choose which providers and accounts they use to receive funds** carries a series of further positive implications for both customers and governments. Instead of delivering G2P payments through one single financial service provider, developing an integrated and interoperable payments infrastructure in LMICs allows governments to channel transfers through multiple, competing FIs, giving them greater incentives to improve the customer experience and quality of service, while overall expanding the network of access points from which customers can cash out their G2P transfers.

For customers, being able to choose on which of their accounts to receive the transfers means

FIGURE 4
Key elements of a digital G2P transfer system



Source: Davidovic *et al.* (2020)

more convenience in managing their finances, while also giving them the option of **switching switch providers if they are dissatisfied with their current service**. It also empowers them in choosing the agents and points of access that they trust the most and make them feel safer, which is particularly important for women. For governments, leveraging the existing infrastructure of several providers, instead of relying on the proprietary network of only one, carries substantial cost savings in terms of delivery. It also removes the need to carry out a procurement process to select an individual FI to channel the transfer, tapping instead into the wider payment infrastructure and existing agent networks.

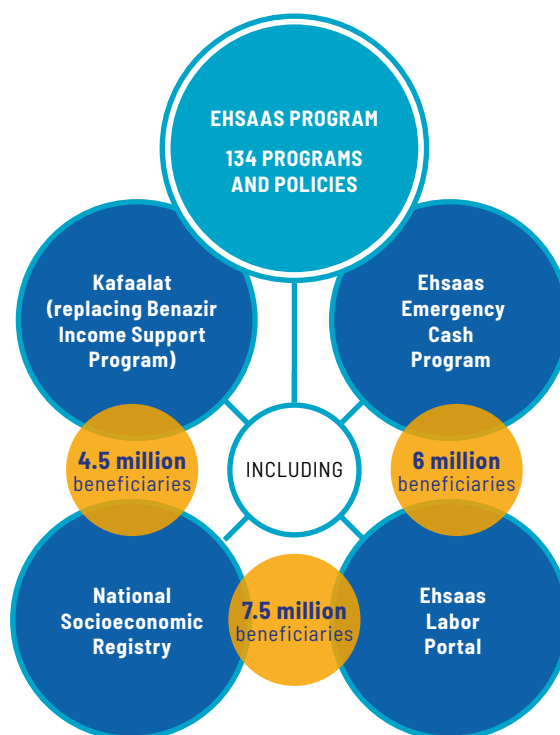
In the frame of the COVID-19 pandemic, the capacity of an LMIC to expand customer choice on how to receive digital G2P payments is bound to be severely limited by existing infrastructural, regulatory, and education and awareness gaps, **few of which can most likely be overcome in the short term**. Nevertheless, the longer-term process of adaptation of digital social safety nets to external shocks, expanding customer choice should be viewed by public agencies as a fundamental step to achieving a more reliable, effective and customer-friendly system, which can be used to channel both short-term, cash assistance transfers towards the most vulnerable segments of society, as well as longer-term, social welfare transfers.

- **Link existing social databases to improve targeting of beneficiaries.**

Linking together existing social databases at country level, including social registries, can assist the policymaker in ranking individuals and households according to levels of wealth and specific needs, thereby improving the targeting of cash transfer programmes expressly created to respond to the impact of the COVID-19 pandemic (Packard *et al.*, 2019). The cases of Chile and Pakistan, illustrated in the previous section, are two examples of cash transfer schemes implemented to respond to the crisis, which

FIGURE 5

Beneficiaries of pre-existing programmes selected for additional support under the EEC Programme



Source: Adapted from Bourgault and O'Donnell, 2020

build on household databases of different, pre-existing social protection programmes in order to correctly identify and target beneficiaries. To give an example of this, Figure 5 illustrates how many beneficiaries of different, pre-existing social protection programmes (under the umbrella Ehsaas Programme) were targeted for further support within the Ehsaas Emergency Cash Programme, which was implemented in response to the COVID-19 crisis.

- **Use MMOs' client data to improve G2P targeting.**

During the policy response to the COVID-19 crisis in Kenya, the World Bank Group (2020b) recently proposed to carry out rapid phone surveys to identify Kenyan citizens at risk of slipping into poverty because of the emergency, and then

triangulate the results of the survey with MMOs' client data, in order to test whether the latter could be used **to predict clients' vulnerability and distinguish between those eligible for coverage** by a mobile-powered social transfer scheme. A parallel proposal called for the Kenyan government to apply geographical targeting using small area poverty estimates²⁷ in combination with MMOs' data, to identify and target scheme beneficiaries. Aside from the obvious issues related to data privacy, already mentioned in Section 1.4, these types of proposals are only feasible in contexts with well-developed mobile money ecosystems and high levels of mobile wallet ownership, with Kenya and its 58 million mobile money customers being a prime example in this sense.

Prioritize ease of use for mobile money services used as G2P channels: Ease of use is a fundamental quality of a truly inclusive mobile-powered social transfer scheme, especially when governments and donors are rushing to provide cash to a considerably extended G2P beneficiary base, as part of the response to the outbreak, and overall simplicity of the mechanism becomes a critical factor in ensuring a comprehensive uptake on the part of the recipients. Fostering ease of use can be done in different ways, for example by **designing accessible and customer-centric digital interfaces for G2P recipients** to interact with, such as dedicated mobile apps that can be navigated with simple commands, is critical to successful uptake. Measures that promote beneficiaries' familiarity with mobile channels for G2P transfers are also essential, such as awareness campaigns and targeted education on the functioning of the schemes.

²⁷ Small area poverty estimation is a field of statistics that encompasses a series of methods to address the limitations of survey data to produce reliable estimates (in this specific case of poverty levels) for different geographical locations.



M-PESA agent
in Kibera,
Nairobi

5.3 Focus on enabling universal basic income through digital G2P transfers

In their 2019 book *Good Economics for Hard Times*, economists and Noble Prize winners Banerjee and Duflo make an argument for the establishment of an **universal ultra-basic income (UUBI)** safety net for populations of developing countries, to provide them with a regular flow of minimal cash transfers that can be enough for basic survival. This type of basic support can prove to be a fundamental gamechanger in a pandemic, where widespread economic recession and various disruptions threaten the vast majority of citizens' livelihoods, from a variety of different angles and in a protracted manner. The virtues of a UUBI approach lie in its simplicity, transparency, and assurance that nobody would starve. It would act as an instrument of poverty alleviation and social stability, mitigating the impact of the economic crisis in terms of increased societal inequalities and resulting tensions (Banerjee and Duflo, 2019 and 2020).

The debate around the introduction some form of universal basic income to provide a minimum

layer of protection to the livelihoods of entire populations has become increasingly more intense in recent years, which is understandable given the polarizing nature of such a concept, both from a political and financial perspective. Following the COVID-19 outbreak, the wave of vast, unconditional cash transfer programmes launched by several governments **has renewed the debate over the opportunity of universal basic income**, considering the extent of the coverage that is already being granted to ensure basic social safety nets for vulnerable citizens against the impact of this crisis.

There are, of course, several concerns over the concept and implementation of a UUBI safety net. The first is **design-related**. Traditionally, a core concern in the design of safety nets is refining targeting to the greatest extent possible so that only those truly in need are covered, while attempting to reduce distortions (such as overlaps and free riding) and discourage dependency and unemployment. These kinds of design and targeting tweaks, more often than not, can lead to the exclusion of large segments of the population that are in fact needful and in distress. Furthermore, targeting considerations can also be distorted by issues such as clientelism, political manipulation, and elite capture, which can strongly reduce the intended impact of the safety net.

Especially during a pandemic, these kinds of design-related preoccupations are trumped by the pressing need for governments to assist as many people as quickly as possible in weathering the impact of this all-encompassing crisis. In this sense, a UUBI solution guarantees a transparent and comprehensive solution to ensure that **everyone can rely on a last-resort subsistence lifeline**, irrespective of the countless personal and professional disruptions that they might have to face as a result of this emergency situation. It ensures a basic safety net of both material and psychological stability, and promotes the revival of the economy after confinement measures have been eased.

Another concern is evidently, **financial**: the issue of whether LMIC governments will have the resources to pay for such an extended safety net, both in the short term as a response to the crisis, as well as forever. In the short term, the pandemic has already made governments around the world well aware of the fact that **the societal cost of not addressing the impact of such an all-encompassing crisis is bound to be far higher** than the current programmes of massive, unconditional cash transfers. In this light, large budget deficits appear to more be acceptable, in the short term, when compared to possible societal collapse under the disruptions caused by the pandemic.

The question remains on whether such measures are **financially sustainable**, especially when maintained well beyond the pandemic, for an indefinite amount of time. Increasingly more studies and pilots are being carried out in both developed and developing countries, and at increasingly larger scales in order to assess the feasibility and impact of such schemes, with promising results.²⁸ Nevertheless, the data cannot be called conclusive, given that these pilots and studies have been quite diverse and limited in time, scale, context and target (mainly low-income, vulnerable people), as well as the amount and intervals of the transfers.

While analyzing the arguments and available data in favour of and against universal basic income goes beyond the scope of this research, what is interesting from our perspective is to focus on the ways in which digital finance can enable this type of measures in LMICs. One major barrier to implementing such extensive safety nets is, evidently, related to **penetration and outreach** (i.e. the capacity for governments to reach even the most remote, rural segments of a national population in order to provide them with regular cash transfers).

²⁸ Refer to Gentilini *et al.* (2020b) and Ortiz *et al.* (2018) for an extensive dissertation on the topic of universal basic income, as well as recent pilots and experiences.

Mobile money transfer systems can be a gamechanger in this sense, provided that the national context provides the necessary enabling elements to ensure the establishment of such a vast digital safety net: sufficient mobile penetration; adequate levels of digital literacy and familiarity with such services; an enabling regulation; an established ITC infrastructure, and other core enabling factors. This has already been illustrated in Section 3.1, with several examples showcasing the rapidity by which LMICs in widely different contexts have managed to deploy **massive amounts of cash directed at large portions of the population** by leveraging mobile money channels and national digital ID databases, with substantial cost savings in terms of identification and delivery. In Togo, for example, the Novissi scheme is already providing a basic

monthly income to 16 percent of the population. In Morocco, the government has provided social cash transfers to more than half of all the country's households.

As digital financial inclusion in LMICs keeps growing, UUBI nets will become an increasingly more feasible option, **at least from the practical perspective of enabling massive payments deliveries**. Other key roadblocks, such as finding financing and achieving political consensus, are a completely different matter. Gentilini *et al.* (2020b) argue that universal basic income implementation could become a feasible option within the next five years for many middle-income countries, from the perspective of overall account ownership, provided that a concerted effort is made by all core stakeholders in the digital



Women lining up at a mobile money agent to take out cash from their mobile wallets during the pandemic, Kurigram District, Bangladesh

finance ecosystem. This time estimate, evidently, is bound to be considerably longer for low-income countries, although recent successful experiences in fostering the growth of account

ownership in a few such contexts (such as Uganda), in relatively short amount of times, offer a reason for optimism.

BOX 4 WFP's experience in using blockchain technology as an enabler of digital G2P payments

The blockchain is a type of distributed digital ledger hosted across a network of multiple participants, that provides a way to share information and transfer digital assets in a faster, more transparent, and secure manner. **The use of blockchain technology as an enabler of digital cash transfers** holds considerable potential to mitigate or overcome several critical challenges that affect the identification and verification of cash transfer recipients. By storing data in blocks which are immutable and secure, and with multiple actors holding copies, the risk of fraud, theft or manipulation is reduced to near zero. Furthermore, its peer-to-peer nature removes the need for third party verification from costly intermediaries such as banks or other institutions. Recipients' privacy and security is guaranteed as they are assigned encrypted code numbers as ID to ensure their anonymity, while still allowing scheme managers to monitor the delivery of the transfers in real time (WFP, 2017).

The World Food Programme (WFP) has carried out extremely relevant work in recent years, as part of its "Building Blocks" initiative, to leverage blockchain technology within cash transfer programmes for refugees, with the objectives of facilitating transfers, expanding recipients' choice over how and when to receive their money, and overall strengthening beneficiaries' data protection and risk management. In 2017, it began delivering **blockchain-powered cash transfers in two Syrian refugee camps in Jordan**, relying on the biometric registration of more than 10 000 beneficiaries to enable them to pay for food at the camp with only a scan of their irises, instead of using cash, voucher or e-cards. Their entitlements were all registered on a blockchain-based computer platform, which kept track of their spending.

Following the COVID-19 outbreak, in April 2020 the WFP began delivering blockchain-powered cash assistance to 46 000 Rohingya refugees in Cox Bazar, Bangladesh, providing beneficiaries with contactless cards with QR codes, linked to a digital account, which they could use at outlets within the camp to pay for various goods, with all transactions updated in real-time on the blockchain. Interestingly, these digital accounts are able to store cash transfers provided by different agencies within the camp, not just WFP, which showcases the notable advantages that this innovation holds in terms of coordination and optimization of humanitarian response efforts. Beyond cash transfers, it is also interesting to underline that the WFP is exploring potential applications of blockchain technology in other areas that are linked to digital payments and transfers, such as digital identification and supply chain tracing (WFP, 2020).

Overall, during the pandemic and other future global disasters, blockchain technology holds considerable potential to become a key enabler for more transparent, efficient and coordinated cash transfers directed at vulnerable segments of the population. Beyond social cash transfers, this technology **shows potential to radically alter the entire digital payments space**, for example by making digital cross-border payments (i.e. remittances) substantially cheaper, safer, and more transparent. Nevertheless, several barriers still curtail the widespread adoption of blockchain technology in digital payments ecosystems, such as substantial infrastructural investments required initially; high levels of regulatory uncertainty and lack of public expertise on this technology; and lack of proof-of-concept on a larger scale.

Providing digital credit solutions to mitigate the impact of the COVID-19 pandemic

6.1 Facilitating the provision of short-term loans to crisis-affected businesses

All around the world, but especially in LMICs, businesses of all sizes and sectors are being negatively impacted by the COVID-19 pandemic due to a series of interconnected causes: 1) the lockdowns, which have temporarily paralyzed economic activity at the country level; 2) the widespread disruptions to existing supply chains; 3) the continuing expenses incurred by businesses, even when closed due to the lockdowns (e.g. rent, furloughs); 4) the longer-term safety measures against infection, that have curtailed profits in a number of industries; 5) the scarcer flows of liquidity in the economy, due to people spending overall less; 6) the temporary economic standstill reached in a number of industries (e.g. tourism, aviation, cruise); and 7) from a longer-term perspective, the slowly unfolding economic recession.

In this scenario, MSMEs have been by far the most affected businesses, due to a lack of social safety

nets, limited resources, over-representation in highly impacted economic sectors (e.g. retail, food and beverages, accommodation), lack of supply chain alternatives, and several other factors. A May 2020 survey from the ILO's SCORE Programme, spanning over 1 000 MSMEs across four continents, showed that three out of four MSMEs are experiencing a reduction in revenues throughout 2020, with one-third of them anticipating to lose more than half of their revenues for the year. Among the companies surveyed, 75 percent suffered from reductions in customer orders (and do not expect a full recovery within 2020), **while 9 businesses out of 10 have been experiencing cash flow shortages.** Considering that, from a global perspective, MSMEs account for more than 70 percent of total employment and 50 percent of the GDP, ensuring the survival of this sector represents a key priority within government's response strategies against the COVID-19 crisis (ILO, 2020b).

Given this, it is evident that **massive injections of liquidity** are critical in the short-term in order for MSMEs to weather the crisis, as exemplified

by the national stimulus programmes launched by governments in the wake of the outbreak to provide businesses with cash grants, as well as credit lines and partial guarantees, combined with a range of other assistance measures such as the deferral of utility bills, loans and tax payments, reductions in social security contributions, and wage subsidies.

According to the same ILO (2020b) survey, 65 percent of surveyed MSMEs have pointed to **access to short-term credit** as an essential factor to weather the crisis, against 54 percent of large enterprises. A similar large-scale survey²⁹ has shown that the availability of credit is viewed as fundamental to endure the pandemic especially by MSMEs in Latin America (49 percent of the sample) and Sub-Saharan Africa (40 percent). This scenario, of course, is unfolding in a sector **that was facing a considerable finance gap well before this crisis**, with 41 percent of MSMEs in developing countries (141 million) having unmet financing needs that amount to approximately 1.3 times the current levels of lending (SME Finance Forum, 2020; Facebook, OECD and the World Bank Group, 2020).

Considering this scenario, digital credit (both online and mobile-enabled) stands as a powerful tool to mitigate not only the traditional financing barriers³⁰ faced by MSMEs in developing contexts, but also those **specific constraints to credit access that are a result of the pandemic's impact**. During a lockdown, applying for and receiving a loan can prove to be highly unpractical for business owners, given the widespread mobility restrictions, the absence of active brick-and-mortar FIs' branches or agents, the added risk of contagion, and the overall higher

29 "The Global State of Small Business" survey was carried out in May 2020 by a partnership composed of Facebook, the World Bank, and the Organization for Economic Cooperation and Development (OECD), interviewing more than 30 000 small businesses over 50 countries.

30 These include, among others, a weak or absent credit history; lack of conventional types of collateral (e.g. land, houses); low levels of financial education; and scarce initial capital.

transaction costs associated with the process. In such contexts, the promotion of online banking and mobile credit services can play a major role in mitigating these barriers, ensuring that entrepreneurs can receive loans without having to physically displace themselves and crowd banks or public agencies.

Overall, digital technology holds the potential of **improving the credit process in several different ways**, which carry advantages for both MSMEs and the FIs attending them by.

- digitizing the loan application process, thereby allowing MSMEs to provide documents and information for due diligence processes in a completely contactless manner;
- developing more accurate underwriting techniques based on big data analysis;
- adopting predefined algorithms to refine the loan approval process and reduce the time required for disbursement;
- decreasing operational costs and turn-around time with the assistance of a rule-based process engine;
- rapidly processing small-scale, unsecured loans with minimal documentation through a virtual interface; and
- delivering a tailored customer experience with a customized offer based on the MSME's profile (Varma, 2020).

Despite these advantages, it should be noted that the development of tailored digital credit solutions to respond to the pandemic's impact has been lagging behind in developing and emerging contexts, compared to the efforts that both the public and private sector have carried out in promoting applications of digital payments and transfers. This is understandable, considering the resources required on an FI's part (in terms of time, human capacity, financing) to design and deliver these types of products. There are, however,

various interesting examples of commercial banks, MMOs and fintech companies stepping up to provide *ad hoc* digital credit to small businesses and individuals affected by the crisis.

- In **Nigeria**, the e-commerce operator and MMO Jumia has been offering, since March 2020, instant, no-collateral micro-loans for up to NGN 100 000 (USD 255) to users of its JumiaPay mobile app, with the aim of providing short-term economic relief to its clients in the wake of the lockdown (Oxford Business Group, 2020a).
- In **Kenya**, the MMO Safaricom and KCB Bank launched in March 2020 a KES 30 billion (USD 278 million) stimulus fund for onward lending through the M-Pesa app, which allows for higher borrowing limits for qualifying customers and extended repayment periods for borrowers that use existing facilities. They also launched a loan restructuring program that targets individuals and small businesses affected by the pandemic, allowing for renegotiations of existing loan contracts (Capital Business, 2020).
- In **Bangladesh**, City Bank has begun piloting in July 2020 a “Digital Loan” product as a response to the pandemic, in partnership with the MMO Bkash, which digitizes the bank’s traditional loan products and makes them available to users of the BKash app, with the entire loan process (including application, KYC checks, disbursement, repayment) carried out on the app (TBS, 2020).
- In **China**, the commercial bank HSBC and logistics operator Cainiao have partnered to offer trade financing loans for digital merchants (see Box 5 for more information).

The finance industry as a whole can draw inspiration from these initial pilots to design and develop innovative approaches to digital credit for MSMEs and individuals affected by the pandemic. LMICs’ governments can promote these innovations through targeted policy support

BOX 5

Providing short-term digital credit to distressed retail businesses – the case of HSBC and Cainiao

An interesting example of private finance stepping in to respond to the retail sector crisis caused by the COVID-19 outbreak is the partnership between HSBC, Hong Kong’s largest bank, and Cainiao Network Technology, which is the logistics unit of Chinese e-commerce conglomerate Alibaba. Following the outbreak in Hong Kong, HSBC leveraged Alibabab Tmall’s platform to offer **trade financing loans for up to USD 500 000 to online merchants**, fully digitized and at a (temporarily) discounted interest rate, with a seven-day approval period. During this collaboration, Cainiao scans loan applicants based on “customer background, real-time inventory and operation status”, and afterwards sends this data to HSBC for credit assessment. In this manner, HSBC is able to leverage big data and third party information (from Cainiao) to make rapid loan application decisions that can make the difference during a state of crisis between survival and bankruptcy for small businesses in distress (SCMP, 2020).

aimed at easing key bottlenecks to digital credits (e.g. rigid KYC requirements for remote loan applications, and inflexible credit scoring and registry systems). With adequate public-private collaboration, it would be possible to rapidly develop digital credit models that are particularly adapted to pandemic-induced scenarios, especially in view **of future partial closings and re-openings of local economies** brought about by either localized or nationwide new outbreaks of the virus.

Aside from private sector initiatives, there are a few interesting examples of **digital credit programmes being launched directly by LMIC governments** to curb the impact of the COVID-19 pandemic on specific sectors of the economy.



A garment and face mask manufacturing factory in Harare, Zimbabwe

- Nigeria:** In May 2020, the Central Bank of Nigeria launched a NGN 50 billion (USD 130 million) Targeted Credit Facility, with the aim of providing financial relief to MSMEs and households whose livelihoods had been impacted by the pandemic. The Targeted Credit Facility offers loans to MSMEs and households at an interest rate of 5 percent per year (which are bound to rise up to 9 percent after February 2021) for a maximum duration of 36 months. Maximum loan amounts are USD 7 700 for households and USD 64 000 for an enterprise. Applicants need to provide verifiable evidence that their business or livelihood was adversely affected by the pandemic, or that they would be able leverage the crisis to seize a profitable business opportunity. The NIRSAL Microfinance Bank, whose main shareholders are the Central Bank and the public agricultural financing scheme NIRSAL, was charged with managing the credit scheme.

Several potential flaws have been highlighted (Onyimadu, 2020) regarding the Targeted Credit Facility's approach to lending, such as demanding from MSMEs a collateral value that can be up to 70 percent of the requested loan, as well as imposing traditional eligibility criteria for credit provision (e.g. high sales proceeds, good cash flows, solid business history) that do

not take into account the emergency situation faced by most enterprises and households. Interestingly, in June 2020, the Central Bank waived the original requirement for a guarantor to back the loan, as this was highlighted as a critical barrier limiting the scheme's uptake (Abara Benson, 2020).

- Togo:** The Yolim credit programme was launched by the government in July 2020, in partnership with two of the country's leading telecom companies. Its core objective is to provide interest-free loans to smallholder farmers affected by the crisis. Yolim, which means "planting season" in Kabyé, is a mobile service that can be accessed with a basic handset, which provides interest-free credit to small-scale farmers (deposited directly in a mobile wallet) to either purchase agricultural inputs or lease tractors, up to a total loan amount of XOF 96 000 (USD 172) per farmer. Beneficiary farmers have to be registered to Yolim by one of the 17 large-scale agricultural aggregators that are part of the programme, and are required to provide both an ID document (voter's card) and a telephone number. The programme had an initial coverage of 57 000 farmers, with a target of 256 000 by the end of 2020, and it has already mobilized XOF 5.5 billion (USD 10 million) (Akoda, 2020).

6.2 Focus on the supply side: Promoting FIs' digital transformation to remain competitive

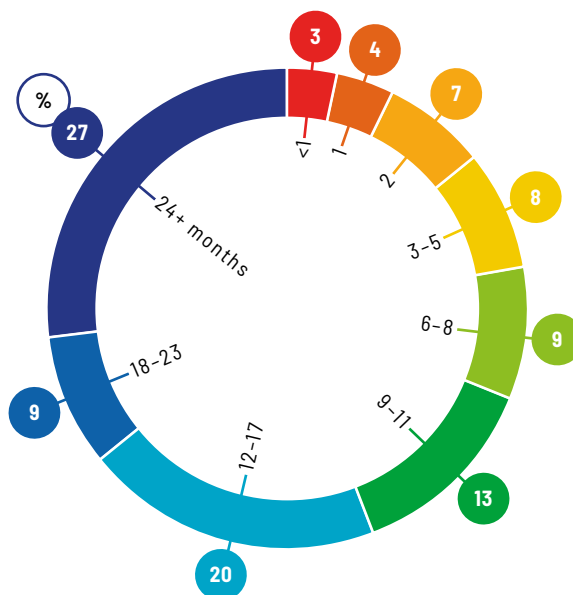
During the COVID-19 crisis, promoting a shift towards digital is not only critical for the livelihood and inclusion of the demand side for financial services (i.e. the clients), **but also to ensure the stability and competitiveness of the FIs themselves**, which need to be able to (at least in part) continue their operations in a pandemic. This implies a continued ability to deliver services, communicate with clients, register new users, process new loan application, carry out loan recoveries, and many other aspects. In this sense, it is evident that the promotion of digital transformation among FIs should encompass not only the *external* institutional level, as it relates the customer experience (which includes aspects such as service provision, external communications, complaint redressal), but also the *internal* one (such as administration, budgeting, human resources, and decision-making).

From the specific perspective of credit provision, commercial banks, microfinance institutions (MFIs), fintech companies, and various other types of FIs have been strongly affected, both in both developed and developing countries, by the rise in loan defaults and repayment delays stemming from the economic impact that the COVID-19 pandemic has had on borrowers. The extensive layoffs, bankruptcies, temporary closures, job furloughs and pay cuts in the economy, coupled with the moratoria on loan repayments announced by several central banks, have strongly reduced credit recovery rates and threatened FIs' capacity to retain enough liquidity.

Furthermore, it should be highlighted that, among FIs, **MFIs have been particularly impacted by the pandemic**, mainly because of the vulnerability of their core client segments, as well their relatively lower levels of internal and external digitization, compared to commercial banks. At present, a

FIGURE 6

How many months of operating expenditures can MFIs cover with cash on hand? (April 2020)



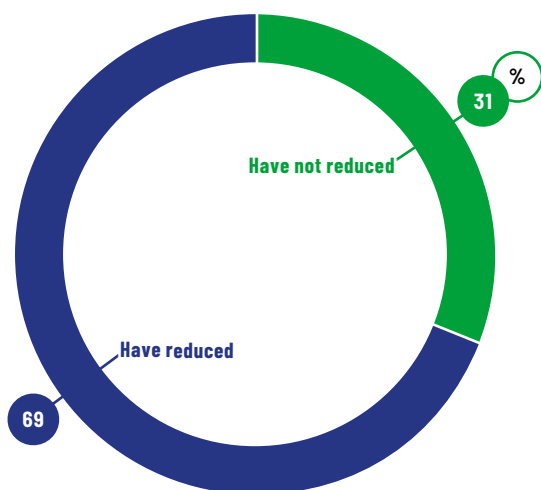
Source: Zetterli (2020a) data from the CGAP Global Pulse Survey of MFIs

main concern regarding the state of the overall MFI industry in LMICs is that it might be destined to face a **widespread liquidity crisis** over the coming months, during a protracted state of crisis that still does not have a clear end in sight. Nevertheless, according to data from the CGAP Global Pulse Survey of MFIs³¹ (see Figure 6), the situation for what concerns MFIs' cash availability at the end of April of 2020 does not seem to spell a completely catastrophic scenario: 56 percent of MFIs would be able to cover a year's worth of operations with the cash and liquid assets at their disposal, while 30 percent would be able to cover at least six months of operations. Only 14 percent

31 The CGAP Global Pulse Survey of Microfinance Institutions aims to capture the full picture of COVID-19's impact on microfinance at the global, regional, and national levels. By offering a full understanding of how the impact is playing out across the sector, the survey is designed to help funders and regulators effectively support the microfinance sector and to inform planning by MFI management teams. See: cgap.org/pulse

FIGURE 7

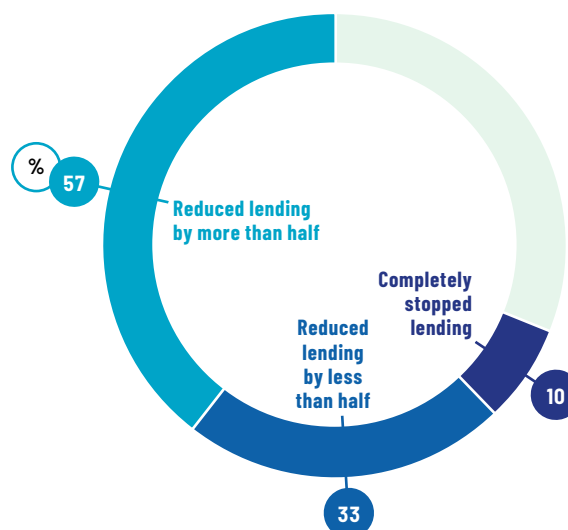
Percent of MFIs that have reduced their lending due to COVID-19 (as of July 2020)



Source: Zetterli (2020a), data as of July 22 from the CGAP Global Pulse Survey of MFIs

FIGURE 8

Extent of reductions among MFIs that have curtailed lending (as of July 2020)



Source: Zetterli (2020a), data as of July 22 from the CGAP Global Pulse Survey of MFIs

of the surveyed MFIs can cover less than three months of operational expenses, with half of these being able to cover one month at maximum. From a regional perspective, the most worrying scenario in this sense is the one faced by MFIs in Sub-Saharan Africa and Latin America, due to the considerably higher operational expenditures faced by such institutions in these regions (Zetterli, 2020a)

To prevent such an outcome, MFIs in widely different contexts **have significantly reduced their lending activities following the outbreak**, while also carrying out a range of internal changes aimed at reducing operational costs and preserve their liquidity. The CGAP Global Pulse Survey of MFIs shows that, as of July 2020, almost three out of four MFIs had reduced their lending due to the COVID-19 crisis, with almost 60 percent of these institutions having reduced lending by more than half, and 10 percent having completely stopped their lending activities (see Figures 7 and 8) (Zetterli, 2020a).

Quite relevantly, **31 percent of MFIs in the CGAP survey claimed to have expanded their existing digital customer channels to adapt to the effects of the pandemic**, while 29 percent have created new digital customer channels as a specific response to the crisis. Around 40 percent of MFIs in the CGAP Global Pulse Survey are now carrying out part of their business digitally, although only 13 percent carry out more than one-third of their transactions through these channels, while a quarter of all MFIs don't carry out any digital transactions at all. As pointed out by Zetterli (2020b), this appears to trace a notable dividing line between MFIs that are responding to the crisis by investing on their digital offer, and those who do not have the willingness or resources to do so.

It is evident that **promoting a process of internal and external digitization among financial institutions** becomes key to ensure that these institutions remain active and competitive in the face of a protracted COVID-19 crisis, which carries a strong risk of bringing new spikes in cases and

associated containment measures in the next months, with potential widespread disruptions to FIs' business. Especially those categories of institutions that **are overall lagging behind on the path towards digital transformation**, such as MFIs and rural financial cooperatives, will have to undertake this strategic shift or lose their target client segments (e.g. rural and low-income clients) to fintech start-ups that are better capable of leveraging the rising levels of mobile penetration in LMICs to rapidly expand their portfolio. Several barriers, evidently, are constraining this shift, such as inadequate institutional knowledge on how to enact a digitization process, legacy IT systems, and rigid regulatory constraints. These barriers will be analyzed more in-depth in Section 7.3 on recommendations.

The silver lining in this scenario is that a strong push towards FIs' digital transformation in LMICs will carry in the long term a strong potential to accelerate the digital financial inclusion of MSMEs (especially those active in traditionally underserved sectors like agriculture), as businesses and individuals will begin to rely more and more on digital services out of sheer necessity. In this sense, the main types of FIs that are set to benefit the most from this scenario are those fintech companies that had begun investing in the design and provision of digital financial services in developing and emerging contexts **well before the pandemic began**. These institutions will be able to leverage a range of considerable advantages they have over traditional brick-and-mortar FIs, mainly



Visiting a mobile money kiosk in Gulu, Uganda, to cash in a transfer sent from abroad

related to a more advanced level of internal and external digitization of their structure, services and operations. These advantages will make them capable of delivering a more flexible, transparent and targeted offer of financial services compared

to traditional FIs, capturing substantial clients who, in the aftermath the pandemic, found themselves unable to be attended to properly by their traditional institutions of reference.

BOX 6

Leveraging crowdfunding as a response to the pandemic

By providing people in lockdown with a chance to donate digitally to the efforts against the COVID-19 emergency, it would be possible for governments (and the non-profit sector in general) to attract considerable solidarity funding that can be used to finance the national response to the emergency. This would involve both a combination of **small-scale donations** from thousands of solidary citizens, as well as **one-time transfers** from large donors (such as companies or high-net individual).

As recently pointed out by the UNCDF (2020b), governments can strengthen these solidarity funds

by establishing or leveraging existing **crowdfunding e-platforms**, which can be used to either attract and pool non-earmarked resources to fight the crisis, or to finance specific projects such as the purchase of test kits, medical supplies, and first necessity items. The advantage of this second modality in attracting donations is that people are motivated towards giving money for a defined objective, whose achievement can be tracked and then reported on the crowdsourcing platform, in a more transparent manner.

Final considerations and recommendations

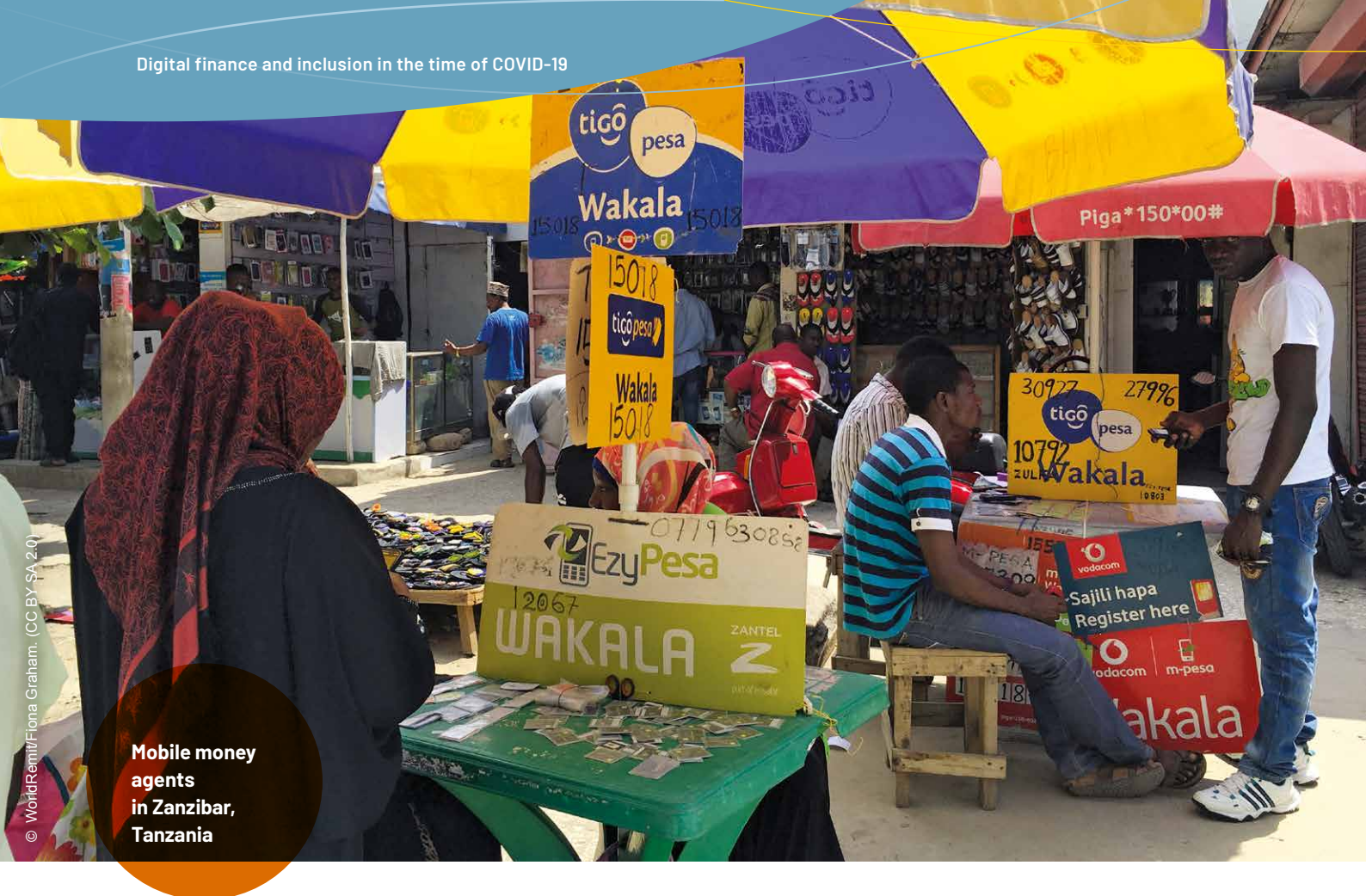
7.1 The pandemic as a trigger to moving beyond agent-assisted models in mobile money markets

By looking at the experience of the past two decades, it becomes evident that the fintech sector has a tendency to grow and innovate as a response to global crises, as new digital financial solutions are designed and implemented **to fill the various gaps in response of the traditional banking sector**, meeting that unserved demand for tailored, more sophisticated, but also accessible financial services on the part of crisis-affected populations.

In this light, **it is possible to trace a parallel** between the current rise in new fintech solutions purposely developed to respond to COVID-19, and what happened in the aftermath of the 2007–08 financial crisis, where several major fintech companies were created to fill the increasingly more evident gaps in the traditional banking sector's offer, leveraging cutting-edge technology to offer cheaper, faster, and easier-to-use services to a larger pool of customers.

From the perspective of developing and emerging countries, the risk is that this boost to fintech innovation and uptake at global scale **will end up affecting countries unequally**: On one hand, countries with an already developed digital finance ecosystem, or one that can at least leverage a series of enabling factors that would allow them to support its accelerated development, are bound to benefit considerably from the rising uptake of fintech solutions spurred by the pandemic. On the other hand, those countries that for different reasons have not invested in recent years in the core enabling elements of a digital financial ecosystem **risk lagging behind considerably** in this accelerated process of digitalization, with evident implications from a developmental perspective.³²

³² In this sense, it is interesting to remark that the risk associated with this pandemic of widening the existing digital and financial inclusion divide does not apply only to individual categories of vulnerable citizens within a country, but also from country to country in the same regional context. West Africa is a good example, where a number of countries, such as Ghana and Togo, have responded to the pandemic by reforming their regulatory framework on digital finance and investing in mobile-powered G2P transfers, while other countries have ended up focusing their policy response efforts in other areas.



Mobile money agents in Zanzibar, Tanzania

A major obstacle that still constrains a uniform acceleration of the digital financial transformation process is the over-reliance, in various LMICs across all regions, on **agent-assisted, over-the-counter transaction models to enable the provision of mobile money services**, which are described more in-depth in the next paragraph. In this sense, the COVID-19 crisis holds the potential to act as an important trigger for developing countries that still rely strongly on agent-assisted models for mobile money provision, to evolve their mobile money ecosystems towards more advanced, cash-lite models, that can ideally offer a variety of more sophisticated, mobile-powered financial services such as group loans, mobile e-commerce, and asset financing to a population of customers fully capable of making use of them.

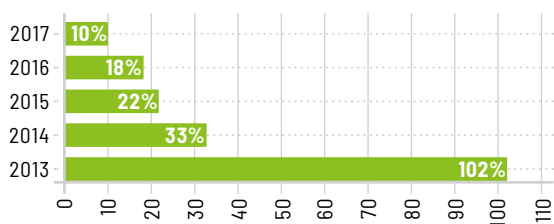
As it stands, in several –and diverse– developing countries (such Bangladesh, Ghana, Pakistan, Paraguay, Zambia) mobile money clients tend to rely heavily on physical agents to deposit or withdraw cash (i.e. CICO), to register for specific

services, address issues and complaints (i.e. customer support), or, in general, to perform all of their financial transactions over-the-counter (OTC).³³ **An agent-driven model can be viewed as an intermediate step³⁴ on the development path of a mobile money ecosystem**, in contexts where low levels of digital financial literacy and the scarce trust in mobile money services require physical agents to help clients navigate the available offer and establish familiarity with these products.

³³ A transaction is considered OTC when it is conducted by an agent's account on behalf of a customer. OTC can be offered formally, when a provider deliberately chooses to implement an OTC strategy for commercial and regulatory reasons. It can also be provided informally, despite being prohibited by the financial regulatory framework

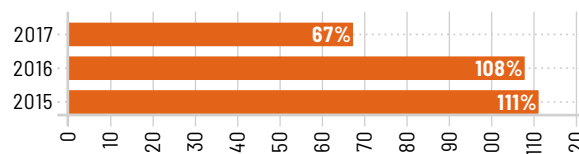
³⁴ Note that describing an agent-driven model as a stepping stone towards a fully digital ecosystem constitutes, in the end, an ideal representation. In reality, the crux of the matter lies in achieving the right balance between digital and CICO transactions, and how both transaction models can coexist in an optimal manner, during a process of slow but gradual further digitization.

FIGURE 9
Global change in OTC growth rates (%)



Source: GSMA, 2018b

FIGURE 10
Unregistered customers transacting OTC/
total registered customers (%)



Source: GSMA, 2018b

Over time, ideally, higher levels of mobile wallet ownership³⁵ on the part of clients should spur a development towards a fully digitized, account-based mobile money model, where customers are well aware and capable of using the various digital financial services available to them, without the intercession or help of an agent. **Account-based models are the basis for cash-lite ecosystems** where fully digital transactions (such as from a mobile wallet to another digital destination) steadily gain more importance over CICO transactions. These models are critical for the sustainable growth of the mobile money ecosystem, offering an overall better customer experience, increased service loyalty and profitability for MMOs, and, most importantly, greater financial empowerment and inclusion for customers (GSMA, 2018b).

During a pandemic, an excessive reliance on physical agents and OTC transactions is, evidently, **extremely counterproductive**: in periods of lockdown, it effectively cuts off mobile money clients from the digital finance ecosystem, as clients are unable to carry out transactions on their own either because they do not know how, or because they lack an account under their name. When lockdown restrictions are relaxed,

the need to depend on physical agents to carry out mobile money transactions represents an added health and safety risk. Furthermore, social protection programmes that are based on digital G2P transfers are considerably easier to implement in contexts where the mobile money ecosystem registers high levels of mobile wallet ownership and does not rely primarily on agents.³⁶ Finally, the use of big data on mobile money customers' behaviors to organize the response to the pandemic is only feasible in mobile money systems with a high level of digitalization (as in the case of China, described in Section 2.1).

It remains to be seen whether in the long-term the COVID-19 crisis will spur the development of mobile money ecosystems in LMICs more towards an account-based model and a stronger reliance on fully digital transactions. It is a fact that, from a global perspective, reliance on OTC transactions had been diminishing prior to the pandemic (see Figures 8 and 9), although **these still remain a staple of customer behaviour in several developing countries**, such as Bangladesh, Cambodia, Myanmar, Pakistan and Uganda. (Financial Inclusion Insights, 2020).

³⁵ Compounded, of course, with faster and more reliable connections, more affordable access to mobile data, and, most importantly a higher number of digital payment acceptance points.

³⁶ Nevertheless, there are interesting examples of mobile-powered G2P transfer schemes, implemented to respond to the pandemic, in contexts that register low levels of mobile wallet ownership, such as the EEC Programme in Pakistan described in Section 5.1.

Without substantial investments on the part of policymakers and FIs to move beyond an OTC-based model, the digital finance ecosystem of an LMIC risks falling into a so-called “**OTC trap**”, meaning that providers are locked into an OTC model for too long without substantial, immediate incentives to raise the levels of mobile wallet ownership, thereby preventing an evolution towards a fully digital, account-based model (Lagos Shemin, 2020). In this sense, the COVID-19 pandemic can represent a turning point for both policymakers and financial institutions, pushing these stakeholders to partner and implement measures that promote increased account registration among the wider population, and fully digital transactions.

Aside from the various measures already presented throughout this study to foster mobile wallet ownership, it should be noted that the development of a **national public policy to guide the evolution of a digital financial ecosystem towards a cash-lite model** is a critical step to move beyond an agent-driven model at country level. An excellent example of this is the recent experience of the Government of Ghana, which in the wake of the COVID-19 outbreak (May 2020) introduced a tailored bundle of policies and guidelines to orient the evolution of the national digital finance ecosystem (see Box 7).

BOX 7

Ghana’s recent experiences in the promotion of digital financial services through policy interventions

In May 2020, the Government of Ghana launched an ambitious **Digital Financial Services (DFS) Policy** whose main objective is to leverage and promote the potential of digital financial services as a tool for financial inclusion and economic empowerment at country level. The policy, which was developed with the support of the Consultative Group to Assist the Poor (CGAP) of the World Bank and the Swiss State Secretariat for Economic Affairs, establishes a four-year timeframe (2020-2023) to achieve substantial progresses in six core areas: 1) Improving governance of the digital financial services ecosystem; 2) Supporting fintech companies; 3) Creating an enabling regulatory framework for the digital financial ecosystem; 4) Actively building the capacity of authorities to supervise the digital finance ecosystem; 5) supporting the development of market infrastructure for digital financial services; and 6) driving the expansion of digital payments use cases (Government of Ghana, 2020a; Buruku, 2020).

The DFS Policy delineates considerable opportunities related to the use of digital financial services as part of the national response to the

COVID-19 pandemic. It details, for example, **how the national biometric ID database could be linked to GPS digital addressing system of Ghana’s postal service** to facilitate the remote registration of mobile money customers. The DFS Policy also calls for the implementation of a regulatory “sandbox” that would make it possible to pilot the introduction of innovative digital financial services in the market, while also providing action areas to foster the digitization of government-to-person (G2P) and person-to-government (P2G) payments.

Together with the Policy, the government also published a *Digital Payments Roadmap*, with support from the Better Than Cash Alliance, that seeks to guide the transformation of Ghana’s financial ecosystem Government towards an inclusive *cash-lite* model, establishing ambitious targets to achieve **full payments digitization** (whether G2P, P2P, business-to-client (B2C), or other categories of payments), accompanying this process with a revamped legislation for the digital finance ecosystem and a comprehensive regulation of digital financial consumer protection (of Ghana, 2020b).

7.2 Recommendations for policymakers

The following sections present a series of general recommendations related to the design and use of digital financial services, as well as policies to promote digital financial inclusion, in developing and emerging contexts. They are aimed at policymakers, development agencies, and financial institutions, with the objective of offering some contributions and food for thought that could assist in shaping and refining their strategies during the pandemic. Most of these would also hold value during future responses to other large-scale crises that generate multi-sectoral impacts such as the COVID-19 pandemic.

While self-evident, it is worth noting that there is no policy combination that represents the perfect response to the COVID-19 crisis, from the perspective of digital finance use and financial inclusion. An effective policy response is a **context-dependent, iterative process** that needs to be adapted and refined according to the different phases of the COVID-19 crisis, and the evolution of its impact on economies and societies. However, a number of general recommendations, drawn from recent experiences and lessons learned by LMICs from around the world, can still prove useful in widely different contexts to mitigate some aspects of the crisis's impact.

Focus initially on relatively small, yet critical, regulatory adjustments: Before embarking in longer-term programmes and strategies aimed at radically innovating a country's digital financial ecosystem (in order to adapt it and strengthen it against both the pandemic and other future crises), governments should first assess what are the most effective "quick wins" in terms of regulatory adjustments (i.e. those straightforward and cost-effective modifications – both temporary and permanent) to the national framework regulating digital finance **that carry a high potential to mitigate**



Pakistan: Beneficiaries practicing physical distancing while queuing to cash out a social cash transfer

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some aspects of the pandemic's impact on the economy. Multiple examples are mentioned throughout this study of governments doing exactly this in the wake of the COVID-19 outbreak: Kenya and Ghana, for example, have waived fees on mobile money transactions and increased transaction limits to promote the use of digital payments; Pakistan has eased KYC requirements to facilitate the remote registration of mobile money customers; and Zambia has declared MMO agents as "essential services" to allow them to remain operative during lockdowns. Therefore, policymakers, possibly with support from development agencies, should carry out precise assessments of their current regulatory frameworks, identifying specific pain points and rapid solutions in the digital financial ecosystem that would enable to mitigate, at least in the short term, some of the negative impacts of the crisis.

Ensure a level playing field among digital finance providers: From a macro-perspective, to ensure that the accelerated shift towards digitization induced by the pandemic is carried out in an inclusive and fair manner, a **standardized**

regulatory framework should ideally be³⁷ introduced for all types of institutions involved in the mobile and digital money market, whether commercial banks, MNOs, fintech companies, financial cooperatives, or other providers. This is fundamental to ensuring a “level playing field” for all types of digital finance providers in the market, thus ensuring that a competitive economic moat is not created around a specific provider category.

Until recently for example, countries that were considered as “sleeping giants” in terms of their potential for mobile money expansion, such as Nigeria and Egypt, restricted the authorization to provide mobile money services to only a few types of institutions (primarily commercial banks), which resulted in **lower levels of investments in the market and fewer innovative products and services**, curbing the growth of the mobile money (GSMA, 2019). Starting from 2018, both these countries introduced reforms that attempted to harness the potential of mobile money as a key driver for financial inclusion, allowing telecom companies to enter this market as service providers.

Even countries that are relatively advanced from the perspective of digital financial inclusion still present substantial regulatory imbalances that affect competition between different types of MMOs, although there are some recent cases of promising regulatory reforms in LMICs that sought to balance these distortions. In **Uganda**, for example, telecom companies completely dominate the mobile money market, even though they are required to partner with a commercial bank to obtain an MMO license, as well as hold the balances recorded in their mobile wallets

³⁷ Implementing such a standardized regulatory framework will turn to be an impossibility in several LMICs where decades of regulatory and market distortions have crystallized into an extremely unbalanced scenario in terms of the competition among different types of FIs. Nevertheless, the recommendation stands for what concerns the promotion of a process of gradual and flexible mitigation of those specific regulatory and political constraints that impede the emergence of new types of digital financial service providers on the market.

in an escrow account at the partner bank. Until recently, competitiveness in the market was marred by an ambiguous regulatory framework and the lack of a competition regulation regime, with both the Central Bank and the national telecommunications authority sharing supervisory duties. A promising bill was approved in May 2020 to provide a uniform regulation to mobile financial services and bring the entire market under the authority of the Central Bank. **Ethiopia** is another interesting example, as its government introduced in April 2020 a regulatory reform that allows local non-bank stakeholders (such as telecom companies) to offer for the first time basic mobile money services to the general population, under the frame of a standardized licensing system that applies to all market players, with an expected positive impact on mobile money usage and digital financial inclusion

Overall, ensure a correct balance between fair regulation and adequate competitiveness and innovation in the mobile money market should be a priority for policymakers seeking to foster the development of a solid digital financial ecosystem, as well as the overall inclusion of the most vulnerable and unbanked, with a view towards making entire populations **more resilient and prepared** to respond to future catastrophic crises such as the COVID-19 pandemic.

Accompany the digitization efforts with adequate financial consumer protection measures: Whether related to payments, transfers, credit or savings, any policy or programmatic effort to foster the digitization of financial services should be accompanied by substantial government-led interventions aimed at **strengthening financial consumer protection**, which are fundamental to promote trust in, and uptake of, such services among the general population. These should encompass both government-led efforts (such as digitizing payments for response workers), as well as clear and enforceable rules for all types of digital financial service providers.

These measures can take a variety of forms: revising the financial regulatory framework to account specifically for financial cyber-crimes; creating or appointing a supervising public entity solely devoted to safeguarding the digital finance sector; implementing dedicated mechanisms for recourse and dispute resolution; ensuring ease of use and simplicity in the digital interface used by customers (to avoid mishaps and scams); establishing rigid requirements for transparency and disclosures in the formal offer of digital financial services, and several more. Overall, users need to be put in the condition to properly understand and mitigate the risks they face when embracing new digital financial services, while minimizing their potential losses (Better Than Cash Alliance, 2016).

The more this digitalization process is accelerated, due to the necessities borne out of the pandemic, the timelier should policymakers be in implementing these financial consumer protection measures.³⁸ If this is not done, as past evidence has shown, the rapid rise in the offer of digital financial services in a developing country is bound to be accompanied by a **parallel increase in episodes of fraud, scams, predatory lending and identity theft**, which exploit and target the relative unfamiliarity of the average citizen with these products, and ultimately lead to the failure of the digitization effort.

³⁸ A recent example of a country that reformed its financial consumer protection framework in the wake of the pandemic is Peru, which in July 2020 implemented measures to protect pandemic-affected borrowers from abusive practices on the part of FIs, as well as allow them to benefit from loan restructuring and alternative reimbursement agreements due to the state of emergency.

Zambia:
an agent of the fintech
company LifePay, a
beneficiary start-up of
UNCDF's Fintech4You
Accelerator
Programme



Develop a regulatory sandbox to test policies and products:

in the longer-term optic of making digital financial ecosystems more sophisticated, inclusive and resilient to external shocks, regulators in both developed and developing countries have developed and implemented **regulatory sandboxes** that allow for fintech companies to experiment and pilot new products and business models, such as biometric identification, blockchain-based remittances, digital KYC and alternative credit scoring, within a controlled environment and under the regulator's strict supervision. Several LMIC governments have implemented such programmes in recent years, including Kenya, Mozambique, Rwanda, Thailand and Sierra Leone, in an effort to achieve a range of specific objectives such as promoting competition or developing guidelines and standards for new technologies. Nevertheless, from a global viewpoint, it should be noted that relatively few sandboxes focus specifically on developing solutions **to promote the financial inclusion of underserved or excluded client segments**.

During the COVID-19 response, regulatory sandboxes can be used to test innovative services and business models that can tackle the specific pandemic-induced challenges and pain points faced by financial clients, in an environment that guarantees adequate safeguards for financial consumer protection. In this regard, it is interesting to note that about 30 percent of regulatory sandbox projects, according to a recent CGAP survey, are **dominated by fintech companies engaged in the innovation of payments services** (with a focus on crypto-based solutions), which as seen throughout this study, carry the greatest variety of use cases that can assist in the response to the pandemic (Jenik, Duff and de Montfort, 2019).

Furthermore, it should be noted that recent research also points to the fact that regulatory sandboxes present **substantial challenges to implementation and maintenance**, which might bring policyholders to propend towards

alternative instruments to promote fintech innovation. They can be quite expensive, for example, requiring up to 25 full-time employees and dedicated resources in the range of USD 250 000 to over 1 million. They also present considerable logistical challenges, such as how to ensure fair entry to a sandbox among different fintech companies. (Yalla and Rowan, 2020; Appaya and Jenik, 2019). In this sense, policymakers in recent years have successfully experimented other types of platforms/programs to facilitate digital finance innovation, such as:

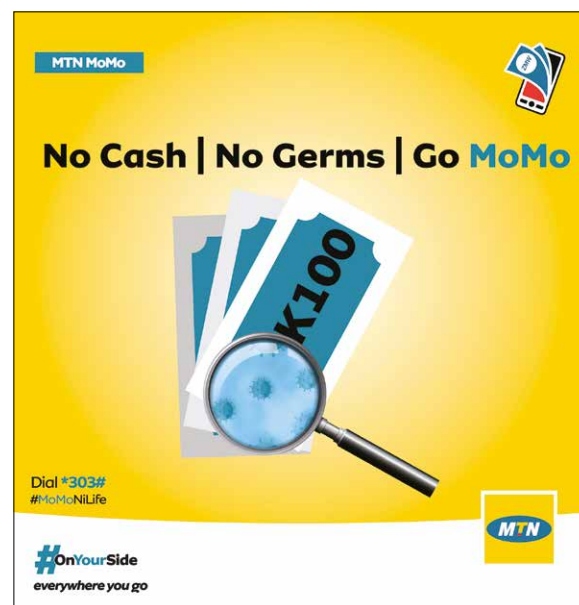
- **Innovation hubs:** These are dedicated access points tasked with providing support, guidance and clarifications to financial service providers piloting and offering innovative services, that are trying to **navigate the regulatory and legal complexities of the digital financial ecosystem in which they operate**. Their format and structure can vary widely depending on the regulator's objectives: Malaysia (Digital Finance Innovation Hub) and Indonesia (OJK Infinity), for example, have set up innovation hubs with other stakeholders that go beyond the financial sector. In addition to providing regulatory clarity, they enable service providers, including FIs, fintech start-ups, and academia to collaborate on joint solutions.
- **Regulatory accelerators:** These programmes enable partnership arrangements between fintech firms and policymakers to promote innovations on shared technologies, most commonly to solve pre-defined use cases. In the Philippines, for example, the Central Bank implemented in 2017 a **chatbot solution** that allowed financial customers to file complaints through their mobile handsets via an app or SMS, with substantial benefits in terms of data quality, precision, improved customer experience, and rapidity of customer complaints' handling. The fintech company that supported the Central Bank in enabling this innovation was selected through a competitive process launched by an accelerator called **RegTech for Regulators Accelerator**,

established in 2016 with support from the Bill & Melinda Gates Foundation, the Omidyar Network, and the United States Agency for International Development (Appaya, Luskin Gradstein and Mathurin-Andrew, 2020).

Promote awareness and education among

consumers: For governments, development agencies and industry leaders, **the promotion of consumer education initiatives and awareness campaigns among the population** is an essential step towards ensuring widespread usage of, and trust in, digital financial services. These initiatives are also fundamental to motivate customers into becoming active mobile wallet users and move away from agent-assisted transactions, as well as reassure them on the effectiveness of existing mechanisms for fraud prevention and complaint redressal. An interesting example in this sense, from the side of the private sector, is the “No Cash, No Germs, Go MoMo” campaign launched by MTN Zambia in the wake of the pandemic, which coupled a widespread awareness campaign with increases to transaction and balance limits, in order to promote active mobile money usage (Lagos Shemin, 2020).

Another interesting example in this sense has been presented in Section 3.1, which shows the results of a project to digitize payments for Ebola response workers in Sierra Leone. At the beginning of the project, response workers usually ended up **cashing out immediately upon receipt of their mobile payment**, moving on to transact in cash, as a result of their lack of familiarity and trust with the mobile money service. As a result, they did not actively use the accounts in which they received the payments as mobile wallets, and did not use these mobile accounts to access other digital financial services. To correct this, response workers were made the recipients of a financial consumer education course, following which they became more convinced and aware of the advantages of keeping money in their mobile wallets, in digital form (Better Than Cash Alliance, 2016).



Higher levels of financial and digital education are also fundamental **to protect the general population** from the most immediate risks that can derive from accelerating the uptake of digital financial services at country level, such as fraud, scams, predatory lending and identity theft.

Strengthen the resilience of existing MMO agent

networks: The resilience of MMO agent networks, and the very health of the agents themselves, have been threatened by the COVID-19 pandemic, due to a variety of factors: the prolonged lockdowns and closures of agent points, with associated sharp drops in revenue; the decrease in demand for CICO transactions; liquidity pressures on agents, caused by the rush among customers to withdraw money in the wake of the outbreak; the increased risk of contagion faced by agents on the workplace; and several other causes. Mobile money agents represent a lifeline for many vulnerable communities (especially rural ones) that have no other channel to access financial services, and they constitute essential instruments to register and include beneficiaries in digital G2P payments schemes. It is therefore evident how guaranteeing the health, livelihoods and resilience of these agents should represent a crucial priority for both policymakers and



Non-dedicated agents provide mobile money services as a complementary source of income to their core line of business (e.g. pharmacies, grocery stores).

MMOs. This can turn out to be quite challenging, as policymakers and MMOs will be required to collaborate and ensure that the agents' ability to continue working and earn a living remains compatible with their continued safety on the workplace (Theodorou, Chege and Warnes, 2020).

Several policy and institutional recommendations can be suggested to foster the resilience and strength of mobile agent networks during the pandemic, many of which are supported by recent country-level examples:

- **Declare MMO agents as "essential services":** This has been indicated by several observers³⁹ as an important step to ensure that mobile money networks remain operational and profitable during lockdowns, and that high numbers of clients do not find themselves completely cut off from the digital finance ecosystem from one day to the next. Countries such as Zambia and India have implemented this measure in the aftermath of the outbreak,

although the lack of regulatory clarity has made it difficult for local authorities to decide whether "non-dedicated" agents were to be deemed an essential service (i.e. those agents that offer at the same time both financial and non-financial services, such as groceries or office supplies)(Hernandez and Kim, 2020).

- **Incentivize the provision of interest-free emergency loans to agents:** Policymakers can incentivize the provision of interest-free, rapid loans to MMO agents, to assist them in weathering the crisis from a livelihood perspective, as well as facing the associated liquidity squeezes they are bound to face in their business because of the spike in demand. This would imply identifying those categories of FIs better placed to rapidly provide liquidity to agents, preferably through mobile channels, and subsidizing and/or supporting their credit provision activities. In this sense, it is interesting to note that there are some recent examples of innovative fintech companies, such as Flow in Uganda, which focus expressly on providing instant e-money advances to agents and shopkeepers facing

39 On this topic, refer for example to Hernandez and Kim, 2020; Theodorou, 2020; Okai, 2020

cash shortages, leveraging their business data (i.e. mobile money transactions) to make credit decisions (Rothe, 2020).

- **Consider carefully how to implement fee waivers:** As already illustrated in Section 4.2, governments should take particular care to avoid critical knock-on effects on mobile agents' livelihoods when implementing fee waivers or reductions on mobile transactions, in order to encourage digital payments during the pandemic. These include waivers on fees associated with P2P transactions, bank-to-wallet and wallet-to-bank transactions, and cross-network transactions. Unlike commercial banks, which also intermediate deposits, for the majority of MMO transaction fees represent the core source of operational liquidity, and a prolonged reduction of the income derived from this source can critically threaten the sustainability of MMOs' operations, as well as their capability to maintain their agent networks,⁴⁰ especially when facing a rapid spike in transactions deriving from the largescale of a digital G2P payments scheme (Theodorou, 2020).

Therefore, it is essential that policymakers keep such fee waiving measures in place only on a strictly temporary basis, as a first response line to encourage digital payments' use following an outbreak, while reviewing the tradeoffs associated with its continued implementation on a regular basis (e.g. monthly), in consultation with all major stakeholders from the mobile money industry. Furthermore, they should consider restricting the waiver to a certain transaction threshold, to ensure that it actually benefits the most vulnerable customers affected by the pandemic and does not encourage wealthier individuals from exploiting the waiver for larger-scale transactions. (GSMA, 2020b).

40 In fact, according to a GSMA (2014) study, agent management and commissions account for the largest shares of MMOs' operating costs.

7.3 Recommendations for development agencies

Promote cross-country exchanges of experiences among governments: The examples provided in this study are only a handful of very diverse and successful experiences that governments in both developed and developing countries have had in battling this crisis (as well as past ones). Case studies like the digitization of payments directed at Ebola response workers in Sierra Leone, or the reform of the digital finance space recently carried out in Ghana, present **multiple elements of replicability and inspiration** for other LMICs that are currently seeking for ways to respond to the COVID-19 crisis through targeted policy reforms and innovative uses of digital financial services. Beyond the contribution that this study might provide, there are innumerable other cases and lessons that deserve to be brought to light and shared with the international community, to promote a harmonized response to the COVID-19 crisis from a digital finance perspective. In this sense, development agencies can play an important role in promoting cross-country exchanges of experiences among governments, fostering the sharing of ideas, lessons learned, and case studies.

Launch digital innovation accelerators and competitions: Within new and existing partnerships with stakeholders in the digital finance domain (e.g. policymakers, MMOs, foundations, impact investment funds, angel investors), development agencies can provide their financial and technical resources to launch digital innovation accelerators, incubators, hackathons and competitions at national and regional level, that will focus expressly **on identifying, selecting, and promoting the growth of fintech startups** whose products and ideas hold considerable potential to contribute to the global response against the COVID-19 pandemic, and disseminate the key insights and lessons learned from their experiences among the community of practice. In this manner, it will be

possible to foster the development of a new range of digital financial solutions that seek to respond to the precise pain points and disruptions caused by the crisis.

An example in this sense is a recent initiative launched in March 2020 by UNCDF, MetLife Foundation, and the Singapore Fintech Festival, called the **COVID-19 Financial Health Challenge**. The challenge seeks to identify solutions and business models that can promote the financial health of consumers (especially the most vulnerable ones), assist them in becoming more resilient against external shocks, empower them to make more informed financial decisions, and achieve their financial goals when faced with the disruptions caused by the COVID-19 crisis. The challenge is hosted on the APIX platform, a digital innovation platform whose goal is to catalyze digital innovation and drive financial inclusion. Shortlisted candidates are able to participate in a six-week programme to further refine and develop their ideas, with support from industry experts. At the end of the programme, they will have a chance to receive a USD 10 000 grant to further expand their ideas, as well as receive further technical assistance and mentorship. Selected winners will have the opportunity to pilot their innovation in China and Malaysia, with support from UNCDF and MetLife Foundation (Khor, 2020).

Establish inter-divisional and inter-agency teams: The promotion of digital financial services during the COVID-19 pandemic is but a component of a wider strategic response to the crisis that encompasses practically every aspect related to the safety and livelihoods of national populations, such as health, social protection, shock resilience, economic empowerment, and many more. In this sense, all the COVID-19-related programmatic work carried out by development agencies in the digital finance domain (whether technical assistance, policy advice, financial support, or other interventions) should be carried out in synergy with other types of expertise that are available either in-house or among other agencies **as part of expressly established inter-**

disciplinary teams and coordination units, to ensure that an appropriately complex strategic response is given to such an all-encompassing, multidimensional crisis.

These special task forces could be set up according to specific geographical foci, or widely varied **macro-areas of engagement** (e.g. agriculture, social protection, or women's resilience), with the ultimate aim of developing adequate strategic responses, as well as innovative solutions, related to the use of digital finance as part of the response to the COVID-19 crisis. These working groups should be put in the condition to work flexibly and collaborate with each other, responding to a central coordination mechanism composed of representatives from different leading development agencies, and matched with strong donors and implementing partners on the ground (both public and private) that are able to provide both financial and technical resources to these efforts.

7.4 Recommendations for financial institutions and MMOs

Invest in a process of institutional digitalization: For many FIs, the pandemic has imposed a “reality check” on their actual readiness to deal with a sudden spike in the use and demand for their digital services (Marous, 2020). In the aftermath of the outbreak, many financial providers in LMICs have seen their digital capabilities and customer experience **put under considerable (and often excessive) stress**, due to customers overloading all remote channels of interaction with their FIs, such as call centers, mobile apps, online platforms and social media. This shift in preferences on the part of clients for remote channels for interaction can be seen in Figure 11, which shows the results of a large-scale survey carried out in April 2020 by the Capgemini Research Institute, among financial consumers across 11 countries. As can be seen, there is an evident customer shift towards mobile apps, internet

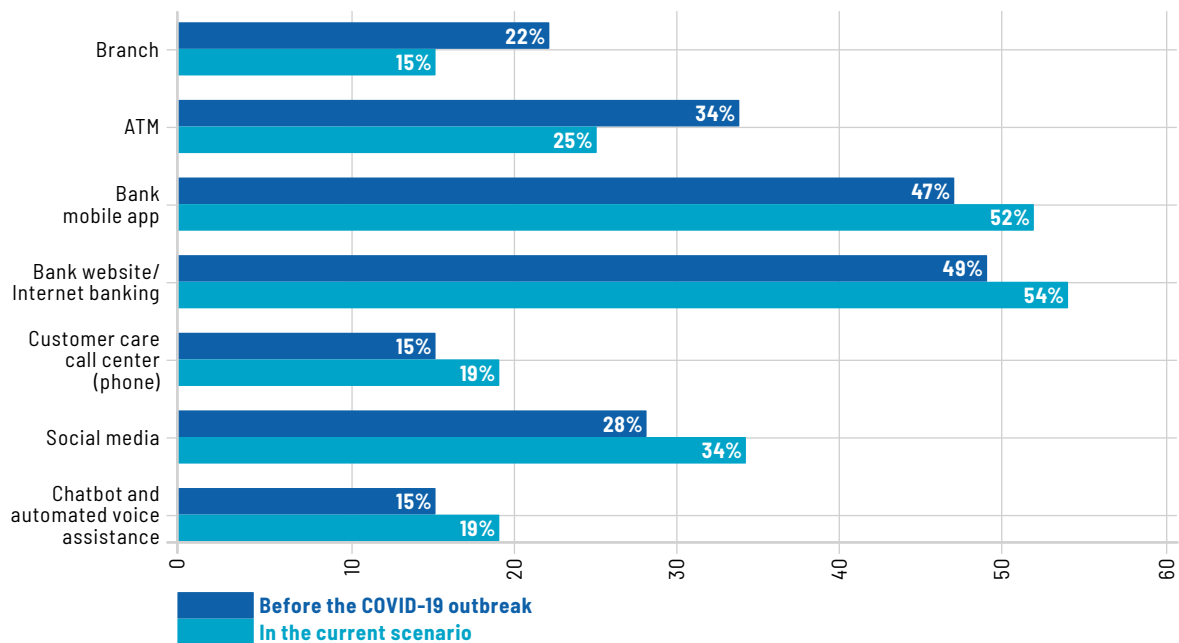
banking and other remote channels to interface with FIs, to the detriment of banking branches and ATMs.

For FIs, the COVID-19 pandemic can prove to be a turning point towards reinventing their processes and structures, promoting a process of internal and external digitization that allows them to remain competitive in a post-pandemic world. In fact, initial data from LMICs already shows that FIs are reacting to the pandemic **by investing heavily into further digital transformation of their systems**. During a survey made by the Oxford Business Group (2020b) among 281 African companies, more than three quarters of the CEOs of financial institutions interviewed stated that they were investing in tech solutions to allow operations to keep running smoothly during the pandemic, and also that the crisis **would lead to major digital transformations in their institutions**, even after its resolution.

Nevertheless, it should be noted that **there are several key challenges** that constrain and slow down the process of digital transformation among FIs in developing and emerging contexts, and especially MFIs, which are considerably lagging behind in this sense compared to commercial banks. A recent survey from the Belgian Investment Company for Developing Countries, spanning 27 financial institutions based in 15 LMICs, shows that all MFIs interviewed stated that their lack of institutional knowledge and human resources (HR) capacity was limiting their capacity to promote a process of internal and external digitization. As can be seen from Figure 12, this overarching issue was compounded by frequently reported barriers such as the limitations of the MFIs' own IT systems, the regulatory constraints posed by the local regulatory financial framework, and the general lack of funding that could be leveraged to implement such a process of digital transformation (Schicks, 2020).

FIGURE 11

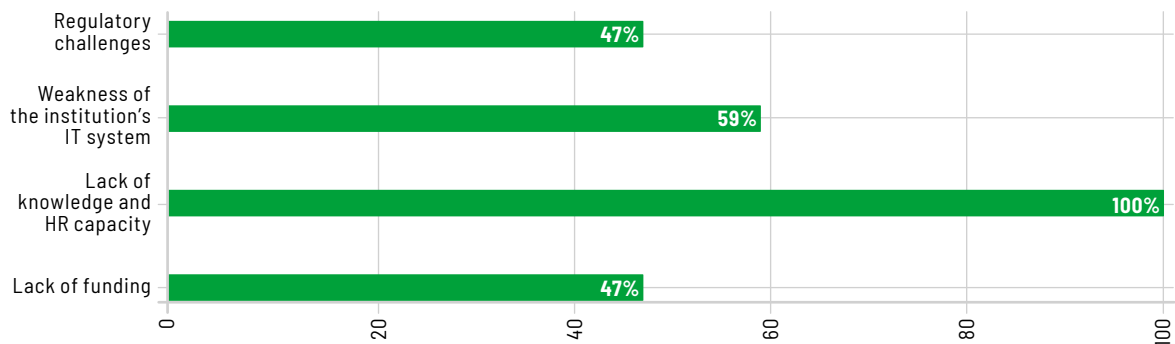
Primary modalities for bank interactions before and after COVID-19



Source: Capgemini Research Institute, 2020

FIGURE 12

Survey results: challenges for digitalization among non-commercial banks (MFIs and a few leasing companies)



Source: Schicks, 2020

Develop tailored financial services that respond to the new demand:

Together with the widespread disruptions that have affected financial sectors, the COVID-19 pandemic is also carrying substantial opportunities for FIs, MMOs and fintech firms to develop innovative financial products and solutions **that can target both the pain points and the new trends** generated by the crisis. Several of these have been analyzed throughout this study: the need to respect physical distancing while taking care of one's financial life; the growth in e-commerce; the high demand for short-term credit on the part of MSMEs; the rise of new customer categories that were previously eschewing the digital financial sector; and many more. Two examples presented here, the "Connected Card" (Box 8) and "Save My Local" (Box 9), showcase simple yet effective ideas that fintech companies and FIs have developed to respond to the unique, constraining features of the COVID-19 scenario, such as lockdowns, physical distancing, and business disruptions.

In other words, the COVID-19 pandemic can represent an opportunity for enterprising FIs to rise above the competition and reach new client segments, by developing an offer of services that is tailored on the new trends in demand stemming from this crisis. Figure 13 presents more results from the aforementioned

BOX 8

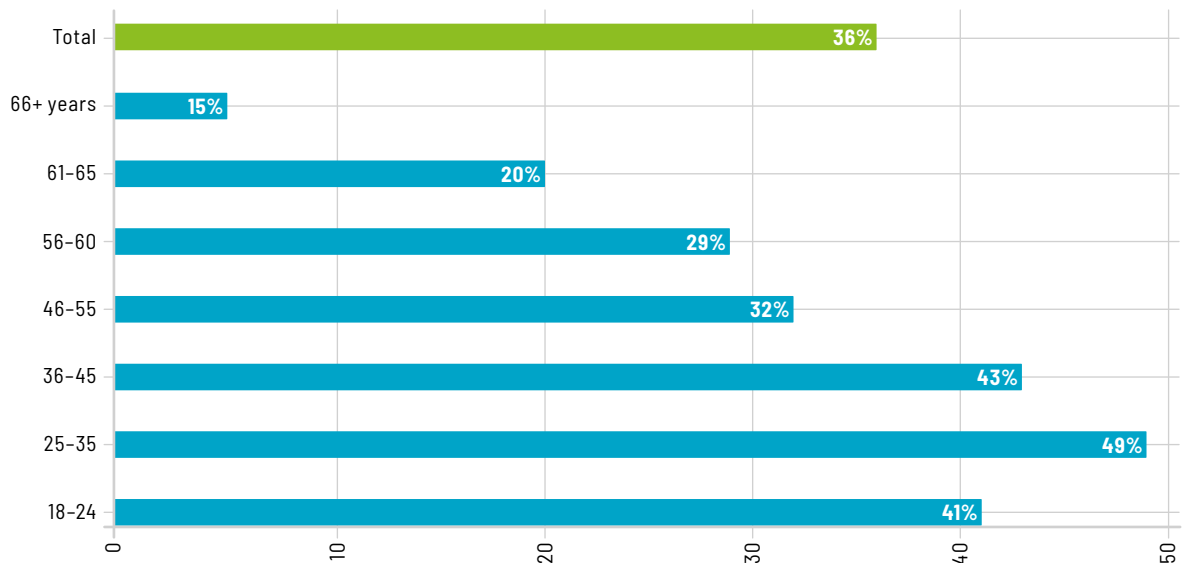
Taking care of essential purchases on behalf of another: the Connected Card

To meet the demand of customers required to self-isolate during a quarantine, who need to keep taking care of their financial lives, British bank Starling launched the Connected Card in April 2020. This is basically a second debit card connected to an existing account of a Sterling customer that can be given to a family member or trusted friend, for them to make purchases on behalf of the customer (only at a store, not online) while he or she is in self-isolation. The card has a balance limit of £200, and its transactions can be easily tracked and administered through Sterling's banking app (Patel, 2020).

This innovation is quite handy especially for certain customers (such as the elderly) that might not be familiar with -or able to access- e-commerce, and as such would have to rely on someone else to buy essential items on their behalf at local retail stores. This innovation has been quickly taken up and replicated by other British banks, such as NatWest and the Royal Bank of Scotland.

FIGURE 13

Survey statement: "I discovered a new banking provider/financial institution who best helped me in the current environment, and I will continue using them after the end of the current crisis"



Source: Capgemini Research Institute (2020)

BOX 9

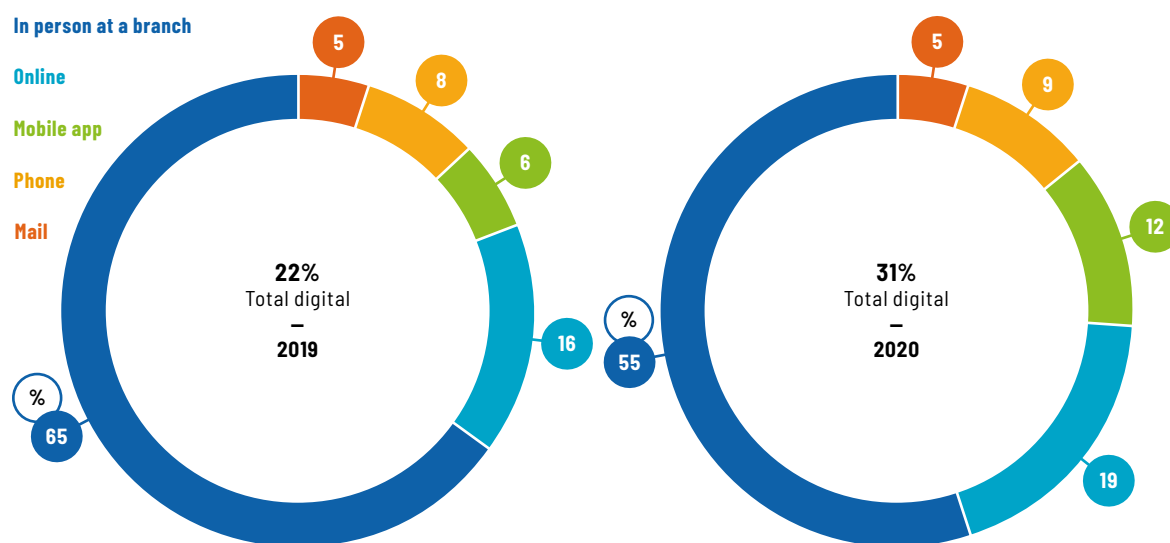
A voucher system to assist small businesses during lockdown: Save My Local

An interesting idea connected to the use of digital payment systems to support small businesses during the crisis comes from a group of volunteer programmers from **British fintech app Curl**. In April 2020, Curl launched the pilot of a free website called "**Save my Local**" that allows small businesses to create and sell vouchers for their products to loyal customers, fully online, in order to generate in a short period of time the much needed cash flow that is needed for these enterprises to survive the crisis. These products will become available to those who have purchased the vouchers after the pandemic is over, while customers -in the meantime- can contribute to support their favored small businesses in weathering the crisis.

Capgemini Research Institute survey, **illustrating the large numbers of financial consumers who have switched to a new financial provider**, or complemented their current ones, in order to gain access to an appropriate offer of specific financial services that they required to weather the COVID-19 crisis. The high number of consumers who have switched or complemented providers, especially among the younger age categories, shows that there is substantial scope for innovating FIs to establish strong customer loyalty among a new wave of customers impacted by the crisis, with good potential for it to last even after the end of the pandemic (Capgemini Research Institute, 2020).

Revisit policies for first engagement of customers: even in those developing and emerging contexts where the use of mobile money is quite widespread, customers are still normally required by FIs to visit a brick-and-mortar branch or physical agent to register for a new account or other service, regardless

FIGURE 14
How consumers opened their most recent banking account



Source: Marous, 2020

of whether any subsequent interaction with the service, following registration, will only be digital. During a pandemic, with people forced in lockdown and banking branches all closed, it is essential for FIs to revisit their policies for first engagement of customers -whether it's for opening an account, applying for a loan, or other interactions to ensure that financial relationships can be established without needing to meet face-to-face (Marous, 2020).

Recent data provides us with an idea of consumers' increasing predisposition towards remote, digitally enabled modalities of registration to open bank accounts, as a consequence of the COVID-19 outbreak (see Figure 14). This "induced" tendency towards digital registration needs to be encouraged and promoted by FIs through different angles of intervention, such as:

- Re-evaluate internal policies that do not allow to establish new checking, savings or loan relationships of any kind without engaging first with a brick-and-mortar branch.

- Simplify the registration of new digital customers, both by revising related processes to make them less cumbersome and by improving remote interactions between agents and customers.
- Revise all back-office operations, promoting a shift towards digitization when possible, with a view to supporting new relationships with digital customers and to implementing seamless integration⁴¹ in the FIs' internal systems (Marous, 2020).

⁴¹ Seamless integration is the process where a new module or feature of an application or hardware is added or integrated without resulting in any discernable errors or complications. It means that whatever change is being applied to a system, it happens without any negative impact resulting from the integration.

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Digital finance and inclusion in the time of COVID-19

The COVID-19 pandemic has impacted digital financial inclusion trends across the world in many and complex ways. In developing and emerging contexts, this crisis also holds the potential to propel an unprecedented acceleration in the process of financial digitization and turn out to be a game changer for digital financial inclusion.

The aim of this study is to illustrate the opportunities and risks associated with the surge in uptake and use of digital financial service, providing ideas on how to leverage the paradigm changes affecting the overall approach and perspective towards digital financial services – on the part of various stakeholders – to advance financial inclusion and development. It also seeks to showcase how digital financial services have been used – in both traditional and innovative ways – to mitigate the impact of the COVID-19 crisis on economies and societies, by both public and private actors.

Inclusive Rural Transformation and Gender Equity – Economic and Social Development

www.fao.org/policy-support/policy-themes/access-to-finance

Food and Agriculture Organization of the United Nations

Rome, Italy

ISBN 978-92-5-133623-6



9 789251 336236

CB2109EN/1/01.21