Pandemic catalyzes transition to cashless benefits

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Original post here.

Health concerns and the sudden implementation of economic shutdowns have caused many countries to expedite or expand transitions to the cashless administration of government benefits in order to make their support efforts as effective as possible. Cashless supports for individuals offer speed, security, and availability that far outperform cash in combating the COVID-19 pandemic, given its unique circumstances. In some countries, increased adoption of cashless technology is an escalation of previously-announced long-term policy goals. Other governments have expedited the transition from cash-based systems to digital payment capacities.

In this post we discuss examples of countries that have used digital payments in their responses to the Ebola epidemic in 2014 and now the COVID-19 pandemic.

Sierra Leone: Lessons from Ebola

While payment systems in most countries progress from cash to bank-cards to mobile money, many Sub-Saharan African governments have leapfrogged card-based solutions in favor of mobile interventions.

According to a World Bank survey, 27 of the 35 countries with the highest portion of mobile money account holders in 2017 were in Sub-Saharan Africa. Sierra Leone ranked 35th on the list, with 11% of adults holding mobile money accounts. The country had aggressively promoted mobile transactions. It issued its first mobile money guidelines in November 2015. At the time, only 4% of adults reported having a mobile money account, but the country had a 90% mobile phone penetration rate and 5,000 mobile-to-cash agents. This enabled the government's campaign.

The campaign was also prompted by, and a corollary to, a successful effort undertaken a year earlier by healthcare authorities to quickly set up a decentralized mobile payments system for emergency response workers when the country suffered an Ebola outbreak in 2014 (see pp. 20-21). The effort responded to extraordinary hiring and retention needs, which were made more difficult by a payment system rife with delays and fraud.

On top of reducing contact risks, the digitized system cut payroll delivery time from a month to a week, and spared the virus response an estimated 800 lost healthcare work days due to strikes that had occurred early in the outbreak. The success of Sierra Leone's intervention depended on prior acceptance of the new media of exchange, its easy convertibility into and out of cash, and a strong government initiative.

A UN-sponsored report concluded that the effort was very successful:

"Sierra Leone was also able to substantially improve the security, transparency, and efficiency of paying Ebola Response Workers [and] also generated major cost savings, compared to the expense of moving cash around during an extremely dangerous time in the country. The combination of these two benefits – saving lives and saving money – stands as a remarkable achievement in the humanitarian field" (p. 6).

The report concluded that Liberia and Guinea, the other two countries hardest hit by the Ebola outbreak, were less successful for various reasons: lower penetration of cell phones, underdeveloped mobile payment networks, and high fees during the conversion to and from cash (p. 21). The contrast among these neighboring countries underscores two factors important to successful digital transitions: existing communications infrastructure and well-integrated payment systems. The UN report urged countries to invest in infrastructure in normal times to be ready for a crisis.

Responses to COVID-19

In the COVID-19 crisis, the immediate problem governments face is to safeguard the health of benefits recipients and administrators in an environment where social contact is limited by necessity.

The pandemic has led governments to swiftly roll out payments to individuals to mitigate the effects of economic lockdowns. In many countries, lockdowns have a particularly negative impact on lower-income populations, who are less likely to be able to work remotely or rely on savings to cover essential costs. They are also less likely to have bank accounts than richer populations, which makes it difficult for governments to deliver benefits quickly without resorting to physical cash. As a result, countries have had to contend with an extra burden: those who receive government-to-person (G2P) payments are rarely at the forefront of medium-of-exchange developments.

Many governments that have been stymied by public demand for cash (Fig. 1, panel 2) are taking advantage of the crisis to aggressively improve their distribution systems. Bank Indonesia, for instance, has rolled out prepaid cash cards for food assistance programs. Meanwhile, states that had card-based systems in place are upgrading to mobile platforms. For example, some of Brazil's G2P payments, which have been distributed by prepaid debit cards, are beginning to migrate to the Federal Revenue Service's CPF app, which could serve as the primary contact point both for benefits and the collection of taxes (P2G).
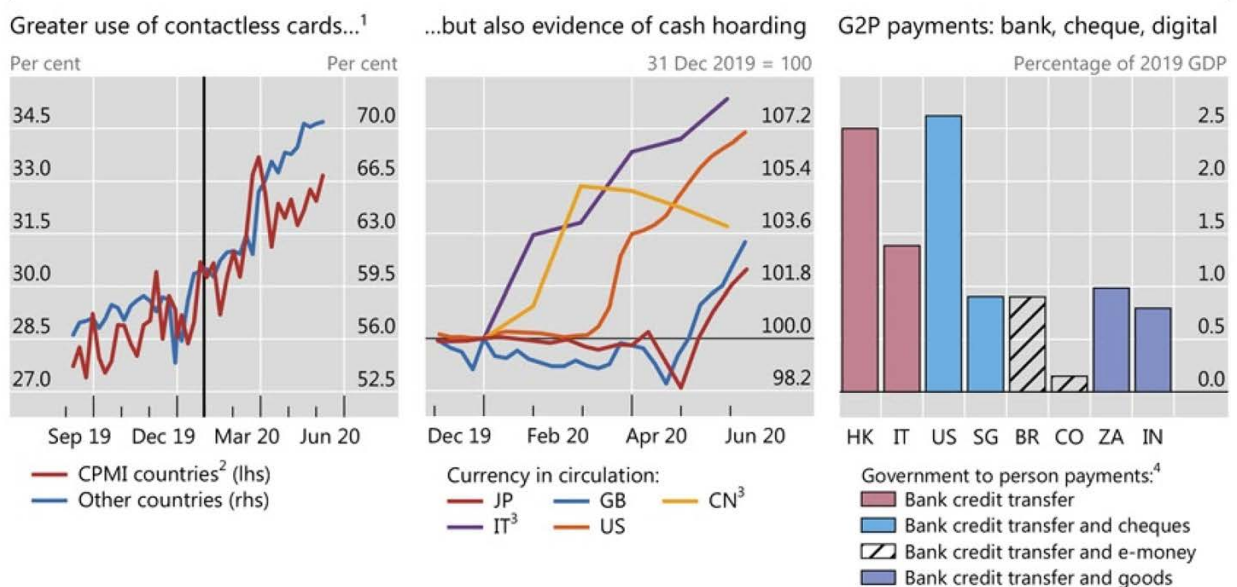
Indonesia: Accelerating from cash to debit

Ineffective government administration of benefits can undermine the public-health response to the crisis. Cash distribution presents problems for countries combatting COVID-19 because recipients must travel to, and gather in, the relatively few places where government officials are

located. Cash can then change hands multiple times in the distribution chain. This problem is particularly visible in Indonesia, where 2017 World Bank data show that 36% of those receiving government payments received them in cash alone.

World Bank data suggest that the government has already had some success in changing how Indonesians deal with their money prior to COVID. From 2014 to 2017, the portion of recipients who received G2P payments into a bank account jumped from 23% to 41%, with nearly half of recipients opening their first bank account in order to collect such payments. In 2019, Bank Indonesia committed to digitizing the government's welfare schemes to increase efficiency and transparency.

Payment behaviour is changing in the pandemic — Graph III.D

The black vertical line in the left-hand panel indicates 30 January 2020, when the World Health Organisation (WHO) declared the Covid-19 outbreak a "public health emergency of international concern".

[1] Share of contactless in all card-present transactions by a global card network. In many countries, transaction limits for contactless payments were raised in Q2 2020. [2] Excludes MX and TR due to data availability. [3] Monthly series. [4] For IN, IT and US, government-to-person (G2P) payments include expanded unemployment benefits. For IN, this includes distribution of grain and cooking gas.

Sources: Federal Reserve Bank of St Louis, FRED; IMF, World Economic Outlook; IMF; Datastream; KPMG; a global card network; BIS calculations.

Figure 1. The Bank for International Settlements has followed the digital transition extensively, including in this June report. CPMI countries refer to members of the Committee on Payments and Market Infrastructures; its membership overlaps closely with the G20.

COVID accelerated such efforts. On April 14, 2020, the central bank announced that it would be "expediting the electronification of relevant social programs, including the Family Hope Program (PKH), Noncash Food Assistance Program (BPNT), Pre-Employment Card and Smart

Indonesian Card (KIP)" in order to "mitigate the COVID-19 impact." More ambiguously, the central bank on April 14 said it was committed to "increase the uptake of non-cash instruments."

This language reflected the reality that, for card-based benefits to be successful, merchants must also accept the cards. Unless merchants adopt the cards as a medium of exchange, upgrading the G2P technology will only shift where cash is distributed rather than replace its usage. In other words, recipients will just use the cards to get cash. In 2017, only 11% of Indonesians used a debit card to make purchases, even though 31% owned a debit card (Fig. 2). These two facts suggest that Indonesians use their cards primarily to access ATMs for cash rather than as media of exchange. While cards may allow for more frequent and geographically dispersed access to funds, without widespread acceptance they may not do much for the health of recipients.
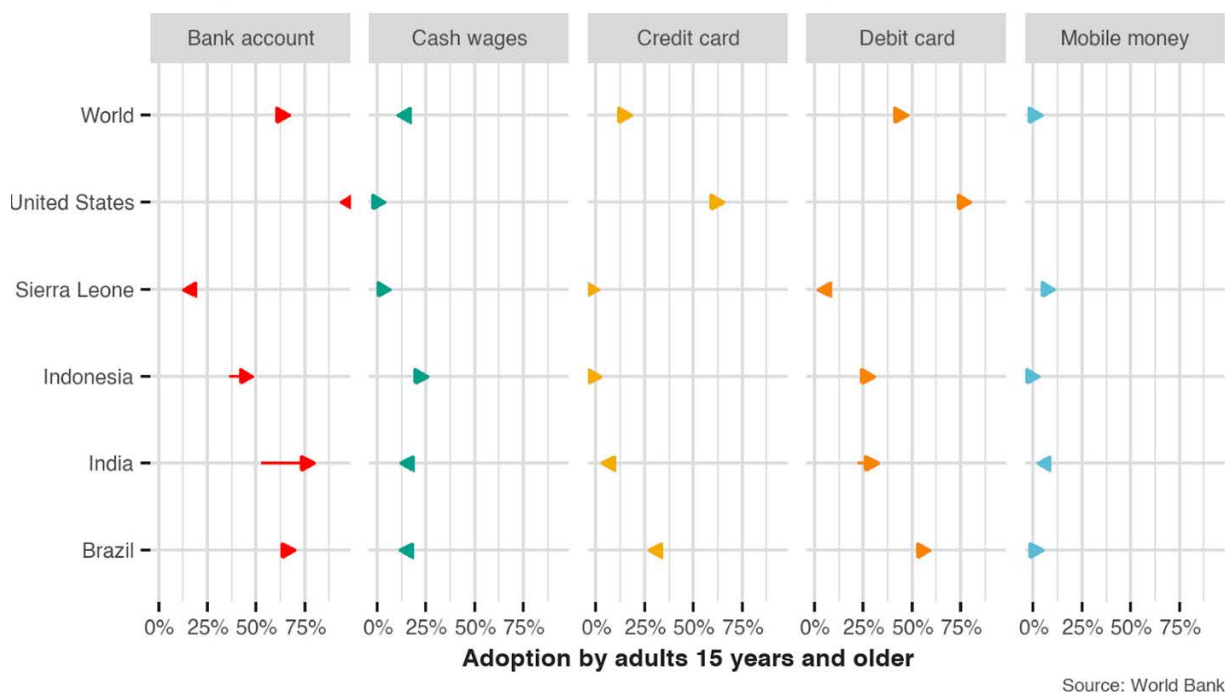

Figure 2. Popularity of various media of exchange in several countries.

United States: Bridging a digital divide

One recent incident in the United States demonstrates the practical implications of the challenges described above. KeyBank, as unemployment vendor to the New York State Department of Labor, provides approximately 500,000 citizens with benefits by prepaid debit card (80% of recipients receive direct deposit into bank accounts). For days in May and June, as the city was just reopening from the lockdown, lines to withdraw unemployment funds stretched a full block at New York City's lone KeyBank ATM. Individuals chose to stand in lines for hours where social distancing was not always observed, to avoid withdrawal fees or transaction limits at more

convenient non-KeyBank machines. Some said they did not know that they could have withdrawn funds at more than 1,000 ATMs throughout the city, although such information was available on the KeyBank's website.

The situation served as a lesson about how isolated solutions may do little to address the complexity that medium-of-exchange adoption presents. Though the US has high rates of card acceptance at businesses, World Bank data show that slightly more low-income Americans typically borrow from friends or family -- where transactions likely take place in cash -- than from a financial institution. Without more robust usage of person-to-person (P2P) payment options, transitioning G2P payments from an ultimate cash dependence will prove difficult.

So, in a country where only 56% of low-income adults accessed a financial account over the Internet in 2017, cards retain their position as medium of choice due to the speed of distribution (relative to checks) and wide acceptance (relative to mobile money).

At the federal level, the US Treasury made the vast majority of one-time Economic Impact Payments (EIPs) via direct deposit into recipients' bank accounts. But the US Treasury also issued nearly 4 million Economic Impact Payments by prepaid debit card. The Treasury allowed recipients to choose between the cards and paper checks, which can take weeks to process and deliver. Another primary mode of delivery has been Direct Express card accounts, debit cards used for Social Security payments and a variety of benefits for current and former federal employees. (A previous YPFS blogpost covered the one-time EIP transfers to eligible tax filers, which have so far totalled $290 billion of CARES Act-approved funds.)

The IRS says that collection of bank information in the first round of stimulus will help should more payments be issued, but repeat issuances may not be the largest problem. A Center for Budget and Policy Priorities study estimated that 12 million Americans have not received a stimulus check since they did not have banking or mailing information on file, a symptom of both ineligibility for [non-pandemic] federal welfare programs and not filing taxes with the IRS. These people can receive their payments if they file a form online, providing deposit information and an email address.

But filing this form will be a barrier for many since reliable Internet access is a problem for low-income Americans, a fact illustrated by the number of New Yorkers who were unaware of the surcharge-free ATM network. As of 2018, at least 29 million Americans lacked both broadband and a smartphone, according to Pew Research survey estimates and the Social Security Administration. Digital exclusion often overlaps with the "unbanked," which the FDIC defines as those lacking a financial institution account. The Federal Reserve estimates the unbanked comprise 14% of Americans making less than $40,000 annually. Another 21% are "underbanked" (Table 11), meaning they have an account but also use unregulated services such as payday loans. The un- and underbanked are more likely to have disabilities, lower education attainment, and are less often white or Asian-American (Table 3.3) — in other words, the same population that often qualifies for government benefits (Table 1).

To address the needs of Americans with diverse financial and technological access, these cases have shown how important it may be to use a constellation of payment systems. For those with smartphone access, mobile payments apps Venmo and Cash App announced in May that tax filers and non–tax filers alike would be able to receive CARES Act stimulus payments from the IRS through their apps. Both apps allow users to join without linking to any bank and to transfer funds instantly to another user or vendor. This change edges the US closer to Sub-Saharan governments such as Sierra Leone, which, while much less financialized, have the highest adoption rates of mobile money accounts, five times the World Bank average.

India: Millions to provide for

India's national transition to digital systems began 11 years ago with the introduction of the Aadhaar national identification system. The system facilitates security by verifying the identities of those using the system, and has already saved India billions of dollars by eliminating fraudulent payments. Digital payment systems built using Aadhaar have grown during the pandemic to process 60 million transactions a day (Fig. 3), and connect more than 150 banking partners.

But, as with much of India, digital payments are a study in contrasts. The country faces administrative difficulties reaching its poorest populations. Its food ration system for internal migrant workers has traditionally operated only within one's home state. The home-state limit caused huge problems for the estimated 10 million migrant workers, stranded across India by the country's COVID lockdown, who had neither income nor rations. Migrant workers then sparked India's largest exodus since the 1947 Partition to return to families and claim benefits.

On May 12, the Indian Ministry of Finance announced an aggressive expansion of its pilot cashless ration delivery service, the One Nation, One Ration card, as an attempt to distribute food to migrant workers. By August, the pilot program will allow recipients with a ration card to access grain rations in 23 states, potentially covering some 670 million recipients or 83% of the program's beneficiaries. The program uses the Aadhaar network to verify identities at the 500,000 government-run shops that distribute rations. The expectation is that the program will be available nationwide by January 2021, ahead of its original target date. Here, cashless distribution dovetails with internal freedom of mobility under India's continuing project of integration as the country attempts to span 36 administrative divisions and 447 languages.

The security and control over the money supply afforded by a nationally run digital payment system will be very important to India. In 2016, Prime Minister Narendra Modi attempted to suddenly demonetize the country's currency in order to crack down on counterfeit bills. The project failed as the central bank reported 99% of value returned to the new bills in circulation, and upended innumerable transactions in cash-loving India. Digital currencies offer improved security against counterfeiting, and provide the detailed data that cash cannot. Additionally, it may allow the country to more strictly enforce taxation as incomes and revenues would be easier to track as they are linked through the Aadhaar network.
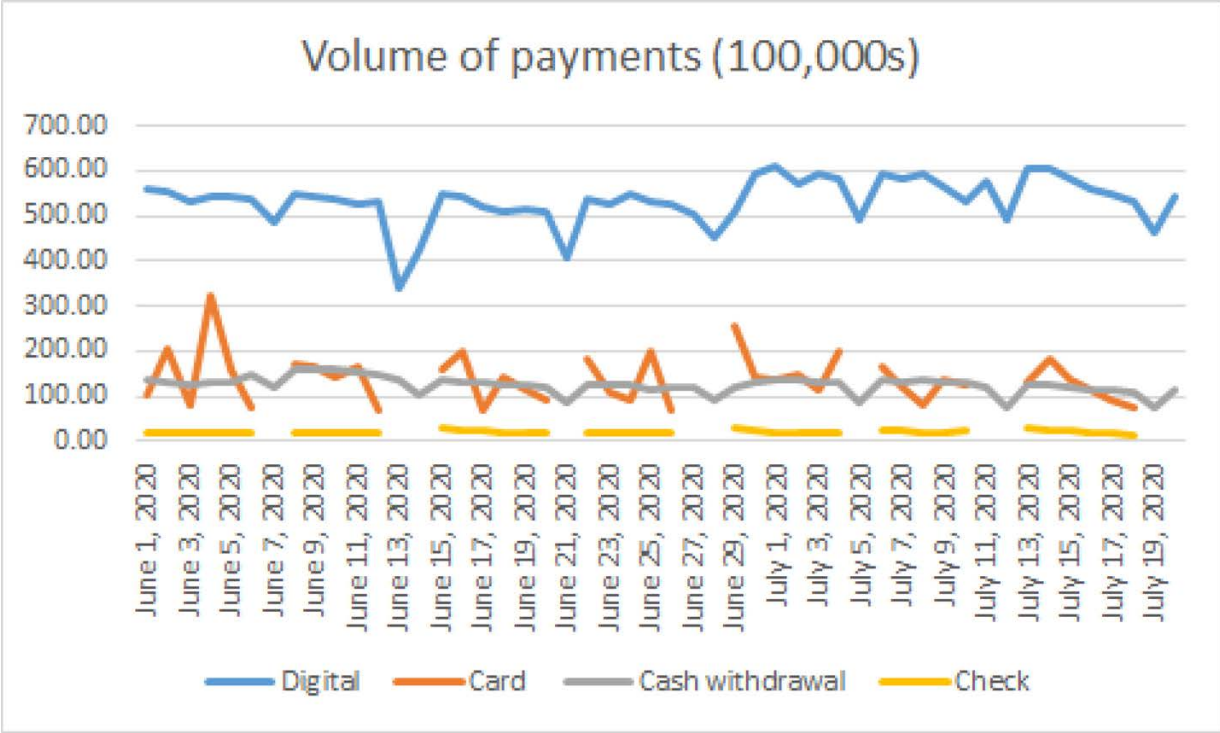
Figure 3. Daily transactions on India's payment systems.

Brazil: Using the crisis to fuel adoption of other technologies

A similar story is playing out in Brazil, where mobile payments of government benefits grew 22% by volume in the first four months of 2020. The government has long used prepaid debit cards to deliver benefits (p. 13), but the verification service for such benefits remains unreliable. In April the government released the CPF app, which builds on the country's year-old national identification framework to facilitate two-way transfers between the Federal Revenue Service and individuals and replace the face-to-face interactions aborted due to COVID.

The release takes advantage of the crisis to introduce what the Secretary says may slowly become a primary interface between the federal government and citizens, providing a platform for the government to send benefits and for citizens to send taxes. This comes ahead of the central bank's roll out in November of its Pix instant payment platform, which has already secured participation from more than 1,000 banks and merchants.

Conclusion: a variety of problems prompt a variety of tools

Despite significant medium-of-exchange developments, government benefit distribution has remained inferior for governments that continue to rely on cash payments. The Ebola epidemic and COVID-19 pandemic highlighted these disadvantages and propelled public health concerns over the distribution of cash to the forefront of administrative concerns. Pressed by short- and long-term policy goals, governments have taken ambitious steps toward cashless benefits

administration. They have succeeded in expanding benefits delivery options, but have yet to persuade citizens into switching voluntarily. The reasons these transitions have been difficult are the same as they have been for decades: low general acceptance of cashless media of exchange; limited access to technological advances; and a reliance on informal financial markets.

These governments' prospects for success in providing healthier, more effective relief than hard currencies therefore depend on current levels of digital financial integration, the accessibility of such technologies to the unbanked, and levels of general financialization. While some of the interventions are card-based, several countries have used the pandemic to push for the adoption of e-commerce and mobile payment systems. (A previous YPFS blogpost surveyed how these have worked for small businesses.) Governments that have authorized private-sector partners have succeeded, but have had to build systems — public goods such as India's Aadhaar network and Brazil's CPF platform — that facilitate interoperability and spur adoption.

If and when governments persuade citizens to switch their means of payment, digital payment systems offer long-term benefits to countries that successfully integrate them. These come in addition to the resilience that future emergencies will require. Often, the very process of integration creates opportunities to link other, non-financial systems that can support policy goals. Singapore's PAssion card has enabled it to target specific industries and classes of citizens. In this respect, the PAssion card is a scalpel to the Paycheck Protection Program's knife, supporting precisely the individuals and sectors that need it most.

In monetary policy, central banks have started to seriously consider central bank digital currencies. CDBCs would be money as much as bills or coins are today, rather than just a medium of exchange. Its status as money would mean that CDBCs could be distributed virtually immediately, realizing Milton Friedman's famous helicopter drop thought experiment.
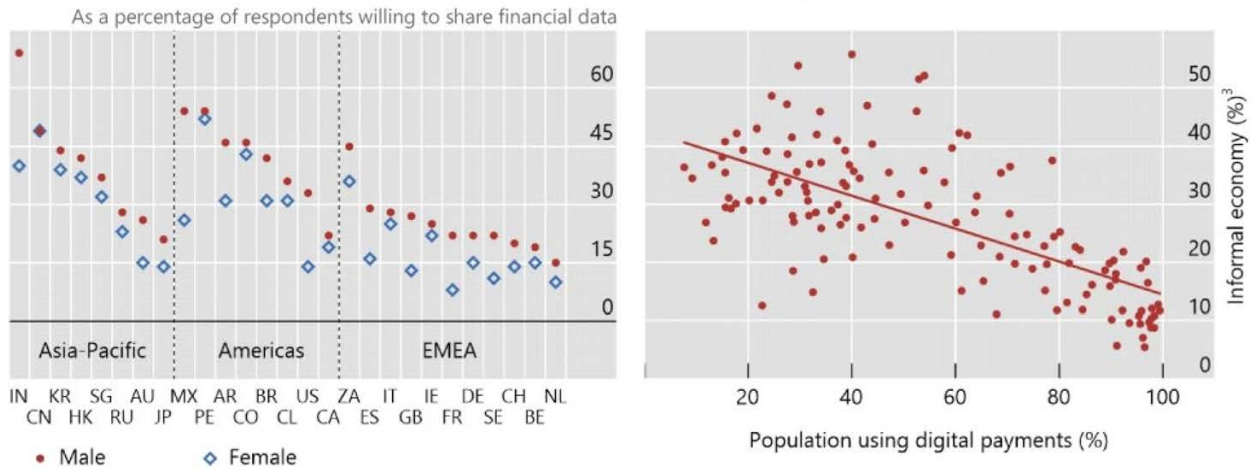
Conversely, digital payments have also enabled funds to flow from citizens to treasuries. A 300,000 person municipality in Senegal saw sevenfold growth in their tax collections when they transitioned to digital (p. 7). Senegal's public sector has led the private sector in its digitization efforts, and intra-government payments reached 100% digitization in 2016 (p. 4). Indirectly, these transitions can also cut the size of the informal sector, meaning that more transactions can be tracked for excise taxes (Fig. 4).

However, a significant informal sector may resist these changes. Citizens may be wary of the level of control and feedback afforded by digital payments and the identification backbones on which they operate, especially when low levels of trust exist in government. But the private sector has its own troubles in novel possibilities for fraud (§2.2) and data harvesting by private payment vendors.

The cost-benefit tradeoff to welfare recipients and governments could be worthwhile. As they work to roll out digital systems, government investment may end up leading the transition away from their own hard currencies.

Digital payments create a data trail, bringing both risks and benefits   Graph III.9

Views on data privacy differ across and within societies[1]

As a percentage of respondents willing to share financial data

The informal economy is smaller where digital payments are more widely used[2]

[1] Based on a survey of 27,000 individuals across 27 countries. The exact question reads: "I would be comfortable with my main bank securely sharing my financial data with other organisations if it meant that I received better offers from other financial intermediaries". For Belgium, the figure covers Belgium and Luxembourg. The dots visualise the percentage of respondents answering the question affirmatively. EMEA = Europe, the Middle East and Africa.   [2] Data as of 2017.   [3] Estimates of the informal ("shadow") economy based on a multiple indicator–multiple cause approach.

Sources: S Chen et al, "Data versus privacy: the role of gender and social norms", *BIS Working Papers*, forthcoming, 2020; EY, "FinTech adoption index", September 2019; L Medina and F Schneider, "Shedding light on the shadow economy: a global database and the Interaction with the official one", *CESifo Working Papers*, no 7981, 2019; World Bank; BIS calculations.

Figure 4. Differing views on data privacy and the significance of the informal sector may hamper digitization efforts by governments. Figure also from BIS report.