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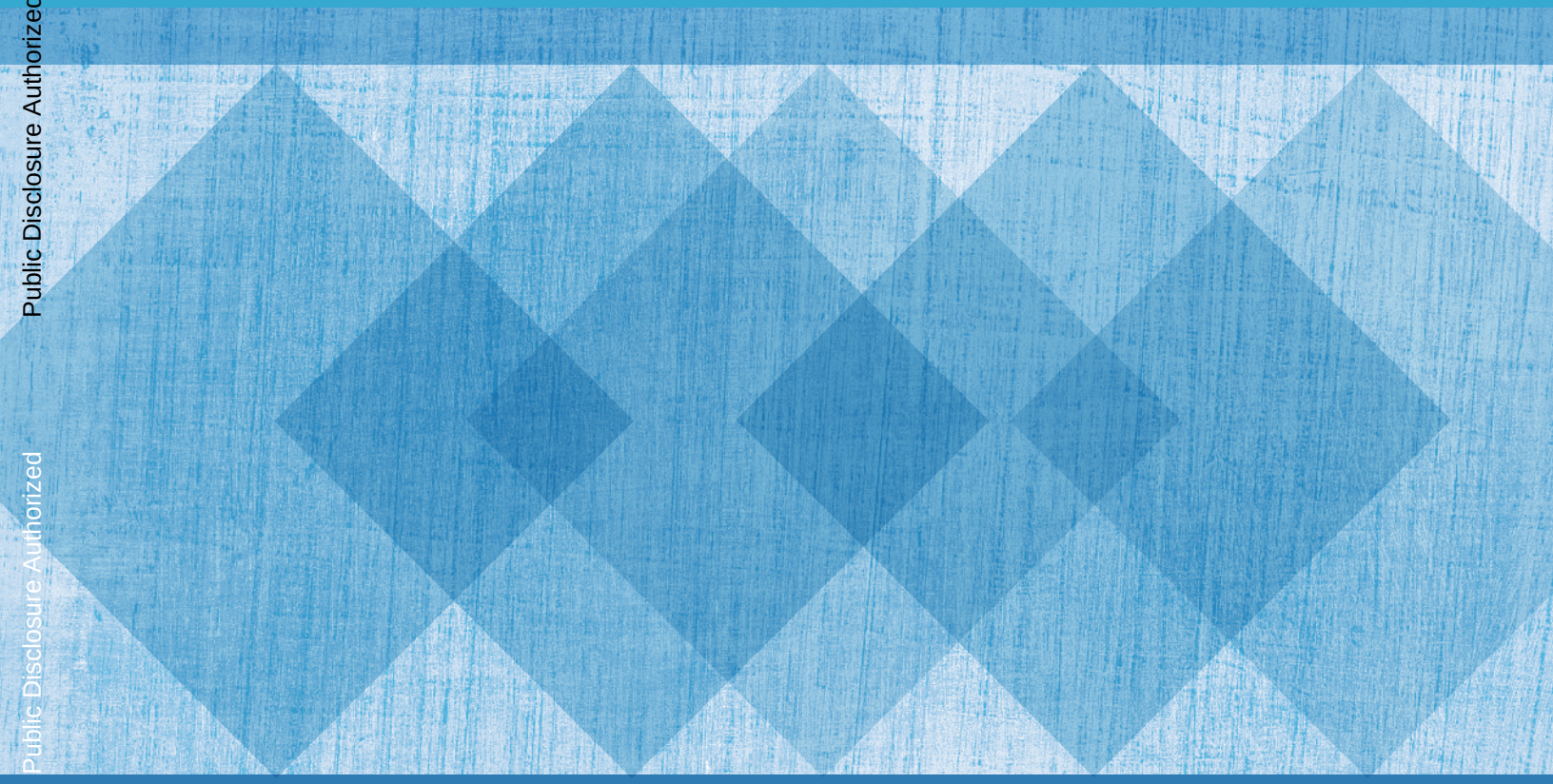
TECHNICAL NOTE

Financial Inclusion Beyond Payments

Policy Considerations for Digital Savings

LESSONS FROM SELECT ECONOMIES IN AFRICA AND ASIA

2019



WORLD BANK GROUP

FINANCE, COMPETITIVENESS &
INNOVATION GLOBAL PRACTICE

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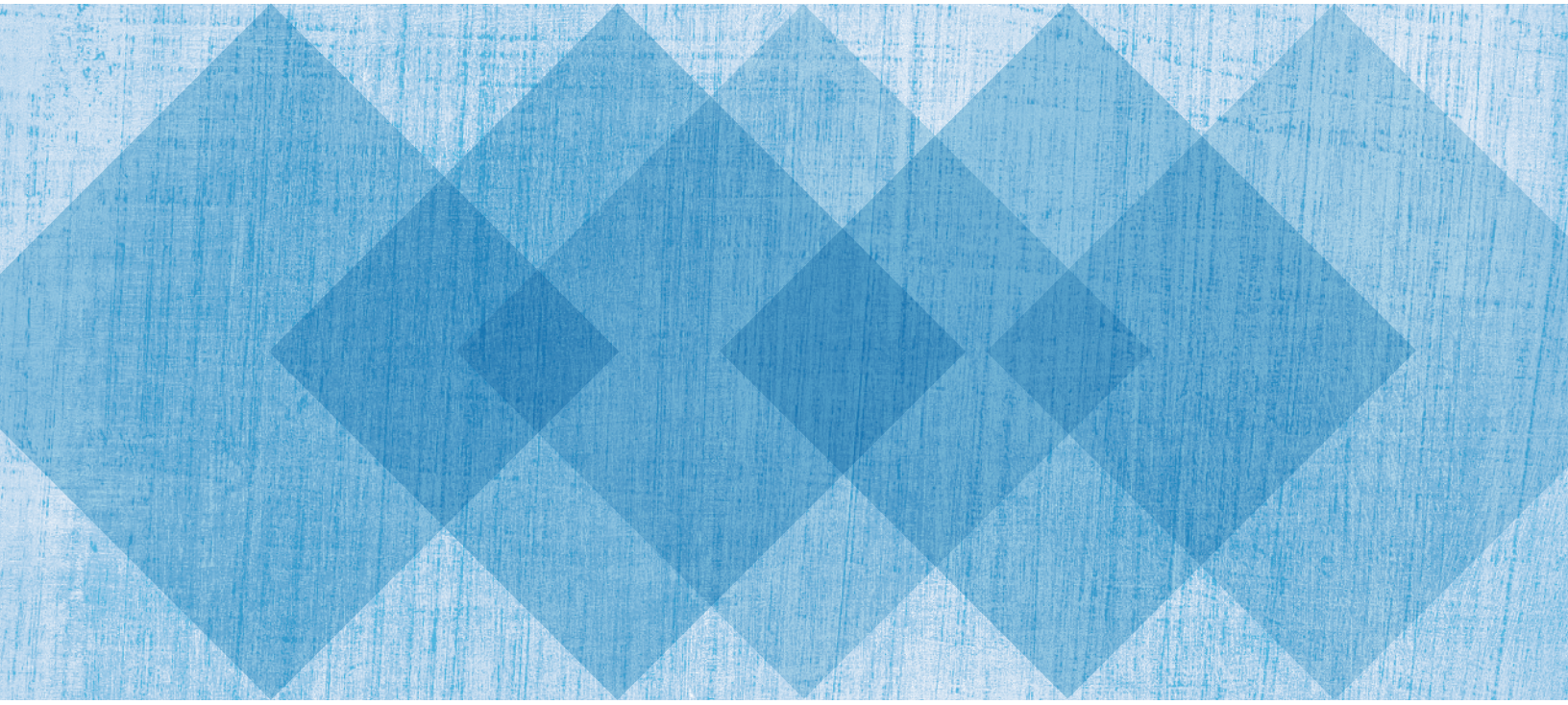

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ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank
AFI	Alliance for Financial Inclusion
API	application program interface
ATM	automated-teller machine
BB	Bangladesh Bank
BCBS	Basel Committee on Banking Supervision
BCEAO	Banque Centrale des Etats de l'Afrique de l'Ouest
BOT	Bank of Tanzania
BOU	Bank of Uganda
BOZ	Bank of Zambia
BSP	Bangko Sentral ng Pilipinas
CB	Commercial bank
CBA	Commercial Bank of Africa
CBK	Central Bank of Kenya
CDD	customer due diligence
CFP	customer funds protection
CGAP	Consultative Group to Assist the Poor
CPMI	Committee on Payments and Market Infrastructures
DBBL	Dutch-Bangla Bank Limited
DFI	digital financial inclusion
DFS	digital financial services
DTMFI	deposit-taking microfinance institution
EAP	East Asia & Pacific
EBL	Everest Bank Ltd.
FAFT	Financial Action Task Force
FICP	Financial inclusion and consumer protection
FCP	financial consumer protection
FSD	Financial Sector Development
GPFI	Global Partnership for Financial Inclusion
GSMA	Groupe Spéciale Mobile Association
HLP	High-Level Principle
IFC	International Finance Corporation
IMF	International Monetary Fund
ITU	International Telecommunication Union
KCB	Kenya Commercial Bank
KDIC	Kenya Deposit Insurance Corporation
KWFT	Kenya Women's Finance Trust
LMI	Lower-middle income
MCB	Mwanga Community Bank
MNO	mobile network operator
MoFP	Ministry of Finance and Planning of Tanzania
MVNO	mobile virtual network operator
NBC	National Bank of Cambodia
NBEI	nonbank e-money issuer
NMB	National Microfinance Bank
ODTI	Other deposit-taking institution
PMDJY	Pradhan Mantri Jan-Dhan Yojana
POS	point of sale
PPP	purchasing power parity
RBA	Retirement Benefits Authority
RBBL	Rastriya Banijya Bank Ltd.
RBI	Reserve Bank of India
SBI	State Bank of India
SSA	Sub-Saharan Africa
SoV	Store of Value
TPB	Tanzania Postal Bank
UNCDF	United Nations Capital Development Fund
VSLA	Village Savings and Loan Association
WAEMU	West African Economic and Monetary Union
WBG	World Bank Group

EXECUTIVE SUMMARY

Innovative, technology-driven savings products are emerging across the developing world. Access to reliable savings products at regulated financial institutions is important for helping low-income and financially underserved segments safely meet their saving goals. Adult populations in many low-income countries demonstrate strong saving propensities, yet saving at financial institutions is low. Recognizing this gap, digital financial services (DFS) providers are deploying digital savings products that have the potential to unlock powerful saving tendencies in developing countries. Nevertheless, digital savings is still nascent, and success has been uneven. It is important to identify the market, product, and policy factors that have both facilitated and constrained digital savings deployments.

The purpose of this report is twofold: (1) to ascertain the characteristics of digital savings products and business models that enhance savings product access, and (2) to identify the policy issues that appear most important for fostering digital savings market development. The report pursues these objectives by analyzing digital savings deployments and DFS policy landscapes in a variety of markets across Sub-Saharan Africa and Asia. The report focuses primarily on digitally-accessible interest-bearing deposit accounts held by regulated deposit-taking institutions, although nonbank entities are frequently integral to the deployment models.[1] Annexes A-C also discuss alternative non-deposit digital savings products that enhance consumer choice.

In analyzing digital savings deployments across the focus countries, the report finds that digital technology and innovative business models enable three broad product and market properties that advance the savings aspects of digital financial inclusion: (1) disaggregation of the digital savings account value chain, (2) product tailoring and customization, and (3) leveraging of existing DFS ecosystems. Value chain disaggregation, which occurs when banking institutions partner with nonbanks for the technology and distribution aspects of digital savings accounts, allows for expanded access channels, improvements in the economics of low-cost savings accounts, leveraging of different entities' comparative advantages, and scaling up of microbanking institutions. Digital technology and innovative business models allow providers to incorporate greater degrees of accessibility, flexibility, affordability, and customization in their savings offerings. Finally, an existing DFS ecosystem can help foster competition in the savings product space and facilitate access through use of existing infrastructure.

The report discusses key policy issues that enable and constrain digital savings market development and offers policy considerations within the context of the G20's High-Level Principles (HLPs) for Digital Financial Inclusion. Framing the policy considerations within the context of the G20 HLPs is meant to facilitate consistency and clarity, as countries consult the HLPs when formulating national financial inclusion strategies and action plans. Table 1 summarizes the digital savings policy considerations, which are geared toward DFS-relevant policy makers. Based on current market observations, three policy

NOTE

1. Much of the report refers to regulated deposit-taking institutions as *banking institutions* or *banks*.

considerations seem most important for facilitating digital savings account deployments:

- Enable banking institutions to pursue digital savings partnerships with nonbank entities.
- Support the development of interoperability between banks and nonbank e-money issuers.
- Harmonize customer due diligence standards for e-money wallets and low-risk bank deposits.

The report concludes by outlining a future digital savings research agenda that will help calibrate and prioritize digital savings policy considerations. Digital savings represents a relatively new area of inquiry for digital financial inclusion research. This report largely focuses on supply-side factors in the digital savings market. As products mature and more data become available, researchers will be able to evaluate questions that bring together supply and demand side factors, thus developing a clearer picture of what works best in the digital savings market. Part 5 highlights a series of research questions meant to elucidate key outstanding issues. These focus on the digital savings product attributes that drive responsible uptake and usage, as well as product economics and competition. Policymakers should consider these future research topics in concert with the policy considerations discussed in this report, as they may judge that certain takeaways are tentative for their own markets until important questions can be addressed.

TABLE 1: Summary of Digital Savings Policy Considerations

HLP 1: Promote a digital approach to financial inclusion	Incorporate saving elements in national financial inclusion strategies. Highlight the importance of affordability, flexibility, accessibility, and customization in digital savings account offerings. Facilitate the integration of digital savings account options with government-to-person payments, and encourage providers to offer options for earmarking portions of salaries for digital savings accounts.
HLP 2: Balance innovation and risk to achieve digital financial inclusion	Establish policy practices for enabling digital savings competition while facilitating cooperation and effective partnerships. Support a "multispeed" approach to digital savings inclusion, as some consumers may be ready to move beyond digital savings accounts to digitally-enabled, market-based wealth-building products.
HLP 3: Provide an enabling and proportionate legal and regulatory framework for digital financial inclusion	Develop a legal and regulatory framework that allows banking institutions to pursue digital savings partnerships with nonbank entities and conduct limited-purpose banking services through retail agent networks. Where appropriate, consider regulatory sandboxes for limited-purpose, technology-driven digital savings account deployments. Harmonize, where prudent, the application of a risk-based approach to customer due diligence for e-money wallets and bank deposits, as imbalances can hinder the acquisition of digital savings customers.
HLP 4: Expand the digital financial services infrastructure ecosystem	Support the development of nonbank e-money issuer-to-bank interoperability, which serves as the technological backbone for digital savings partnerships and distribution strategies.
HLP 5: Establish responsible digital financial practices to protect consumers	Ensure customer funds protection standards are robust for bank deposits and e-money accounts. Ensure customers are afforded critical information about digital savings accounts at point of opening, noting that information sharing may occur unconventionally, such as directly on a mobile phone or through an agent-facilitated document-collection process.
HLP 6: Strengthen digital and financial literacy and awareness	Incorporate saving elements in financial education strategies.
HLP 7: Facilitate customer identification for digital financial services	Continue to implement, refine, and expand national identification systems, and align know-your-customer requirements for basic transaction accounts and savings accounts.
HLP 8: Track digital financial inclusion progress	In cooperation with digital savings providers, gather and publish data on deposits facilitated through digital channels, as such information is critical for understanding digital savings opportunities and risks.

1

INTRODUCTION

While significant progress has been made in advancing access to digital transactional platforms and payments services, research and support for second-generation forms of digital financial inclusion (DFI), such as digital savings, credit, and insurance, are more limited. The G20 describes *digital financial inclusion* as involving the "deployment of digital means to reach financially excluded populations with a range of formal financial services suited to their needs" (GPFI 2016b, 46). Most DFI work thus far has concentrated on digital transaction accounts and payment services. These services form the foundations of DFI and serve as the gateway to full financial inclusion. However, DFS providers are expanding their range of product offerings to other critical financial services areas, including savings.

Access to savings products at regulated financial institutions is a vital component of financial inclusion. Savings products help low-income and underserved populations withstand income shocks, manage unpredictable cash flows, meet emergency needs, stay ahead of inflation, access credit, make personal or professional investments, and prepare for future financial needs, such as school fees and old age. Savings products also provide a safe place for storing wealth, rather than in cash at home or through other informal and potentially risky mechanisms.

Accessible, flexible, and affordable digital savings products could unlock a powerful saving potential, even in extremely low-income countries, and bring existing informal saving into the regulated financial sector. Although saving at financial institutions is low in the focus regions, saving frequency can be quite high. Recognizing the strong potential of digital savings, a variety of entities involved in DFS across Africa and Asia have deployed digital savings products. Nevertheless, these products are young, and success has been uneven. Identifying the product, market, and policy factors that have both enabled and constrained digital savings development is important for policymakers who are seeking to advance DFI.

This report analyzes digital savings account deployments. The report focuses primarily on digitally-accessible, interest-bearing deposit accounts held by regulated deposit-taking institutions. We refer to these products as *digital savings accounts.* Importantly, nonbank entities, such as nonbank e-money issuers (NBEIs), are often involved in digital savings account deployment models, even though they do not hold the contractual relationship with the customer. Additionally, the report principally examines digital savings accounts that are accessible on basic mobile devices or agent-administered point-of-sale (POS) terminals. The report's findings and policy considerations are based on an analysis of digital savings account deployments and DFS policies in 12 developing economies across Sub-Saharan Africa (SSA), South Asia, and East Asia & Pacific (EAP) (collectively, "focus regions"). Annexes A-C also take stock of alternative digital savings products that are expanding consumer choice in this space.

The report proceeds by clarifying the scope of research, presenting product and market findings, offering policy considerations, and outlining a future research agenda. Part 2 clarifies the financial product, geographic, access channel, and temporal scope of the report. Part 3 analyzes digital savings deployments in 12 countries across the

focus regions. Based on the findings in part 3 and additional analysis of DFS policy factors in the focus countries, part 4 organizes a series of digital savings policy considerations within the context of the G20's HLPs for DFI. Part 5 concludes by introducing future research topics that will refine stakeholders' knowledge of digital savings dynamics and help prioritize policy measures. These research questions focus on product economics, competition, and perhaps most importantly, factors that drive responsible digital savings uptake and usage. We recommend policymakers consider these future research topics in concert with the findings and policy considerations, as certain takeaways may remain tentative in local markets until additional questions can be investigated.

2

SCOPE OF REPORT

2.1 FINANCIAL PRODUCT SCOPE

This report focuses primarily on digitally-accessible interest-bearing deposit accounts held at regulated deposit-taking institutions. For ease of reference, the report refers to these products as digital savings accounts. All of the digital savings accounts examined in this report are ultimately held by regulated deposit-taking institutions (collectively, "banking institutions"), even if they are facilitated by or pass through financial services offered by nonbanks. Consumers can save through a variety of financial products beyond interest-bearing deposits, including more basic store of value (SoV) accounts and more sophisticated market-based wealth-building products, such as stocks, bonds, and pension funds. Basic SoV accounts, in particular, are well-suited to meet many saving purposes in low-income areas, such as withstanding income shocks, managing unpredictable cash flows, meeting emergency needs, and providing a safe place to store wealth. The key difference between the digital savings accounts studied in this report and digital SoV accounts is that the former group seeks to explicitly incentivize saving by offering a contractually specified financial return and compensating customers for the time value of money. As such, these digital savings accounts help customers build wealth over time and save for long-term purposes.

Consistent with a holistic understanding of digital financial inclusion, the product scope focuses on formal financial services offered in connection with, but that go beyond digital transaction accounts. The Global Partnership for Financial Inclusion (GPFI), the G20 body focused on financial inclusion, defines DFI as "the use of digital financial services to advance financial inclusion. It involves the deployment of digital means to reach financially excluded and underserved populations with a range of formal financial services suited to their needs, delivered responsibly at a cost affordable to customers and sustainable for providers" (GPFI 2016b, 46). The GPFI further sets out "essential components" of DFI, which include a "digital transactional platform" and "additional financial services via the digital transactional platform" (GPFI 2014, 3). The digital savings accounts under review represent a next step in accessing a range of formal financial services enabled by digital transactional platforms. Having access to wealth-building products that offer a financial return is an important step in financial inclusion and diversification.

Although this study focuses primarily on digitally-accessible interest-bearing deposits, market developments in some of the focus countries reveal important trends in other innovative types of digital savings products. Annex A looks at e-wallet accounts offering customers a financial return. Given their nascence, the policy implications of these return-generating e-money accounts are not well understood, but they represent an innovative alternative to traditional interest-bearing deposits. Annex B explores two digitally-enabled, market-based wealth-building products, the Mbao pension plan and M-Akiba government bond in Kenya. While some market-based products may technically constitute investment rather than savings products, they are important to highlight in concert with digital savings accounts, as they represent a further step in savings-related DFI for those individuals seeking to diversify their portfolios. Finally, Annex C explores a number of efforts in which providers have focused on offering digital transaction accounts specifically designed to facilitate saving.

2.2 GEOGRAPHIC SCOPE

To guide the analysis, the study examines digital savings deployments and DFS policies in 12 markets across SSA, South Asia, and EAP (collectively, "focus regions"), the regions most committed to promoting a digital approach to financial inclusion. According to the 2016 Maya Declaration Progress Report, DFS represents the top thematic target area among SSA members of the Alliance for Financial Inclusion and the second most frequent thematic target area for Asian members of the alliance (AFI 2016a). Furthermore, in a 2015 report investigating mobile credit, savings, and insurance, the Groupe Spéciale Mobile Association (GSMA) reported that mobile savings products are most prevalent in SSA and Asia (GSMA 2015d). Within the regions, the study analyzes the digital savings markets in: Bangladesh, Cambodia, Côte d'Ivoire, India, Kenya, Nepal, Niger, Philippines, Tanzania, Uganda, Vietnam, and Zambia (collectively, "focus countries"). Country selection was based on the availability of information on the countries' digital savings landscapes and was intended to represent a range of digital savings experiences, rather than focus only on successful cases. For instance, at the conclusion of the product research in late 2017, digital savings accounts do not appear to have emerged in Niger and Vietnam. Incorporating insights from these 2 countries' DFS markets has been valuable in isolating some constraining factors not clear in the 10 other jurisdictions.

2.3 ACCESS CHANNEL SCOPE

The digital savings accounts studied in this report generally meet two criteria: (1) account holders can conduct cash-in, cash-out transactions through a retail agent network, and (2) the account is accessible either on a basic mobile device or an agent-administered POS terminal. The GPFI defines DFS as "financial products and services, including payments, transfers, savings, credit, insurance, securities, financial planning and account statements" that "are delivered via digital/electronic technology such as e-money (initiated either online or on a mobile phone), payment cards and a regular bank account" (GPFI 2016a, 3). The universe of digital channels through which consumers can access savings accounts is broad. Such channels include internet banking, smartphone-enabled banking applications, automated-teller machines (ATMs), POS terminals, and basic mobile devices, among others. This report focuses on access channels that have played a significant role throughout the focus regions in reaching unbanked and underbanked population segments. Nevertheless, Internet access and smartphone penetration are expanding rapidly in SSA and Asia. Providers and policymakers should continue to leverage these technologies in pursuing innovative DFI strategies.

2.4 TEMPORAL SCOPE

Research for this report was conducted in 2017. As such, some product characteristics and policy issues discussed in this report may not reflect their most recent status upon publication. Certain report elements were updated during the review process in late 2018. To avoid temporal imbalances, updates were limited to a few select topics. For example, the report was updated to incorporate 2017 Findex data, which was released in 2018. The research conducted for this study constituted desk research and analysis of publicly available data, laws, regulations, and analytical publications, along with information published by the digital savings providers.

3

MARKETS, MODELS, AND PRODUCTS

This section investigates how digital technology and innovative business models enhance savings account accessibility. Section 3.1 provides an overview of the digital savings opportunity in the focus regions and countries. Section 3.2 analyzes delivery models and key product features for a selection of digital savings accounts in the focus countries. Section 3.3 outlines the primary ways in which digital savings delivery models and account characteristics advance the saving aspects of DFI. Part 3 focuses primarily on supply-side factors. Readers should pair the analysis in part 3 with the future research questions proposed in part 5, given limited data on uptake and usage. Part 5 recommends that future research focus on which product attributes are particularly important for successful uptake and usage. Part 5 also recommends additional exploration of product viability and competition dynamics.

3.1 ASSESSING THE DIGITAL SAVINGS MARKET OPPORTUNITY

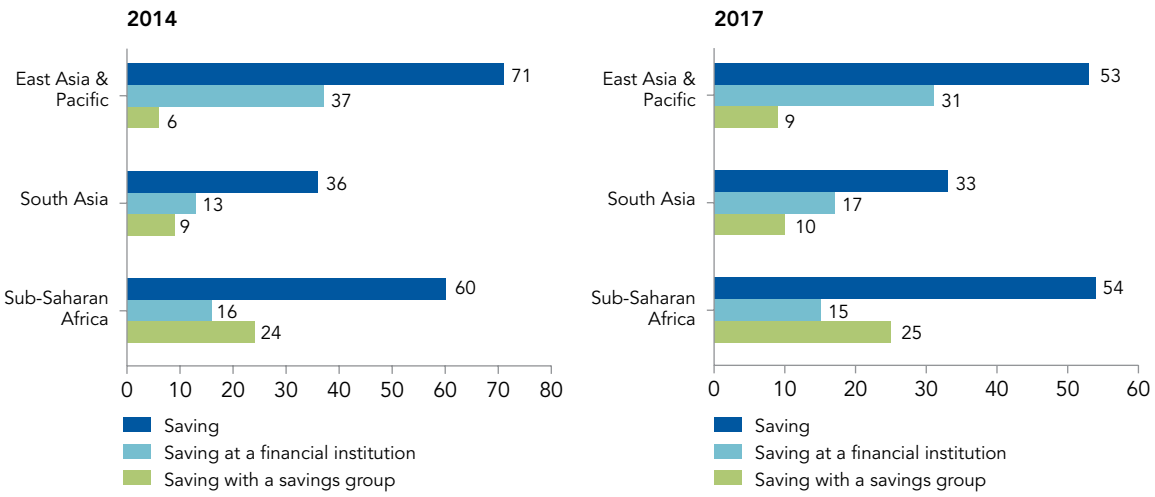
Healthy propensities to save coupled with low formal saving in the focus regions indicate a distinct opportunity for affordable, flexible, and accessible digital savings accounts.[2] Figure 1 captures broad saving patterns across the focus regions reflected in the 2014 and 2017 Findex surveys. Adults' propensity to save has historically been higher in SSA and EAP than in South Asia, though saving was lower across all 3 regions in 2017 compared to 2014. Saving propensity remains high in many of the focus countries (annex d). The percent of adults who save in Kenya, Uganda, Zambia, Philippines, Vietnam, India, and Nepal is higher than in their respective regions.

Saving at a financial institution is low across the focus regions. In 2017, only 15 and 17 percent of adults saved at a financial institution in SSA and South Asia, respectively, while 31 percent of adults saved at a financial institution in EAP (figure 1). Less than 10 percent of adults saved at a financial institution in Bangladesh, Cambodia, Côte d'Ivoire, Niger, and Tanzania (annex d).

Low formal saving likely derives from limited access to savings products among low-income and rural populations, and from the perception among low-income individuals that their savings are not large enough to warrant an account at a financial institution, which may entail maintenance fees, minimum balance requirements, and high indirect access costs (e.g., transportation, time). Findex data indicate that the primary reason adults in the focus regions do not have a financial account is because they believe they have insufficient funds to warrant an account (figure 2). Distance to financial institutions, cost of financial services, and documentation requirements are also significant barriers to account ownership. This suggests that affordable, accessible, and flexible digital savings accounts could fill a significant formal savings gap among low-income populations.

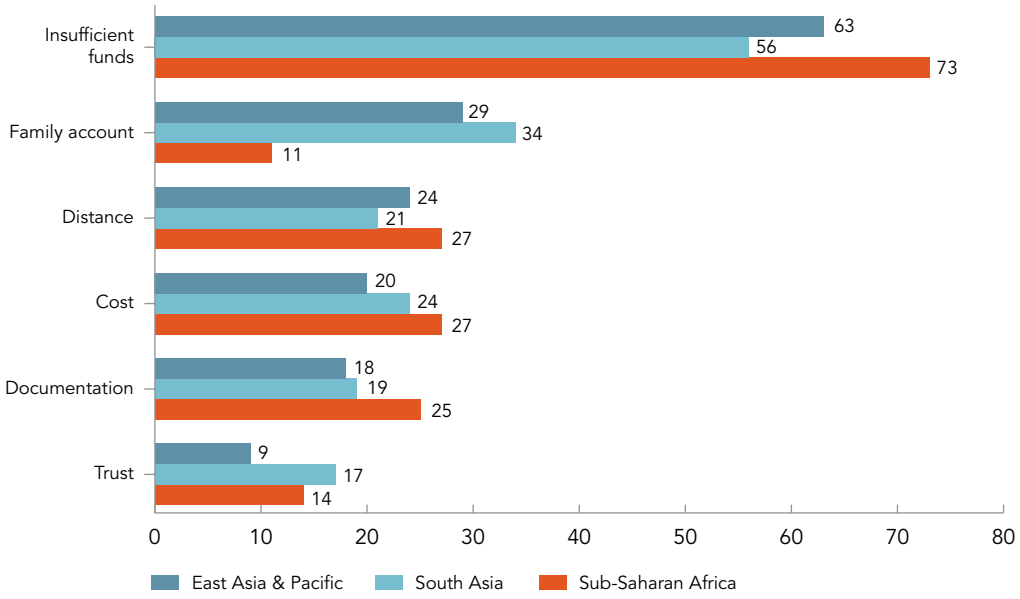
Digital savings providers who recognize local saving customs and tailor their products accordingly could introduce formal saving opportunities to important market segments. At 25 percent of adults, saving with a savings group definitively surpasses saving at a financial institution in SSA (figure 1). Among the South Asia and EAP focus countries, more adults save with groups in Bangladesh, Cambodia, and Nepal than in formal institutions (annex d). Roughly the same number of Vietnamese adults

FIGURE 1: Saving Patterns across Focus Regions (% age 15+) (excluding high income countries)



Source: World Bank Global Findex Database

FIGURE 2. Reason for not having a financial institution account (% without a financial institution account, age 15+) (excluding high income countries)



Source: World Bank Global Findex Database, 2017

save with groups as with formal institutions. Thus, savings groups represent a distinct digital savings opportunity, provided products offered can be adapted to meet savings group patterns.

Women, low-income, and rural segments would especially benefit from accessible digital savings options. Table 2 indicates that women, low-income, and rural segments have lower access to saving opportunities at financial institutions than the broader population in the focus regions. Digital savings providers could play an important role in expanding access to savings products among these segments.

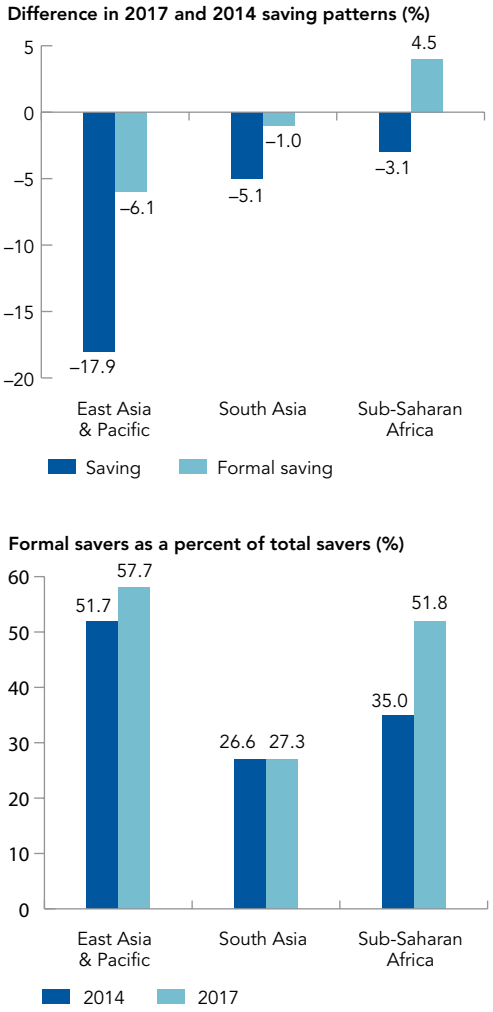
Formal saving did not drop as significantly as overall saving between 2014 and 2017. Saving propensity was lower across all 3 focus regions in 2017 compared to 2014 (figure 3). Formal saving also decreased in EAP and SSA, while

TABLE 2: Saving at a Financial Institution among Vulnerable Segments (2017, Percent of Age 15+)

	Women	Poorest 40%	Rural
East Asia & Pacific	28	16	28
South Asia	15	10	16
Sub-Saharan Africa	11	9	14

Source: World Bank Global Findex Database

FIGURE 3. Trends in Saving Patterns: 2014 and 2017 (% of age 15+)



Source: World Bank Global Findex Database

it increased in South Asia. Meanwhile, formal savers as a percent of total savers increased across all 3 regions. More research is needed to investigate these saving dynamics and their relation to product offerings, including digital savings products. The drop in saving propensity may owe to a variety of factors. Likewise, while the increase in share of formal savers may owe to more stable access to savings products at financial institutions, it could also be that more informal savers dropped out of the saving pool.

3.2 DIGITAL SAVINGS ACCOUNT DELIVERY MODELS AND CHARACTERISTICS

The digital savings accounts described in this section cover 35 digital savings account deployments in 10 of the 12 focus countries and, while not exhaustive, are representative of each country's digital savings market. Two of the focus countries, Niger and Vietnam, did not have any digital savings accounts that met the scope of this report at the time of the drafting. Table 3 catalogues the digital savings accounts in the focus countries.

3.2.1 Digital Savings Account Delivery Models

Banking institutions serve as the holder of the contractual relationship with the customer for digital savings accounts. This differs from other forms of DFS, such as e-wallets, in which NBEIs, in addition to banking institutions, can serve as the holder of the contractual relationship. NBEIs include a variety of entities, such as mobile network operators (MNOs), financial-technology companies, and other retail chains. Regulation generally prohibits NBEIs from holding deposits that can be intermediated. The World Bank Group (WBG)'s 2017 Global Financial Inclusion and Consumer Protection (FICP) survey indicates that 86 percent of responding jurisdictions prohibit NBEIs from using customer funds for purposes other than redeeming e-money and executing fund transfers (WBG 2017a). These restrictions are more common in the focus regions.

The types of banking institutions holding the savings account relationship with the customer range from full-service commercial banks to more limited scope niche banking entities. Among the 35 documented digital savings accounts in this report, 21 are held by a single commercial banking entity, an arrangement that occurs in 8 of the 10 countries. In 4 instances in India and Nepal, a technology platform connects savers to a variety of banking institutions. Ten digital savings accounts are held by more limited-purpose banking entities, including deposit-taking microfinance institutions (DTMFIs) in

TABLE 3: Documented Digital Savings Accounts in Focus Countries

	ACCOUNT [Account type]	ACCOUNT HOLDER [Entity class]	DRIVER OF TECHNOLOGY AND DISTRIBUTION [Entity class]	TECHNOLOGICAL INTERFACE [Service name]
Bangladesh	Dutch-Bangla Bank Limited (DBBL) Biometric Acct. [Dedicated]	DBBL [CB]		Mobile phone and POS [DBBL Biometric, Rocket Mobile]
	Monthly savings scheme [Legacy]	Mercantile Bank Ltd. (MBL) [CB]		Mobile phone [MYCash: MY Bank Deposit]
Cambodia	AMK savings acct. [Legacy]	AMK Co. [DTMFI]		Mobile phone [AMK Mobile Banking]
	Mobile savings acct. [Dedicated]	Amret Co. [DTMFI]		Mobile phone [Amret Mobile Teller]
Côte d'Ivoire	Advans Savings Acct. [Legacy]	Advans [DTMFI]	MTN, Orange [NBEI: MNO]	Mobile phone [MTN Mobile Money, Orange Money]
India	Savings accts [Legacy: broad platform]	Multiple banks	Eko India [NBEI: non-MNO]	Mobile phone [SimpliBank]
	Savings accts. [Legacy: broad platform]	Multiple banks	Fino Paytech [NBEI: non-MNO]	POS [MicroATM, kiosk banking]
	State Bank of India (SBI) No Frills Acct. [Legacy]	SBI [CB]	Oxigen [NBEI: non-MNO]	POS [Oxigen CSP Kiosk]
	Savings acct. [Dedicated]	Airtel Payments Bank [payments bank]	Airtel [NBEI: MNO]	Mobile phone [Airtel Money]
	Savings accts. [Legacy]	Fino Payments Bank [payments bank]	Fino Paytech [NBEI: non-MNO]	Mobile phone and POS [Mobile banking, micro ATM, kiosk]
Kenya	M-Shwari [Dedicated]	Commercial Bank of Africa (CBA) [CB]	Safaricom [NBEI: MNO]	Mobile phone [M-Pesa]
	Kenya Commercial Bank (KCB) M-Pesa [Dedicated]	KCB Bank Kenya Ltd. [CB]		
	KCB M-Benki [Dedicated]			
	M-Kesho [Dedicated]	Equity Bank [CB]		
	Stanbic Savings Acct. [Legacy]	Stanbic Bank [CB]		
	Kenya Women's Finance Trust (KWFT) Savings Acct. [Legacy]	KWFT [DTMFI]	KWFT, Safaricom [DTMFI], [NBEI: MNO]	Mobile phone and POS [KWFT Mobile, M-Pesa]
	PostBank Savings Acct. [Legacy]	PostBank [savings bank]	PostBank, Safaricom [savings bank], [NBEI: MNO]	Mobile phone [M-Sawa, M-Pesa]
	Akiba Mkononi [Dedicated]	United Bank for Africa [CB]	Airtel [NBEI: MNO]	Mobile phone [Airtel Money]
	EazzySave [Legacy]	Equity Bank [CB]	Equity Bank, Equitel [CB], [MVNO (subsid.)]	Mobile phone and POS [Equitel]

continued

TABLE 3, *continued*

	ACCOUNT [Account type]	ACCOUNT HOLDER [Entity class]	DRIVER OF TECHNOLOGY AND DISTRIBUTION [Entity class]	TECHNOLOGICAL INTERFACE [Service name]
Nepal	Savings accts. [Legacy: broad platform]	Multiple banks	eSewa [NBEI: non-MNO]	Mobile phone [eSewa]
	Savings accts. [Legacy: broad platform]	Multiple banks	HelloPaisa [NBEI: non-MNO]	Mobile phone [HelloPaisa]
	Everest Bank Ltd. (EBL) Savings Bank Acct. [Legacy]	EBL [CB]		Mobile phone [Mobile ATM]
	Rastriya Banijya Bank Ltd. (RBBL) Savings Acct. [Legacy]	RBBL [CB]		Mobile phone and POS [RB Mobile Banking, EFTPOS]
Philippines	PondoKO [Dedicated]	BanKO [DTMFI]		Mobile phone [BanKO]
Tanzania	M-Pawa [Dedicated]	CBA [CB]	Vodacom [NBEI: MNO]	Mobile phone [M-Pesa]
	Tanzania Postal Bank (TPB) Savings Acct. [Legacy]	TPB [CB]	TPB, Airtel, Tigo, Vodacom, Zantel [CB], [NBEI: MNO]	Mobile phone and POS [Popote, Airtel Money, Tigopesa, M-Pesa, EzyPesa]
	National Microfinance Bank (NMB) Savings Acct. [Legacy]	NMB [CB]	NMB, Tigo, Vodacom [CB], [NBEI: MNO]	Mobile phone and POS [NMB Mobile, M-Pesa, Tigopesa]
	FINCA Savings Acct. [Legacy]	FINCA [CB]	FINCA, Airtel, Tigo, Vodacom [CB], [NBEI: MNO]	Mobile phone and POS [FINCA Mobile, Airtel Money, Tigopesa, M-Pesa]
	CRDB Savings Acct. [Legacy]	CRDB [CB]		Mobile phone and POS [SimBanking]
	Mwanga Community Bank (MCB) Savings Acct. [Legacy]	MCB [community bank]	MCB, Airtel, Tigo, Vodacom [community bank], [NBEI: MNO]	Mobile phone [MCB Mobile Banking, Airtel Money, Tigopesa, M-Pesa]
Uganda	MoKash [Dedicated]	CBA [CB]	MTN [NBEI: MNO]	Mobile phone [MTN Mobile Money]
	Barclays Group Acct. [Dedicated]	Barclays Bank [CB]	Barclays, Airtel [CB], [NBEI: MNO]	Mobile phone [eKeys, Airtel Money]
Zambia	Zanaco Savings Acct. [Legacy]	Zanaco [CB]		Mobile phone and POS [Xapit]
	Eaze Save [Legacy]	Investrust [CB]		Mobile phone [InvestMobile]

Abbreviations: CB: commercial bank. DTMFI: deposit-taking microfinance institution. NBEI: nonbank e-money issuer. POS: point-of-sale terminal. MNO: mobile network operator.

Account type: Legacy describes instances in which a digital channel links customers directly to a savings account within the banking institution's existing suite of products. *Dedicated* refers to accounts that have been created specifically for digital savings. *Legacy: broad platform* refers to a few mechanisms in which nonbank entities establish savings account connections with a wide range of banking institutions.

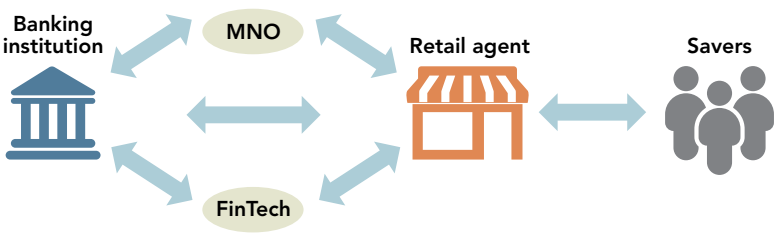
Cambodia, Côte d'Ivoire, Kenya, the Philippines, and Zambia, specialized payments banks in India, a postal savings bank in Kenya, and a designated community bank in Tanzania.

A distinguishing factor among the models for delivering digital savings accounts revolves around the institutions driving the product's technology and distribution and, correspondingly, whether the banking institution that holds the contractual relationship with the customer pursues a substantive partnership with a nonbank entity in furnishing the digital savings account. An entity is said to drive the digital savings account's technology and distribution if it owns and operates the product's primary technological interface and drives the distribution strategy. The entity itself does not need to perform the distribution function alone; rather, it determines or selects the agent distribution model for the account.

Partnerships between banking institutions and NBEIs are common in the provision of digital savings accounts. Table 4 captures the classes of entities primarily responsible for digital savings account technology and distribution in the 10 focus countries where accounts exist. Figure 4 depicts three common digital savings account delivery models. Among the 35 documented digital savings accounts, 23 involve partnerships between banking institutions and NBEIs. Of these, 6 accounts involve distinctly shared technology and distribution responsibilities between banking institutions and MNOs. In the remaining 12 cases, the banking institution holding the contractual relationship with the customer also drives the product's technology and distribution.

MNO partnerships account for a greater share of the digital savings account models in SSA than in Asia. The historically MNO-centric DFS approach in SSA and contrasting bank-oriented DFS patterns in a number of Asian countries likely contribute to the relative share of MNO digital savings partnerships. Of the 21 documented accounts in SSA, 16 involve partnerships between banking institutions and MNOs. In Asia, 7 of the 15 documented accounts involve partnerships, 6 of which involve non-MNO NBEIs.

FIGURE 4. Three common digital savings account delivery models



Icon source: Shutterstock.com (subscription)

3.2.2 Key Digital Savings Account Characteristics

About two-thirds of the products reviewed involve new digital channels to legacy bank savings accounts, while the remaining products are customized accounts, created for the purpose of digital savings. In 23 of 35 cases, the product involves a digital channel linking customers directly to a savings account within the banking institution's existing suite of products. Of these, 2 mechanisms in India, managed by Fino Paytech and Eko, and 2 in Nepal, managed by eSewa and HelloPaisa, constitute "broad platforms," whereby the entities establish savings account connections with a number of banking institutions. In the remaining 12 cases, an account has been created for digital savings. The report refers to these as "dedicated" accounts, though they may offer other services, such as short-term loans. Nine of these dedicated accounts involve partnerships between banking institutions and MNOs, while the remaining three are managed entirely by banking institutions. Perhaps the most well-known of the dedicated accounts is M-Shwari, the Commercial Bank of Africa (CBA) and Safaricom M-Pesa digital savings account in Kenya. Box 1 explores M-Shwari in more detail. CBA has launched similar products in Tanzania (M-Pawa) and Uganda (MoKash) and is expected to launch an analogous product in Côte d'Ivoire (Mumo 2016).

TABLE 4: Primary Driver of Technology and Distribution among Documented Digital Savings Accounts (Entity Type, Number of Instances, by Country)

	BANGLADESH	CAMBODIA	CÔTE D'IVOIRE	INDIA	KENYA	NEPAL	PHILIPPINES	TANZANIA	UGANDA	ZAMBIA
Banking institution	2	2	—	—	1	2	1	1	—	3
MNO NBEI	—	—	1	1	6	—	—	1	2	—
Non-MNO NBEI	—	—	—	4	—	2	—	—	—	—
Shared (MNO and bank)	—	—	—	—	2	—	—	4	—	—

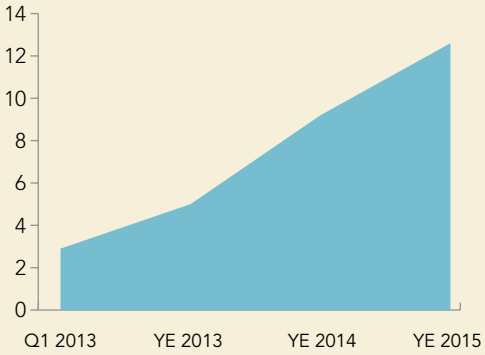
BOX 1

M-Shwari (Kenya)

Launched in November 2012, M-Shwari is a CBA savings and loan product available to M-Pesa customers. CBA holds the savings account relationship with the customer, while Safaricom drives the technology and distribution. M-Shwari is completely branchless and paperless. M-Pesa users open an M-Shwari account via their M-Pesa mobile interface simply by accepting the M-Shwari terms and conditions.[a] Thereafter, users can transfer money directly from their M-Pesa account to M-Shwari. M-Shwari has no minimum balance, no maintenance fees, and no charges on transfers between M-Pesa and M-Shwari.[b] M-Shwari depositors earn 7.35 percent interest per annum on their average daily balance, which is paid quarterly. Users can also open a "Lock Savings Account," which has a maturity of one to six months. Despite being a time deposit, the Lock account has no penalty for early withdrawal. M-Shwari offers 30-day loans for a fixed charge of 7.5 percent.[c]

M-Shwari has had strong uptake in its five years of existence. According to CBA, M-Shwari customers have grown from 2.9 million in the first quarter of 2013 to 12.6 million at year-end 2015, representing about 47 percent of the Kenyan adult population. However, Safaricom reported 30-day active users at 3.9 million at the end of fiscal 2016 (Safaricom 2016). Outstanding M-Shwari deposits stood at K Sh 7.6 billion (about $74 million) at the end of fiscal 2015 and K Sh 8.1 billion (about $79 million) in May of 2016 (CBA 2016; Safaricom 2016).[d] M-Shwari points to how effective partnerships between banks and nonbanks can be in furnishing digital savings accounts.

Total M-Shwari Users (Millions)



Source: CBA annual reports

a. CBA, "Activate M-Shwari," http://cbagroup.com/m-shwari/activate-m-shwari/, accessed May 10, 2017.
b. CBA, "How M-Shwari Works," http://cbagroup.com/m-shwari/how-m-shwari-works/, accessed May 10, 2017.
c. CBA, "M-Shwari: FAQs," http://cbagroup.com/m-shwari/faqs/, accessed May 10, 2017.
d. Box 1 conversions utilize the year-end 2016 exchange rate of $1 = K Sh 102.49 (Central Bank of Kenya).

Basic mobile phones, also known as feature phones, represent the most common technological interface through which users access their accounts, although a sizable segment of the accounts can be accessed through both basic mobile phones and agent-administered POS devices. Just over 60 percent of the documented digital savings accounts are accessed via basic mobile phones. Among these, accounts are accessible through a mix of the banking institution's own mobile-banking platform and through a partner NBEI's mobile-money service. Access via an MNO's mobile-money service is most common in SSA, where the services of Safaricom, Vodacom, MTN, and Airtel all link to digital savings accounts. In Asia, where regulations have often blocked MNOs from directly offering DFS, it is far more common for banks to utilize their own mobile-money applications or partner with a non-MNO NBEI. However, in India, the recently launched Airtel Payments Bank utilizes Airtel Money as its digital savings channel. In 10 cases, digital savings accounts are accessible through both mobile phones and agent-administered POS devices, offering more flexibility for consumers. In three cases in Tanzania involving Tanzania Postal Bank, National Microfinance Bank, and FINCA, as well as one case in Kenya involving Kenya Women's Finance Trust (KWFT), savers can access their digital accounts through mobile options furnished by both the banking institution and an MNO, as well as through POS terminals.

Most of the digital savings accounts offer some level of remote account opening, either directly through a basic mobile phone or via an agent-facilitated document-collection process, but complete savings account opening at a retail agent location is rare. It is uncommon for retail agents to have full authority to open a savings account on behalf of a banking institution. In six observed

cases, savers must visit a bank branch to open a savings account, while the status of non-branch account opening is unclear for a few cases. In a handful of cases that are primarily concentrated in India, direct savings account opening appears possible at a retail agent location. For four digital savings accounts in Kenya and one each in Tanzania and Uganda, customers can open a digital savings account directly on their mobile device. A common approach entails retail agents collecting account-opening information for evaluation by the banking institution. According to the Global FICP survey data, about three-fourths of responding jurisdictions permit retail agents to receive and submit to commercial banking institutions deposit account applications (Annex E, Table E.4). Less than half (42 percent) of all responding jurisdictions allow retail agents to open a customer account following a commercial banking institution's policy (Annex E, Table E.4).

The digital savings accounts reviewed in part 3 constitute deposits held by banking institutions and are eligible for deposit insurance, where regimes exist. Explicit deposit insurance regimes exist in 8 of the focus countries (see: table 6, part 4). This stands in contrast to e-money accounts, which are generally not insured (Izaguirre, Lyman, McGuire and Grace 2016). However, two of the focus countries, Kenya and India, have pursued innovative policy approaches in this area. Kenya is developing pass-through deposit insurance for e-money accounts (Izaguirre et al. 2016). In India, payments bank deposits are insured (see: Box 2). Part 5 recommends future research on whether knowledge of deposit insurance coverage affects account uptake.

Most the digital savings accounts reviewed here are low-cost, marked by low or no maintenance fees and minimum balance requirements, and offer flexible withdrawal policies. Low-cost account features, such as low maintenance fees and minimum balance requirements, are likely important for digital savings uptake among low-income segments. Most of the documented accounts also have flexible withdrawal options, while few stipulate withdrawal limits. In most cases, providers' decisions to offer low-cost account accounts for certain customer segments appear market driven. No more than 10 percent of Global FICP survey respondents mandate low-cost deposit features, such as limits on opening costs, maintenance fees, overdraft penalties, and minimum balance requirements (WBG 2017a).

Many of the documented accounts offer additional features and options, such as:

- **Short-term loans.** A number of digital savings accounts offer customers the possibility of accessing short-term loans. In fact, six accounts are directly marketed as savings and loan products. Four of these are in Kenya, all involving the Safaricom M-Pesa mobile-money service. The remaining two are in Tanzania and Uganda. Although very convenient, these loans can be costly. In the case of the Safaricom/CBA M-Shwari loan, a 30-day loan-facilitation fee is set at 7.5 percent, amounting to an annual effective interest rate of 138 percent.[3] Part 5 recommends that future research explore to what extent demand savings and loan products is driven by demand for credit.
- **Term- or recurring-deposit accounts.** While some of the documented digital savings accounts are available only as term deposits, many others offer the option to open a term- or recurring-deposit account. As an example, Dutch-Bangla Bank Limited (DBBL) in Bangladesh offers the Deposit Plus Scheme, a recurring deposit, and the Fixed Deposit Receipt, a term deposit, through agent-administered biometric POS terminals or mobile banking.[4] In most cases, the banking institution markets the term deposit itself, but this is not universally true. For instance, the non-MNO NBEI Fino Paytech directly markets fixed and recurring deposit accounts.[5] Additionally, dedicated digital savings accounts offer term-deposit options in certain cases. For example, M-Shwari and MoKash offer the Lock and Fixed Savings Accounts, respectively, both of which offer flexible early withdrawal options.[6]
- **Group accounts.** At least six of the documented digital savings accounts offer the ability to access group accounts digitally. These options appear in India, Kenya, Tanzania, and Uganda. Five of the six represent digital channels to legacy group savings accounts at banking institutions. One account, offered through a partnership between Barclays and Airtel in Uganda, is a dedicated, interest-bearing digital savings group account (Barclays, CARE, Plan 2016). As discussed in section 3.1, group saving is widespread in SSA and certain other Asian countries. Digital group savings accounts represent an important effort among DFS providers to forge synergies between their savings products and local populations' traditional, familiar saving patterns.

3.3 HOW INNOVATIVE BUSINESS MODELS ENHANCE SAVINGS ACCOUNT ACCESSIBILITY

3.3.1 Disaggregation of the Digital Savings Account Value Chain

Disaggregation of the digital savings account value chain allows for expanded access channels, improvements in the economics of low-cost savings accounts, the leveraging of different entities' comparative advantages, and scaling of microbanking institutions. DFS business models are frequently characterized by horizontal structures, whereby providers strike partnerships with third parties to fulfill one or more aspects of product development and delivery. Disaggregation of the digital savings account value chain primarily takes two forms. First, banking institutions can partner with a NBEI, which assumes primary responsibility for a digital savings account's technology and distribution. Second, a banking institution may contract with a third party to conduct some or all of the digital savings account distribution responsibilities. Such value chain disaggregation carries distinct financial inclusion advantages that are extremely important for the provision of savings accounts:

- **Expanded access channels.** Through a combination of retail agents and basic devices, digital savings accounts provide customers with a wider range of access channels than traditional branch-based banking. Across the focus countries, the primary access mechanisms involved in digital savings accounts—retail agents, POS terminals, and basic mobile devices—are far more widespread than analogous access channels for traditional savings accounts, such as commercial bank branches. Expanded access channels are important not only for digital savings account opening but also for accessibility and flexibility, two qualities that are vital for low-income savers, who need easy access to savings in case of emergencies.
- **Improved economics of providing low-cost savings accounts.** Disaggregating the digital savings value chain improves the economics of providing low-cost savings accounts by lowering distribution costs and helping banks mobilize local deposits. Digital technology and value-chain disaggregation can lower the cost of distributing digital savings accounts. Working through retail agent networks is more affordable than developing full-scale branch outlets. Partnering with nonbank entities and leveraging digital technology also helps banking institutions achieve faster economies of scale. The McKinsey Global Institute (MGI) estimates that digital technologies and DFS business models can lower "the cost of providing financial services by 80 to 90 percent" (Manyika et al. 2016, 36). Digital savings accounts also provide an opportunity for banking institutions to improve their cost-of-funding profile. Local deposit mobilization can reduce banking institutions' reliance on expensive brokered deposits, wholesale funding, and long-term debt, much of which may also be priced in foreign currency. MGI estimates banking institutions in developing economies could raise $4.2 trillion in deposits via digital channels (Manyika et al. 2016). Finally, digital savings accounts entail an opportunity for providers to achieve economies of scope through diversity in product offerings.
- **Leveraging comparative advantage among different classes of entities.** Through partnerships between banking institutions and nonbank entities, digital savings accounts benefit from the relative strengths of each party. When banking institutions partner with MNO NBEIs in developing and distributing digital savings accounts, both customers and providers can benefit from the MNO's distribution and coverage potential, as well as the presence of existing mobile phones that can serve as the primary account interface. Moreover, MNOs have an economic incentive to distribute the product, despite potentially low margins, as the savings account may enhance loyalty to the MNO's core product offering. Except for the mobile device, partnerships with non-MNO NBEIs that have a large retail presence offer similar advantages. Partnerships between banking institutions and financial-technology companies can benefit from the latter's flexibility, agility, and ability to develop innovative, customizable products.
- **Broadening reach and scale of microbanking institutions.** Digital savings business models allow institutions that specialize in microsavings, such as DTMFIs, to serve a wider base of customers, thereby expanding the reach of their expertise. Globally, DTMFIs, community banks, savings banks, and other microfinance entities maintain expertise in serving local communities, including individual small savers, yet expanding their customer base can be challenging. Pursuing partnerships with MNOs or other NBEIs can provide an efficient avenue for these institutions to achieve scale. In Tanzania, for instance, the Mwanga Community Bank (MCB) has integrated its mobile-banking service with Vodacom M-Pesa, Airtel Money, and Tigo Pesa, allowing customers to access MCB savings accounts from a substantial number of outlets and channels. Likewise, in Kenya, the DTMFI KWFT has supplemented its own KWFT mobile and agent banking service with a Safaricom M-Pesa partnership.

3.3.2 Product Tailoring and Customization

Digital technology and innovative business models allow for more accessible, flexible, and affordable savings accounts. Substantial gaps exist in the focus regions between overall and formal saving. As established in section 3.1, perceptions among low-income segments that their savings are too small to warrant an account, along with cost of financial services and distance to financial institutions, are central impediments of formal account uptake in developing economies. Moreover, adults may save informally for easier access to their savings in case of an emergency or for other nearer-term uses. Digital savings accounts seek to address many of the barriers to formal saving, with low cost features, more proximate access channels, and flexible withdrawal options. Part 5 highlights future research questions geared toward exploring more precisely the connections between digital savings product attributes and uptake.

DFS actors are leveraging technology to tailor products to more effectively meet local saving patterns. An example of the compatibility between digital savings and local customs involves digital group savings accounts. To be sure, group accounts are not unique to DFS. Indeed, most of the digital savings accounts with group options captured in this study represent digital paths to existing group accounts at banking institutions. However, DFS business models allow greater reach to rural areas, where savings groups are common. Additionally, digital savings accounts allow a better opportunity for customization. For instance, the Barclays-Airtel digital group account and Airtel Weza (annex C), mimic group savings customs by requiring three-PIN authentication, analogous to group lock-box procedures. Such a feature is difficult with traditional branch-based banking, as it would require multiple individuals to travel to a bank branch. In addition to Airtel Weza, annex C examines other non-interest-bearing digital transaction accounts that are specifically designed to facilitate saving. For instance, certain providers are leveraging technology to influence saving behavior through features such as SMS saving reminders and labeled products, in which customers can easily earmark funds for specific purposes, including healthcare and education. A successful labeled account example is the M-Tiba mobile health wallet.[7] Annex C also profiles SmartMoney's digital transaction account, which is designed to facilitate saving in rural communities, particularly in Uganda.

3.3.3 Leveraging Existing DFS Ecosystems

A prevailing DFS ecosystem can facilitate the development and uptake of digital savings accounts through existing infrastructure and customer familiarity. Digital savings accounts are built on many of the same information and communication technology elements as digital transaction accounts and payment services. Digital transaction accounts themselves serve as a gateway to digital savings accounts. Furthermore, when low comfort with traditional branch banking is a major hurdle to savings-account uptake, the digital savings account market benefits from the elements of the DFS ecosystem that enhance trust and familiarity, such as community-based agents and basic mobile phones. A robust DFS market can also help customers develop confidence and financial capability to move on to more sophisticated products, including digital savings. Kenya's digital savings market, with digital wealth-management products such as pensions and bonds, exemplifies the influence a strong DFS ecosystem can have on market development.

A robust DFS market can foster healthy competition in the savings account space. A thriving market for digital transaction accounts and payment services can spur banking institutions to seek more efficient channels for delivering banking services, including savings. In Kenya, for instance, a 2017 CGAP report documented a striking correlation between growth in mobile money accounts and bank accounts (Cook and McKay 2017, 2). In some prosperous DFS settings, particularly where nonbank entities have introduced significant competition to the financial services industry, dynamic digital savings markets have developed. In Tanzania and Kenya, various banks and DTMFIs have entered the digital savings space, both by pursuing partnerships with MNOs and by developing their own digital channels. Part 5 recommends that future research further investigate the impact of digital savings accounts on competition, including whether terms have improved for savers.

The DFS ecosystem, often in concert with policy action, can give rise to new classes of entities that are well positioned to offer digital savings accounts without traditional branch-based banking. Examples of new classes of entities exist in a number of focus countries. In the Philippines, for instance, BanKO, a "mobile phone-based, microfinance-focused savings bank," aims to serve the unbanked and underserved segments through its PondoKO savings account, which users access entirely through mobile banking and retail outlets.[8] Similarly, India's payments banks (Box 2), such as Airtel Payments Bank, offer digital savings accounts entirely through mobile devices and retail outlets.

Digital savings providers can effectively pool programming improvements and spur innovations through application program interfaces (APIs). APIs are software programs that specify how software components should interact and how user interfaces should function. An open API can enable third-party developers to innovate freely and to build new features, functionalities, or separate applications on top of preexisting products without needing to establish a specific agreement or partnership with the original developer. In practice, fully open APIs are not the norm in the DFS ecosystem. Rather, the degree of accessibility among DFS providers' APIs runs a continuum from wholly private to partially open for a specified set of partners to fully open to the public (Bankable Frontier Associates 2016). Nevertheless, select DFS actors are taking advantage of at least some degree of API openness to develop digital savings accounts. For instance, M-Shwari was built on top of the M-Pesa platform (Bankable Frontier Associates 2016). Open APIs can offer a tremendous opportunity for digital savings providers to crowd-source high-quality programming expertise at a potentially much lower cost than developing technology in house.

BOX 2

Digital Savings Potential at Payments Banks in India

Historically, the Reserve Bank of India's (RBI) DFS legal and regulatory framework favored bank-oriented DFS. Recognizing the need to leverage digital channels better to promote financial inclusion, the RBI established a new category of institution in 2014—payments banks—a development that may have a significant impact on India's digital savings landscape. As the RBI explained in its 2014 Guidelines for Licensing Payments Banks, "the primary objective of setting up of payments banks will be to further financial inclusion by providing (i) small savings accounts and (ii) payments/remittance services" among underserved segments (RBI 2014b, 2 [2]). The RBI makes clear that payments banks should leverage technology to reach remote and underserved areas through an extended set of access points. In 2015, the RBI granted 11 entities "in-principle" licenses, along with an 18-month window to set up a payments bank.

Airtel, which became the first to launch its payments bank in early 2017, offers a fully digital savings account with no minimum balance, low withdrawal fees, and a 4 percent per annum interest rate.[a] Customers visit one of Airtel's 250,000 banking points to open an account, needing only their Aadhaar number to do so. A customer's mobile number becomes his or her account number. Fino Payments Bank, which followed Airtel, also offers a suite of savings products that customers can access through mobile or POS technology. India Post and Paytm Payments Banks are also operational, and both appear poised to offer digital savings accounts soon.

From a regulatory perspective, payments bank deposits are considered deposits and eligible for deposit insurance, one of the many properties that distinguishes the payments bank license from common NBEI licenses. The RBI prohibits payments banks from lending. They must invest a minimum of 75 percent of customer funds in government securities and place a maximum of 25 percent of funds in commercial bank deposits (RBI 2014b, 5 [5]). As of now, payments bank accounts have a limit of Rs 100,000 (about $1,472), but the RBI says it will review the limit as warranted (RBI 2014b, 3 [4]).[b] Payments banks must also maintain a minimum capital adequacy ratio of 15 percent of risk-weighted assets, a minimum Tier 1 capital ratio of 7.5 percent of risk-weighted assets, and a leverage ratio of 3 percent (RBI 2014b, 5–6 [6]). Payments bank risk-weighted assets will be low, given the limited asset classes in which they can invest and the relatively low-risk nature of those classes. The RBI also recognizes the need for proportional prudential regulatory standards for payments banks, as they take on limited to no credit risk. The RBI suggests prudential requirements for payments banks will largely revolve around operational and liquidity risk management (RBI 2014b, 7 [10]). In general, payments banks must comply with all relevant risk-management, consumer-protection, and financial integrity laws and regulations, and they are responsible for the actions of their business correspondents. Payments bank accounts are eligible for simplified know-your-customer and anti-money laundering/combating the financing of terrorism standards, provided they meet "small account" standards (RBI 2014b, 3 [4]).

Despite their promise, restrictions on revenue opportunities and competition from traditional banks offering Pradhan Mantri Jan-Dhan Yojana accounts may present viability challenges for the payments banks. In fact, CDSL, Shri Dilip Shantilal Shanghvi, and Tech Mahindra surrendered their payments bank licenses before launching (Bhakta 2016). The most established payments bank, Airtel, has not been profitable in its first 2 years, but this is not surprising for an early-stage, growth-oriented company, and there are

continued

BOX 2, *continued*

encouraging trends.[c] Airtel's savings deposits grew substantially over FY 2018, and net interest income is positive and growing. Those payments banks that position themselves to capitalize on unmet formal savings demand should find good opportunities in the Indian market.

Notes:

a. Airtel Payments Bank, "Savings Account," https://www.airtel.in/bank/saving-account.
b. *Note:* Conversions in box 2 utilize the year-end 2016 exchange rate of $1 = Rs 67.95 (Reserve Bank of India).
c. *Note:* Comments on Airtel's performance were updated in 2018. Source: Airtel Payments Bank Ltd, Financial Statements (March 31, 2018), https://www.airtel.in/about-bharti/equity/results.

NOTES

2. In this paper, we use the term propensity to save to represent the share of adults who save in a given jurisdiction. Formal saving in Global Findex refers to saving at a financial institution.
3. https://sites.tufts.edu/inclusivecommerceblog/2014/01/08/m-shwari-unconventionally-affordable-at-an-apr-of-138/.
4. Dutch-Bangla Bank, "Agent Banking," https://www.dutchbanglabank.com/agent-banking/agentbanking.html, accessed May 10, 2017.
5. Fino Paytech, "Savings," http://www.finopaytech.com/industry-sectors/banking/savings, accessed May 20, 2017.
6. CBA Bank, "M-Shwari: Lock Savings Account," http://cbagroup.com/m-shwari/lock-savings-account/, accessed May 15, 2017; MTN, "MoKash-My Saving, My Loans: Terms and Conditions," https://www.mtn.co.ug/Mobile%20Money/Banking/Pages/MoKash.aspx, accessed May 15, 2017.
7. M-Tiba, http://m-tiba.co.ke/, accessed August 4, 2017.
8. BanKO, "PondoKO," http://www.banko.com.ph/savings/pondoko-savings-account/, accessed May 5, 2017. BanKO (2015).

4

DIGITAL SAVINGS POLICY CONSIDERATIONS

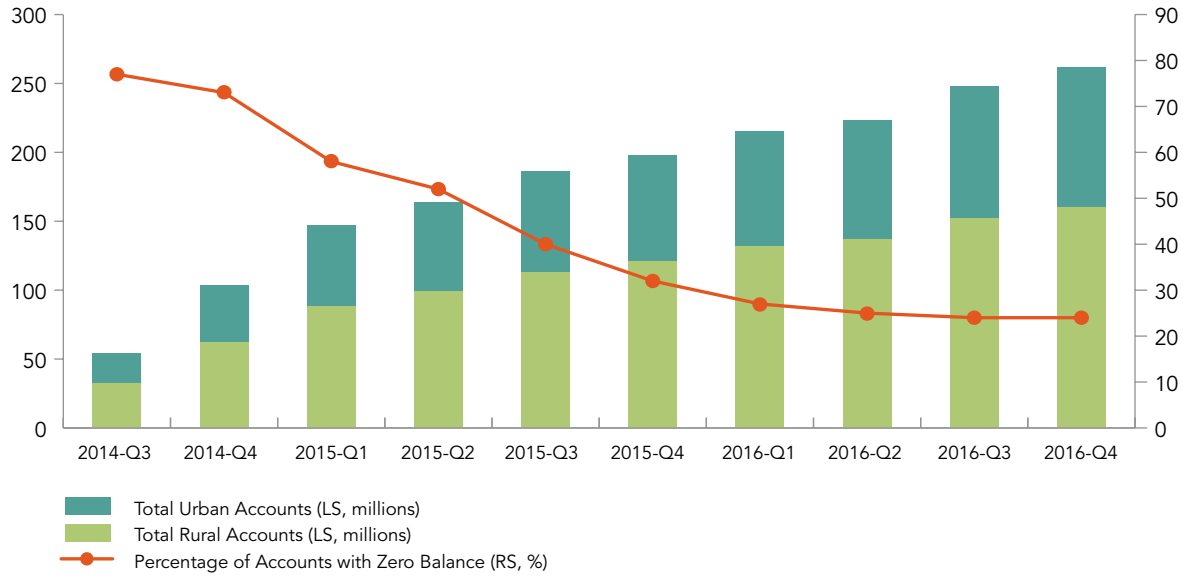
The purpose of this section is to discuss key policy issues that enable and constrain digital savings account development and to offer corresponding considerations within the context of the G20 HLPs for DFI. Recognizing the central role digital technologies can play in driving financial inclusion and inclusive growth more broadly, the G20 developed a set of eight HLPs for policy makers and market leaders around the world to consult as they contemplate digitally enabled financial inclusion methods (GPFI 2016a). This section provides specific policy considerations supported by policy and market observations for each of the eight HLPs. These observations derive from the digital savings product findings in part 3, as well as a broader analyses of the digital savings markets and policy landscapes in the 12 focus countries. The discussion below also draws on findings from the WBG's 2017 Global FICP survey results. Annex E details key digital savings-relevant FICP data elements.

Policymakers should use part 4 as a guide for analyzing their local digital savings markets. Given that digital savings account deployments are in their early stages and future research is needed to evaluate uptake and usage, the policy takeaways below should be read as considerations, rather than recommendations. The future research agenda outlined in part 5 will allow for a more comprehensive calibration and prioritization of digital savings policy considerations. In the meantime, the policy issues discussed in part 4 can help policymakers evaluate digital savings developments in their local markets. Based on current research, policies that support bank-NBEI partnerships (see: 4.3.i), NBEI-to-bank interoperability (see: 4.4.i), and harmonization of customer due diligence standards between banks and NBEIs (see: 4.3.iii) appear most important for digital savings development.

4.1 G20 HLP 1: PROMOTE A DIGITAL APPROACH TO FINANCIAL INCLUSION

4.1.i) Incorporate savings-specific elements in national financial inclusion strategies. Eleven of 12 focus countries either have or are preparing a dedicated national financial inclusion strategy. One country maintains a national development strategy with a financial inclusion component. Including savings-specific goals in these strategies may help accelerate digital savings market development. Over half (54 percent) of Global FICP survey respondents require deposit-taking institutions to offer basic financial products (Annex E, Table E.1). A 2016 World Bank Group analysis of 17 publicly available national financial inclusion strategies found that 13 incorporate savings/pension-related policy areas (WBG 2016, 8). Both Tanzania's and India's strategy, two of the longer-standing strategies among the focus countries, include savings-related targets and action items. These countries maintain two of the more diverse digital savings markets. Tanzania's National Financial Inclusion Framework sets a target of 25 percent of adults maintaining "two weeks' worth of income in formal savings" (Tanzania National Council for Financial Inclusion 2013, v). The Government of India sets ambitious savings goals in its Pradhan Mantri Jan-Dhan Yojana (PMJDY) strategy, a core pillar of which involves the "Opening of Basic Saving Bank Account of every adult citizen" (Ministry of Finance, India 2014, 20 [7.2]). The Government of India requires banking institutions to offer a PMJDY basic savings account that has no minimum balance and pays interest (Ministry of Finance, India 2014). As of year-end 2016, over 260 million PMJDY accounts had been opened, the majority of which are rural accounts (figure 5). However, nearly a quarter of these accounts had

FIGURE 5. Basic Savings Account Activity under the PMJDY Program



Source: Government of India Department of Financial Services, PMJDY Progress Report

a zero balance in 2016, which, although improving, still indicates low usage. Nevertheless, the relatively high level of financial account ownership in India owes, in part, to the PMDJY program. Importantly, these savings accounts are often available digitally. Fino Payments Bank directly markets PMJDY accounts in its suite of savings products.[9]

4.1.ii) Highlight the importance of incorporating affordability, flexibility, accessibility, and customization in digital savings account product offerings. Section 3.1 demonstrates that among excluded and underserved populations, demand is potentially strong for flexible, accessible, and affordable digital savings accounts. Encouragingly, most of the digital savings accounts analyzed in this study offer good withdrawal options, charge minimal fees, and maintain low or no minimum balance. Additionally, in light of the strong savings group culture and other unique saving patterns in many developing countries, customized accounts could formalize powerful saving patterns. Here, too, DFS providers are improving upon existing models.

4.1.iii) Facilitate the integration of digital savings account options with government-to-person payments, and encourage digital savings providers to offer options for earmarking portions of salaries for digital savings accounts. The G20's recommendation surrounding the leveraging of large-volume recurrent payment streams points to an opportunity in the digital savings space. Sixty-seven percent of Global FICP survey respondents encourage or mandate recipients of government transfers to open an account to receive their funds (Annex E, Table E.1). Globally, one of the chief methods for saving involves the earmarking of recurring salary payments for specific accounts. Many digital savings providers already facilitate these services. For example, Tanzania Postal Bank offers customers a salary account accessible through agent and mobile banking.[10] Meanwhile, Fino Payments Bank in India allows customers both to open a designated interest-bearing salary account and to receive Aadhaar benefits directly into their savings accounts.[11] In Côte d'Ivoire, cocoa farmers have an option to designate a portion of their earnings from the agriculture value chain for a savings account with the DTMFI Advans, through an Advans-MTN digital savings partnership (Riquet 2016). The actual landing account for G2P payments should be that which reaches the client most easily. In many cases, this may be an e-money account offered by an NBEI. Providing consumers with options for redirecting portions of large-value payments from landing accounts to digital savings accounts could enhance uptake.

4.2 G20 HLP 2: BALANCE INNOVATION AND RISK TO ACHIEVE DIGITAL FINANCIAL INCLUSION

4.2.i) Establish policy practices for enabling digital savings competition while facilitating effective partnerships. Among the focus countries, Tanzania maintains the best variety of actors and partnerships in the digital savings space. Neighboring Kenya, which has a similar policy framework as Tanzania, also maintains good diversity in its

digital savings market but a greater degree of market concentration among entities providing technological and distribution services. Safaricom dominates these aspects of digital savings in Kenya. Kenyan policy makers have adopted innovative policy approaches to alleviate some of the competition challenges. For instance, to ameliorate channel access issues, the Communications Authority of Kenya has established specialized mobile virtual network operator (MVNO) licenses. Equity Bank, through its subsidiary Equitel (Finserve), acquired an MVNO license in 2014, which it utilizes to offer digital savings (Muthiora 2015). In other countries, intense competition between banks and NBEIs has likely inhibited digital savings development. For example, distrust between banking institutions and NBEIs in Côte d'Ivoire, which has a mature DFS market relative to its counterparts in the West African Economic and Monetary Union (WAEMU), has impeded digital savings partnerships (Vasudevan 2016).

4.2.ii) Support a "multispeed" approach to digital savings inclusion, as some consumers may be ready to move beyond digital savings accounts to digitally-enabled, market-based wealth-building products. As discussed in section 2.3 and annex B, digitally-enabled, market-based wealth-building products that advance financial inclusion have begun to emerge in select markets. Such products—which allow users to access tax-advantaged retirement accounts (such as Mbao in Kenya), participate in collective investment funds (for example, Yu'e Bao in China), and acquire individual debt and equity securities (for example, M-Akiba in Kenya)—offer innovative opportunities for certain users to move beyond basic savings and diversify their portfolios. However, they also carry risks that should be well understood by regulators and consumers.

4.3 G20 HLP 3: PROVIDE AN ENABLING AND PROPORTIONATE LEGAL AND REGULATORY FRAMEWORK FOR DIGITAL FINANCIAL INCLUSION

4.3.i) Develop a legal and regulatory framework that allows banking institutions to pursue digital savings partnerships with nonbank entities. In the most diverse digital savings markets, banking institutions strike substantive partnerships with NBEIs for the technological and distribution aspects of digital savings accounts. The best policy enabler in this regard is a clear legal/regulatory framework for NBEIs. Broadly, NBEI participation develops in two ways. First, a nonbank entity may be granted an independent NBEI license, which gives it autonomy in issuing and distributing e-money. Alternatively, in a bank-based DFS market, regulation might permit a nonbank entity to participate in DFS, but only through a direct partnership and agreement with a banking institution to conduct e-money or payment services on behalf of the bank. Fifty-nine percent of Global FICP survey respondents indicate their jurisdiction maintains a legal/regulatory framework for NBEIs (Annex E, Table E.2). In the focus regions, a solid majority of FICP respondents in EAP and SSA report having NBEI frameworks, while less than half of respondents from South Asia report such frameworks (table 5). Tanzania and Kenya, which historically followed an MNO-led DFS model, have seen the most successful bank-NBEI digital savings partnerships. Countries such as Cambodia, India, and Nepal, which historically required bank-based DFS, have taken steps to level the DFS playing field.

4.3.ii) Enable banking institutions to conduct limited-purpose banking services through retail agent networks. Some markets have seen digital savings accounts driven primarily by banks. The best policy enabler in this regard is a clear, legally sound standard that permits banking institutions to offer limited-purpose banking services through an agent network. The status of such agent banking standards is uneven across the focus countries. Although 11 of 12 focus countries allow agent banking arrangements in some form, the clarity of these standards is inconsistent. In the focus regions more broadly, most FICP survey respondents indicate that agent banking standards are in place (table 5). Fewer, but still a high percentage of respondents, permit banks' agents to collect deposits. Globally, 81 percent of responding jurisdictions permit commercial banks to contract with retail agents as third-party delivery channels (Annex E, Table E.3), while 65 percent of respondents permit commercial banks' agents to collect deposits (Annex E, Table E.4).

4.3.iii) Harmonize, where prudent, the application of a risk-based approach to customer due diligence (CDD) for e-money wallets and bank deposits. As with other DFS, risk-based application of anti-money laundering standards and requirements for combating the financing of terrorism can help consumers more easily acquire digital savings accounts. Although 60 percent of Global FICP survey respondents report having established CDD simplifications or exceptions for certain accounts or customers, many report requirements beyond basic identification, particularly for commercial bank accounts (WBG 2017a). A unique challenge arises in digital savings when an imbalance exists between CDD requirements for e-money services and bank accounts. For instance, a jurisdiction may specify CDD tiers in its e-money standard but not in its bank regulatory requirements. This poses challenges for customer acquisition that utilizes an e-money service as a channel to digital savings accounts. Where prudent, regulators should strive to harmonize CDD requirements for e-wallets and bank deposits.

TABLE 5: NBEI Frameworks and Agent Banking in Focus Regions

	EAST ASIA & PACIFIC	SOUTH ASIA	SUB-SAHARAN AFRICA
Legal/regulatory framework in place for NBEIs	82%	43%	70%
Commercial banks can contract with retail agents as third-party delivery channels	91%	86%	95%
Commercial banks' agents can receive deposits	70%	67%	75%

Data source: WBG 2017 Global Financial Inclusion and Consumer Protection survey. Figures represent percent of responding jurisdictions. See Annex E for additional information.

4.4 G20 HLP 4: EXPAND THE DFS INFRASTRUCTURE ECOSYSTEM

4.4.i) Support the development of NBEI-to-bank interoperability. NBEI-to-bank interoperability is the technological backbone of digital savings partnerships. Twenty-three of the 35 products documented in this report demonstrate NBEI-to-bank interoperability. Most products are enabled by bilateral interoperability between NBEIs and banks. Multilateral arrangements, which would also support digital savings development, are more limited.

4.5 G20 HLP 5: ESTABLISH RESPONSIBLE DIGITAL FINANCIAL PRACTICES TO PROTECT CONSUMERS

4.5.i) Ensure customer funds protection (CFP) standards are robust for both bank deposits and e-money accounts. Digital savings accounts present unique CFP challenges, as they often invoke two sets of CFP standards, those applicable to bank deposits and others that apply to e-money accounts. Relative to basic e-wallets, digital savings accounts often entail heightened CFP risk, due to higher monetary values and longer horizons. Additionally, as opposed to generally strict intermediation standards for e-wallets, banking institutions can intermediate the funds generated from digital savings accounts, since they constitute bank deposits. Thus, it is important that regulators ensure CFP standards for both bank deposits and e-money accounts, through which digital savings often pass, are sound. Countries without explicit deposit insurance have to rely on a strong safety-and-soundness regulatory structure to protect bank deposits from run-risk. Even when deposit insurance is in place, resolution and payout mechanisms have not been thoroughly tested in many jurisdictions around the world. More work needs to be done to strengthen supervision and resolution mechanics. E-money accounts are generally not considered deposits or eligible for deposit insurance, but NBEIs present lower risks than banking institutions and are often subject to strict use-of-funds requirements. For instance, they usually cannot intermediate e-money and often must hold 100 percent of the value of customers' funds in a segregated account at one or more prudentially regulated financial institutions. Eighty-six percent of Global FICP survey respondents report such a requirement (Annex E, Table E.5). Eight of the 12 focus countries have clear CFP standards in place for both bank deposits and e-money accounts (table 6).

4.5.ii) Ensure customers are afforded critical savings account information at point of opening, noting that information sharing may occur unconventionally, such as directly on a mobile phone or through an agent-facilitated document-collection process. Digital savings account disclosure should cover, at a minimum, maintenance fees, withdrawal limits and fees, deposit insurance coverage, interest rates, when to expect interest payments, which banking institution holds the account, and how to submit grievances. Holders of digital savings contractual relationships are often further removed from the point of transaction than in traditional banking or e-wallet and payment services. Strong, transparent FCP standards and practices are important for responsibly providing digital savings accounts. Table E.6 (Annex E) details disclosure requirements for deposit products among FICP survey respondents. These requirements are uneven across regions and institutional class. Notwithstanding catch-all liability clauses for providers vis-à-vis their agents (see: Annex E, Table E.7), mechanisms for ensuring that savings account–related information is transmitted through unconventional account-opening processes, such as directly over a mobile phone or through an agent-facilitated document-collection process, are not entirely clear.

4.6 G20 HLP 6: STRENGTHEN DIGITAL FINANCIAL LITERACY & AWARENESS

4.6.i) Incorporate saving-specific elements in financial education strategies. Nearly 60 percent of Global FICP survey respondents report that a financial capability strategy either exists or is in development in their jurisdiction (WBG 2017a). Financial education programs should incorporate important saving-specific elements, including but

TABLE 6: State of Customer Funds Protection in Focus Countries

	BANGLADESH	CAMBODIA	INDIA	KENYA	NEPAL	PHILIPPINES	TANZANIA	UGANDA	VIETNAM	WAEMU	ZAMBIA
Has explicit deposit-insurance regime	✔		✔	✔	✔	✔	✔	✔	✔		
Law or regulation requires customers' e-money funds to be separated from the funds of the e-money issuer and held in an account (e.g., trust, escrow) at one or more prudentially regulated institutions	✔	✔	✔[12]	✔	✔	✔	✔	✔	✔	✔	✔

Note: as of 2017

TABLE 7: National Identification Systems in Focus Countries

	BANGLADESH	CAMBODIA	CÔTE D'IVOIRE	INDIA	KENYA	NEPAL	NIGER	PHILIPPINES	TANZANIA	UGANDA	VIETNAM	ZAMBIA
Has national ID	✔			✔	✔	✔	✔	✔	✔	✔		
Year established	1973	1975	2001	2009	1971	2011	1999		2014	2014	1975	1994
e-ID[13]	✔		✔	✔	✔	✔			✔	✔		✔

Source: World Bank ID4D dataset

not limited to: the benefits of saving; setting saving goals; risk versus return; characteristics of various classes of available savings products; the importance of utilizing savings rather than credit, where possible, for income smoothing; and the importance of seeking financial return to outpace inflation. The final concept is a serious matter, as high and volatile inflation rates in certain developing regions can put savings value at risk, even over short periods of time.

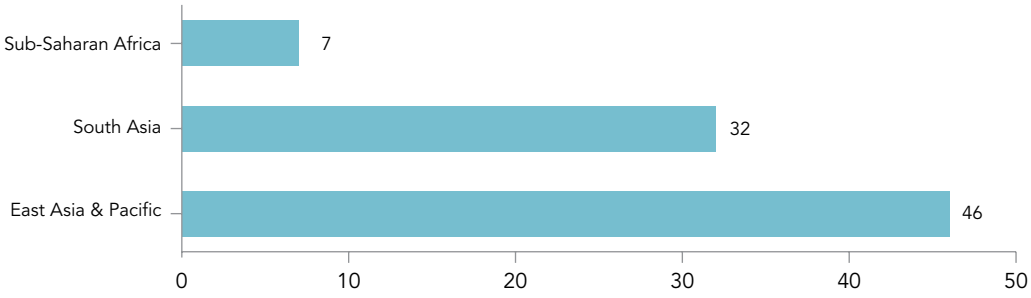
4.7 G20 HLP 7: FACILITATE CUSTOMER IDENTIFICATION FOR DIGITAL FINANCIAL SERVICES

4.7.i) Continue to implement, refine, and expand national identification systems. As with all financial services, lack of identification can inhibit access to digital savings accounts, particularly when digital savers face uneven identification requirements between different classes of entities involved in providing a digital savings account. Eleven of 12 focus countries have national identification systems in place, while 8 countries' national IDs have e-ID features (table 7). Although progress has been made in developing and disseminating national IDs, substantial population segments still have no official identification. Among the focus regions, the issue is most severe in SSA and South Asia (figure 6).

4.8 G20 HLP 8: TRACK DIGITAL FINANCIAL INCLUSION PROGRESS

4.8.i) In cooperation with banking institutions and NBEIs, policymakers should gather and publish data on deposits facilitated through digital channels, as such information is critical for understanding opportunities and risks. Gauging the impact of and appetite for digital savings accounts is challenging due to data constraints and the nascent status of most products. Many of the future research topics outlined in part 5 depend on more robust digital savings data. Bank regulators may be in a good position to work with banking institutions to develop a tracking framework through regulatory reports. As a positive example in this regard, Safaricom has published helpful metrics on M-Shwari and KCB M-Pesa performance in its investor presentations. Better collection and dissemination of digital savings data would help regulators, researchers, and the providers understand opportunities and risks.

FIGURE 6. Percentage of Unregistered Population in Focus Regions (2017)



Source: World Bank ID4D dataset

NOTES

9. Fino Payments Bank, "Savings Accounts," http://www.finobank.com/personal/products/savings-account/, accessed August 10, 2017.
10. TPB Bank, "Salary Account," http://www.tpbbank.co.tz/personal-banking/salary-account, accessed August 20, 2017.
11. Fino, "Saral Salary Account," http://www.finobank.com/personal/products/savings-account/saral-salary-account/, and "FAQs: Accounts and Deposits," http://www.finobank.com/personal/customer-care/faqs/accounts-and-deposits/, accessed August 10, 2017.
12. This reflects the RBI's standard applicable to nonbank prepaid issuers (RBI 2016b, 8). Payments banks are required to hold a maximum of 25 percent and a minimum of 75 percent of customer deposits in bank deposits and government securities, respectively (RBI 2014b, 5 [5]).
13. A physical token that proves an individual's identity and is used to identify, authenticate, and act as an electronic signature. A smart card that contains a contact or contactless chip (World Bank ID4D dataset).

5

FUTURE RESEARCH

Digital savings accounts represent a relatively young advancement in DFI. At this time, it is difficult to thoroughly assess certain research questions related to product sustainability, market impact, and key drivers of uptake and usage. While not exhaustive, table 8 outlines research questions that will be important to address as digital savings products mature and more data become available.

TABLE 8. Future Digital Savings Research Questions.

TOPIC	RESEARCH QUESTIONS
Product economics	Are digital savings accounts viable on a standalone basis? Do digital savings accounts complement or cannibalize institutions' existing product offerings?
Competition and market impact	Does the introduction of digital savings accounts improve terms for savers? Do digital savings accounts complement or compete with traditional savings products? Is there evidence of optimization behavior among consumers between digital savings accounts and SoV accounts?
Product attributes and design	How do product performance and design characteristics, such as reliability and ease of use, affect uptake and usage? Are there specific product attributes that will help close the formal saving gender gap? To what extent is uptake of credit-linked digital savings accounts driven by demand for credit? What are the risks associated with saving via digital channels that are not present in traditional savings products? Is there evidence consumers recognize the unique value proposition of digital savings accounts? Do policy-oriented product attributes, such as deposit insurance coverage, drive uptake?
Financial inclusion programs or policies	Have financial inclusion programs or policies (e.g., requirements, exceptions, tax incentives, subsidies) driven digital savings deployment or uptake relative to traditional savings accounts? Which financial inclusion-related legal and regulatory issues have been most consequential for digital savings uptake and usage?

ANNEXES

ANNEX A

E-MONEY ACCOUNTS OFFERING FINANCIAL RETURN

Certain e-money accounts offer customers a financial return, without requiring users to open a separate digital savings account. These e-wallet profit-sharing arrangements provide a simple, accessible, and convenient mechanism for storing wealth and earning a productive return. The arrangements also introduce healthy competition to the digital savings account market, which may incentivize more banking institutions to seek methods for expanding savings to the unbanked and underserved. In the focus countries, the e-wallet products Airtel Money, Tigo Pesa, and M-Pesa in Tanzania, as well as bKash, Ucash, Trust Bank Mobile Money, and Islami Bank's mCash in Bangladesh, pay customers a return on their e-wallet balance. Box A discusses the mechanics behind these arrangements in Tanzania.

A few elements distinguish these products from the digital savings accounts on which the report primarily focuses. First, they do not constitute deposits and are not eligible for deposit insurance. However, customer funds are generally protected by ring-fencing requirements and intermediation restrictions. Second, it is not clear whether these arrangements create a contractual obligation to share profits with customers or pay them interest. Even if consistent, the programs may be discretionary in certain cases, and the payout often depends on how much interest the financial institution generates on the e-money pool in a given period. Third, the e-wallets are generally subject to balance limits. Finally, their regulatory treatment is uneven across jurisdictions. Whereas Tanzania's and Bangladesh's e-money standards create a clear path for e-money issuers to offer a return on e-wallets, most focus countries' e-money standards either prohibit such activity or are ambiguous on the matter. According to the WBG's 2017 Global FICP survey data, 13 percent of responding jurisdictions allow NBEIs to pay interest on e-money balances and 8 percent allow profit sharing (WBG 2017a).[14]

Nevertheless, where they exist, these arrangements enhance consumer choice in the savings product space and generally serve the same functional role as digital savings accounts from the customer perspective. Thus, more work should be done to evaluate these products' role in savings product markets, as well as their regulatory implications.

NOTE

14. Number of responding jurisdictions to question addressing e-money interest and profit sharing: 62 out of 124.

BOX A

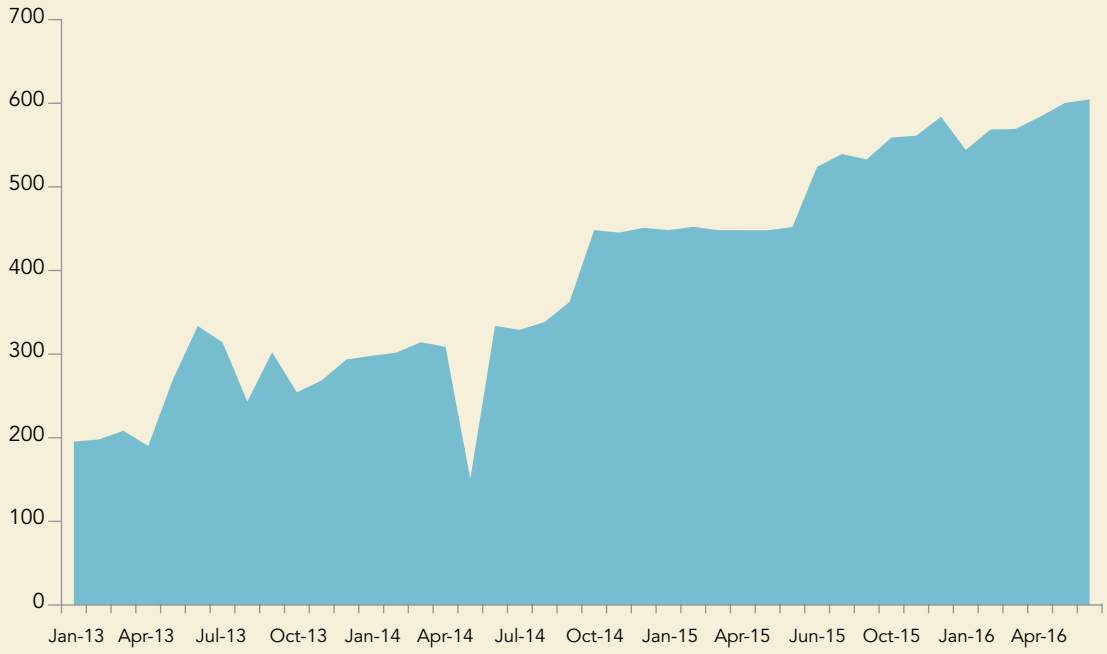
E-Money Profit-Sharing Arrangements in Tanzania

In 2014, Tigo Tanzania, an MNO, became the first NBEI in the world to initiate a profit-sharing arrangement on its customers' Tigo Pesa e-wallet balances. Since then, Tigo has made 11 quarterly payments to customers in the amount of T Sh 58.1 billion (about $26.6 million) (Tigo Tanzania 2017).[a] Other Tanzanian MNOs have followed Tigo's lead. As of January 2017, Airtel completed its fifth quarterly distribution, returning T Sh 11.8 billion (about $5.4 million) to customers (National Newspaper Daily News 2017). Vodacom also offers a similar service for M-Pesa customers called M-Pesa Faida.[b] Tigo and Airtel calculate a customer's return based on their daily e-wallet balance, while Vodacom ties return to customer "throughput," a combination of the wallet balance and other activity, such as transfers and payments (Tigo Tanzania 2017; National Newspaper Daily News 2017). The rate of customer return can fluctuate based on the earnings of the trust balance.

Profit sharing derives from the interest each provider earns on the balance of e-money it is required to hold in segregated trust accounts at commercial banks. Tanzania's 2015 E-Money Regulation requires that the "interest accrued in the trust account shall be used for the direct benefit of the electronic money holders" (BOT 2015a). Prior to the E-Money Regulation, a 2014 Bank of Tanzania circular stipulated the same requirement (Di Castri and Gidvani 2014). As of June 2016, the cumulative balance in e-money trust accounts stood at T Sh 605 billion (about $277 million).

Although providers are required to utilize earned interest for the benefit of customers, there is evidence the arrangements are highly beneficial for the providers themselves. Tigo, the first mover in the customer returns area, experienced significant net cash inflow into Tigo Pesa accounts upon offering the program. Furthermore, the customer returns programs are likely to enhance loyalty, increase mobile transactions, and facilitate agent liquidity management (GSMA 2015a).

Balance on Tanzanian Trust Fund Accounts (billions of T Sh)



Source: Bank of Tanzania; Note: May 2015 value imputed due to anomalous value

a. Note: Conversions in box A utilize the year-end 2016 exchange rate of $1 = T Sh 2,186.21 (Bank of Tanzania).

b. Vodacom, "M-Pesa Faida: What is M-Pesa Usage Benefit?," https://vodacom.co.tz/mpesa/consumers/m-pesa-faida, accessed June 10, 2017

ANNEX B

DIGITALLY-ENABLED, MARKET-BASED WEALTH-BUILDING PRODUCTS

In select markets, digitally-enabled, market-based wealth-building products have emerged, which, from the DFI perspective, represent a step beyond digital savings accounts. While some market-based products may technically constitute investment rather than savings products, they are important to highlight in concert with digital savings accounts, as they represent a further step in savings-related DFI for those individuals seeking to diversify their portfolios. These products are often accessible via digital transactional platforms. For instance, Kenyans can access certain digitally enabled, market-based, wealth-building products through mobile-money platforms. Box B profiles two of these products, the Mbao pension scheme and the M-Akiba government bond.

BOX B

Digitally-Enabled, Market-Based, Wealth-Building Products in Kenya

Blue MSME Jua Kali Retirement Benefit Scheme (Mbao Pension Plan). Mbao is a digitally furnished pension scheme available to all Kenyans over the age of 18 who are M-Pesa or Airtel Money customers. The service, which is registered and regulated by Kenya's Retirement Benefits Authority (RBA), originally began as a retirement product for the informal sector in 2009.[a] However, it has been expanded to all Kenyans due to high demand. Customers transfer funds to the retirement account via M-Pesa or Airtel Money, which charge a small transaction fee.[b] The plan requires members to deposit at least K Sh 20 (about $0.20) per day, K Sh 500 (about $4.90) per month, and K Sh 6,000 (about $58.50) per year.[c] Mbao maintains age-dependent distribution restrictions of 3, 10, 15, or 30 years. Savings withdrawals are tax-exempt in retirement, unless they eclipse K Sh 20,000 (about $195) per month, and all savings withdrawals are tax-exempt for individuals over the age of 65.[d]

Mbao is the largest "Individual Retirement Benefits Scheme" in Kenya by total members, representing 46 percent of industry membership (RBA 2015). As of year-end 2015, Mbao had 75,415 total members, up from 39,013 in 2013. However, its share of total individual pension assets is not commensurately large. In 2013, the RBA estimated Mbao's share of industry assets to be less than 0.5 percent (RBA 2013).

M-Akiba Government Bond. The Kenya National Treasury launched M-Akiba, a product it describes as the "world's first mobile-based government bond," through a pilot offering in March 2017 and subsequently through a larger issuance in June 2017 (National Treasury 2017). Kenyans can purchase an M-Akiba bond for as little as K Sh 3,000 (about $29).

Mbao Pension Plan Entities and Roles

ENTITY	ROLE
Kenya Commercial Bank (KCB)	Custodian, trustee, legal account owner
CO-OPTRUST Investment Services Ltd. *(subsidiary of Co-operative Bank of Kenya)*	Fund manager
Eagle Africa Insurance Brokers Ltd.	Scheme administrator
Safaricom M-Pesa, Airtel Money	Transfer platforms

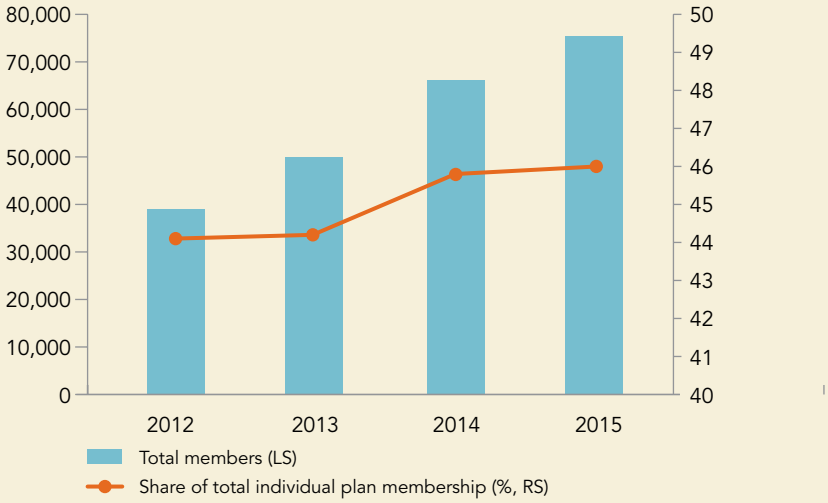
Source: Eagle Africa Insurance Brokers Ltd., Products: Individual Pension Plan

BOX B, *continued*

Previous government bonds required a minimum investment of K Sh 50,000 (about $488). The bond has a three-year maturity and carries 10 percent interest, which is tax free and paid semiannually. Customers use their M-Pesa or Airtel Money accounts to purchase an M-Akiba bond. The bonds can also be sold on the secondary market via M-Pesa and Airtel Money on the Nairobi Securities Exchange.

The government is aiming to raise K Sh 5 billion (about $49 million) through M-Akiba, the proceeds of which will be used to fund infrastructure projects.[e] Upon release, the National Treasury suggested that M-Akiba "is about financial inclusion" and "encouraging a strong savings and investment culture" (National Treasury 2017).

Mbao Pension Plan Membership



Source: RBA, Retirement Benefits Industry Reports (2013-2015); RBA Annual Report (2012–2013)

a. RBA, "Mbao Pension Plan," http://www.rba.go.ke/index.php/en/mbao-pension-scheme, accessed March 22, 2017.

b. RBA, "Mbao Pension Plan FAQs," http://www.rba.go.ke/index.php/en/component/content/article?id=56, accessed April 20, 2017.

c. RBA, "Mbao Pension Plan FAQs"; Note: Box A conversions utilize the year-end 2016 exchange rate of $1 = K Sh 102.49 (Central Bank of Kenya).

d. RBA, "Mbao Pension Plan."

e. The National Treasury, "M-Akiba Retail Bond: Frequently Asked Questions (FAQs)," http://treasury.go.ke/makiba/FREQUENTLY%20ASKED%20QUESTIONS%20-%20M-AKIBA.pdf, accessed June 10, 2017.

ANNEX C

SAVING-ORIENTED DIGITAL TRANSACTION ACCOUNTS

Various DFS providers in the focus countries have developed non-interest-bearing digital transaction accounts that work to incentivize saving through careful user-centric customization. Although these accounts do not offer a financial return, their features are specifically tailored to facilitate saving. Examples include digital group savings accounts and labelled accounts geared toward a specific purpose, such as healthcare or education. A successful labeled account example is the M-Tiba mobile health wallet.[15] Box C further examines two examples of remarkable customization efforts in Uganda.

BOX C

Saving-oriented digital transaction accounts in Uganda

Ugandan DFS providers have put tremendous effort into customizing their basic, non-interest-bearing e-wallet products to accommodate local saving needs. Airtel Weza and SmartMoney demonstrate the potential to unlock savings in remote areas, if products are tailored to particular saving customs.

Airtel Weza. Airtel Weza is an Airtel Money-enabled group savings account available to Ugandan Village Savings and Loan Associations (VSLAs). Airtel, Grameen Foundation, and Plan Uganda developed and launched Weza in 2014.[a] Grameen drove the product design process via a human-centered approach, which identified security, convenience, transparency, and access to credit as key features of any VSLA digital savings product (GSMA 2015). Airtel Weza offers a group wallet, ministatements, and the ability to link the wallet to formal bank accounts. Importantly, Weza is customized to mimic the VSLA administration process, including a three-PIN authorization system akin to the lock-box system in many VSLAs (Grameen Foundation 2014). Weza provides added transparency to the VSLA administration process, as it sends out group SMSs detailing transactions. Users visit Airtel agents to deposit and withdraw funds.

SmartMoney. Founded in 2010 and headquartered in Kampala, Uganda, SmartMoney, a financial-technology company, offers a digital savings account to rural African farmers through its proprietary cloud-based platform, which is operable across all mobile networks.[b] Users need only a basic mobile device to access the service. The SmartMoney mobile account is designed to facilitate saving and small-value payments.[c] SmartMoney places a heavy emphasis on education and community involvement. It has a strong on-the-ground presence, helping communities to build ecosystems that facilitate DFS, called "E-Villages."[d] SmartMoney accounts are free for individual users, while businesses and institutional customers, such as agriculture companies, schools, and churches, pay fees for certain transactions. SmartMoney currently has more than 200,000 individual customers, 2,500 merchant partners, and 150 institutional partners.[e] Its primary geographic focus is rural Uganda. It also operates in Tanzania.

a Grameen Foundation, "Introducing Airtel Weza in Uganda," http://www.grameenfoundation.org/introducing-airtel-weza-uganda.
b SmartMoney, "Communications Technology," http://www.smartmoneyinternational.com/communications-technology/, accessed April 10, 2017.
c SmartMoney, "Mobile Savings and Payments," http://www.smartmoneyinternational.com/mobile-savings-and-payments/, accessed April 10, 2017.
d SmartMoney, "E-Money Ecosystems," http://www.smartmoneyinternational.com/e-money-ecosystems/, accessed April 10, 2017.
e SmartMoney, "Media and Press," http://www.smartmoneyinternational.com/mediaandpress/, accessed April 10, 2017.

NOTE

15. M-Tiba, http://m-tiba.co.ke/, accessed August 4, 2017.

ANNEX D

SAVINGS PATTERNS ACROSS FOCUS COUNTRIES

FIGURE D.1: Saving Patterns among SSA Focus Countries (2017)

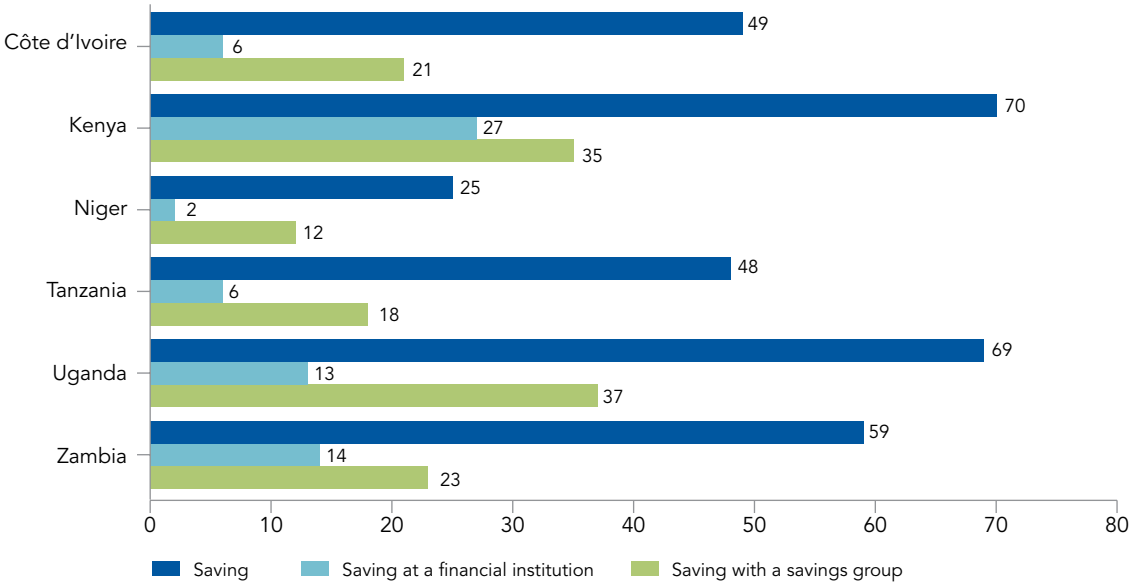
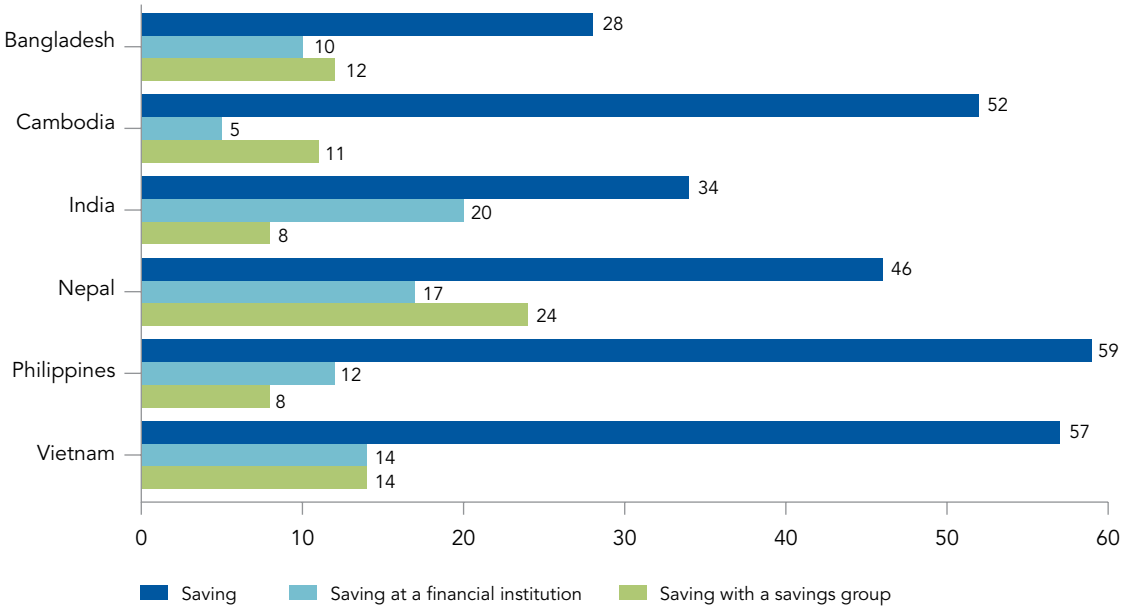


FIGURE D.2 Saving Patterns among Asia Focus Countries (2017)



ANNEX E

DIGITAL SAVINGS-RELEVANT INDICATORS FROM GLOBAL FICP SURVEY

Annex E details key data points from the WBG's 2017 Global Financial Inclusion and Consumer Protection (FICP) survey that are referenced throughout the report. As in the body of the report, Annex E only incorporates Global FICP results that have relevance for digital savings, but it is not intended to capture all factors from the Global FICP survey that could potentially affect digital savings development and uptake. The annex organizes data categories by the policy considerations (see: Part 4) to which they are most applicable. For each data element below, the annex captures survey results for all countries and the following sub-groups: lower-middle income (LMI), low income, East Asia & Pacific (EAP), South Asia (SA), and Sub-Saharan Africa (SSA). The sub-groups reflect the focus regions and income classes on which the report's findings are based. Where relevant, the annex details survey results from the following institutional classes: commercial banks (CBs), other banks, other deposit-taking institutions (ODTIs), and non-bank e-money issuers (NBEIs). These institutional classes are most relevant for digital savings development and play a role in many of the product deployments detailed in the report. For definitions of these institutional classes, see the report's "Glossary of Key Terms." One-hundred, twenty-four jurisdictions participated in the survey. Where relevant, the tables below list the number of respondents per category.

POLICY CONSIDERATIONS 1.1 AND 1.3

TABLE E.1: Select policy approaches that encourage digital savings

	All	LMI	Low income	EAP	SA	SSA
Tax incentive savings schemes	24%	18%	9%	45%	14%	13%
Deposit-taking institutions required to offer basic financial products, such as a basic account	54%	53%	55%	64%	57%	61%
Encouraging (or mandating) recipients of government transfers to open an account to receive their funds	67%	76%	55%	100%	71%	65%
Number of responding jurisdictions	124	34	11	11	7	23

POLICY CONSIDERATIONS 2.1 AND 3.1

TABLE E.2: Institutions for which legal/regulatory framework is in place

	CBs	Other banks	ODTIs	NBEIs	No. of responding jurisdictions
All	100%	57%	56%	59%	124
LMI	100%	68%	71%	59%	34
Low income	100%	45%	73%	64%	11
EAP	100%	82%	82%	82%	11
SA	100%	71%	71%	43%	7
SSA	100%	70%	78%	70%	23

POLICY CONSIDERATIONS 1.1 AND 1.3

TABLE E.3: Select permitted activities among institutional categories

		CBs	OTHER BANKS	ODTIs	NBEIs
Issue e-money	All	82%	54%	38%	100%
	LMI	81%	55%	42%	100%
	Low income	90%	60%	17%	100%
	EAP	70%	56%	0%	100%
	SA	50%	25%	25%	100%
	SSA	95%	57%	56%	100%
Contract with retail agents as third-party delivery channels	All	81%	70%	61%	91%
	LMI	82%	65%	55%	89%
	Low income	80%	60%	63%	83%
	EAP	91%	67%	50%	100%
	SA	86%	50%	50%	67%
	SSA	95%	71%	61%	92%
Act as an agent of a financial services provider	All	78%	64%	73%	74%
	LMI	82%	60%	75%	78%
	Low income	67%	60%	75%	43%
	EAP	90%	78%	67%	86%
	SA	50%	50%	75%	33%
	SSA	89%	71%	67%	67%
Number of responding jurisdictions		123	67	60	72

TABLE E.4: Select permitted activities of retail agents, by institutional category

		CBs	OTHER BANKS	ODTIs	NBEIs
Identify and/or verify the identity of a customer	All	65%	60%	72%	76%
	LMI	59%	62%	60%	76%
	Low income	25%	67%	80%	80%
	EAP	60%	33%	0%	67%
	SA	33%	50%	50%	0%
	SSA	60%	67%	80%	82%
Receive and submit to the institution a deposit account application	All	74%	79%	88%	55%
	LMI	79%	77%	80%	50%
	Low income	50%	100%	100%	75%
	EAP	70%	50%	100%	20%
	SA	83%	100%	100%	0%
	SSA	65%	67%	90%	75%
Open a customer account following the institution's policies	All	42%	45%	52%	54%
	LMI	46%	38%	30%	73%
	Low income	25%	33%	60%	75%
	EAP	30%	17%	0%	38%
	SA	17%	50%	50%	50%
	SSA	40%	33%	40%	90%

continued

TABLE E.4, *continued*

		CBs	OTHER BANKS	ODTIs	NBEIs
Open a basic account	All	49%	56%	61%	51%
	LMI	57%	54%	60%	69%
	Low income	50%	100%	80%	75%
	EAP	33%	17%	0%	33%
	SA	33%	50%	100%	50%
	SSA	50%	56%	60%	88%
Receive deposits	All	65%	74%	85%	61%
	LMI	74%	69%	90%	46%
	Low income	75%	100%	80%	67%
	EAP	70%	67%	100%	50%
	SA	67%	100%	100%	0%
	SSA	75%	67%	80%	70%
Number of responding jurisdictions		93	43	32	58

POLICY CONSIDERATION 5.1

TABLE E.5: Requirement to store customers' e-money funds in a segregated account at one or more prudentially regulated financial institutions

	100 PERCENT OF CUSTOMER FUNDS	A FRACTION OF CUSTOMER FUNDS	NO REQUIREMENT	NO. OF RESPONDING JURISDICTIONS
All	86%	6%	7%	71
LMI	95%	5%	0%	19
Low income	100%	0%	0%	7
EAP	89%	0%	11%	9
SA	100%	0%	0%	3
SSA	93%	0%	0%	15

POLICY CONSIDERATIONS 5.2

TABLE E.6: Disclosure requirements for deposit products at shopping or pre-contractual stage

		CBs	OTHER BANKS	ODTIs	NBEIs
Minimum balance requirements	All	67%	67%	63%	42%
	LMI	66%	58%	55%	50%
	Low income	50%	60%	57%	33%
	EAP	60%	57%	67%	50%
	SA	67%	50%	50%	0%
	SSA	68%	62%	67%	38%
Account opening fee	All	74%	65%	65%	42%
	LMI	67%	56%	53%	14%
	Low income	63%	80%	71%	33%
	EAP	60%	57%	33%	0%
	SA	67%	50%	50%	100%
	SSA	73%	69%	75%	14%
Account maintenance fee	All	75%	62%	63%	50%
	LMI	68%	56%	58%	29%
	Low income	63%	80%	57%	33%
	EAP	80%	71%	67%	50%
	SA	67%	40%	50%	100%
	SSA	77%	69%	67%	14%
Account closure fee	All	74%	65%	59%	44%
	LMI	66%	58%	47%	14%
	Low income	63%	80%	57%	33%
	EAP	70%	57%	50%	0%
	SA	67%	50%	50%	100%
	SSA	73%	69%	63%	14%
Deposit insurance coverage availability	All	65%	58%	53%	29%
	LMI	60%	47%	41%	13%
	Low income	38%	60%	43%	33%
	EAP	50%	57%	33%	0%
	SA	60%	50%	67%	0%
	SSA	45%	46%	50%	25%
Number of responding jurisdictions		110	53	51	26

TABLE E.7: Dpecific rules exist which indicate that financial service providers are liable for any actions or omissions of the agent

	CBs	OTHER BANKS	ODTIs	NBEIs
All	90%	92%	80%	91%
LMI	89%	92%	78%	93%
Low income	86%	100%	60%	100%
EAP	70%	80%	50%	86%
SA	100%	100%	100%	100%
SSA	89%	86%	78%	92%
No. of responding jurisdictions	87	36	30	58

GLOSSARY OF TERMS

Agent banking (also, branchless banking) Third-party "business arrangements of banks and non-bank payment service providers that are typically local entities, such as small shops, to provide basic payment and transaction account-related services on their behalf" (CPMI and WBG 2016, 69).

Commercial Bank "A commercial bank is an institution licensed for taking deposits from the general public that is subject to supervision in the meaning of the Basel Core Principles for Effective Banking Supervision (BCBS 2012)" (WBG, 2017a, 12).

Digital financial inclusion (DFI) "The use of digital financial services to advance financial inclusion. It involves the deployment of digital means to reach financially excluded and underserved populations with a range of formal financial services suited to their needs, delivered responsibly at a cost affordable to customers and sustainable for providers" (GPFI 2016b, 46).

Digital financial services (DFS) "Financial products and services, including payments, transfers, savings, credit, insurance, securities, financial planning and account statements that are delivered via digital/electronic technology such as e-money (initiated either online or on a mobile phone), payment cards and a regular bank account" (GPFI 2016a, 3).

E-money "Monetary value represented by a claim on the issuers which is stored on an electronic device such as a chip card or a hard drive in personal computers or servers or other devices such as mobile phones and issued upon receipt of funds in an amount not less in value than the monetary value received and accepted as a means of payment by undertakings other than the issuer" (Committee on Payment and Settlement Systems 2012, 5).

E-money account "Prepaid instrument based on e-money that can be offered by banks and other authorized deposit-taking financial institutions, as well as by non-deposit-taking payment service providers such as mobile network operators. Such accounts include prepaid accounts" (CPMI and WBG 2016, 69).

E-money issuer An entity that issues e-money. Typically, the entity must be specifically licensed to issue e-money by the relevant financial services regulator.

Interoperability "The ability for different systems to connect with one another" (Arabéhéty et al. 2016, 1).

Mobile banking Banking transactions and services carried out through a mobile phone.

Mobile financial services "Use of a mobile phone to access financial services and execute financial transactions" (GSMA 2015a, 72).

Mobile money account/wallet "An e-money account primarily accessed using a mobile phone" (GSMA 2015a, 73).

Mobile network operator (MNO) "A company that has a government-issued license to provide telecommunications services through mobile devices" (GSMA 2015a, 73).

Nonbank e-money issuer (NBEI) "An issuer of e-money that is not a bank." (WBG 2017a)

Other Bank "A bank other than a commercial bank" (e.g., regional rural banks, agriculture banks, postal banks) (WBG 2017a, 12).

Other Deposit Taking Institutions (ODTIs) An institution authorized to collect deposits or savings that does not fit the definition of bank or Financial Cooperative" (e.g., deposit-taking microfinance corporations) (WBG 2017a, 12).

Over-the-counter service Services in which "a mobile money agent performs the transactions on behalf of the customer, who does not need to have a mobile money account to use the service" (GSMA 2015a, 74).

Payment system provider "An entity that provides payment services, including remittances. Payment service providers include banks and other deposit-taking institutions, as well as specialised entities such as money transfer operators and e-money issuers" (CPMI and WBG 2016, 69).

Point of sale (POS) "A retail location where payments are made for goods or services. A 'POS device' denotes a specialised device which is used to accept the payment, e.g. a card reader" (GSMA 2015a, 74).

Proportionality "The balancing of risks and benefits against costs of regulation and supervision to the regulator, supervisor, and to the regulated and supervised institutions" (GPFI 2016b, 8). "Proportionate regulation and supervision involves a supervisory approach commensurate with the systemic importance and risk profile of supervised institutions" (BCBS 2015, 5).

Risk-based approach A principle established by the Financial Action Task Force for compliance with anti-money laundering standards and requirements for combating the financing of terrorism. Generally, the principle prescribes that enhanced measures should be directed toward areas of higher money-laundering and terrorist-financing risk, while simplified or calibrated measures should be taken where risks are lower (FAFT 2007).

Transaction account "Broadly defined as an account held with a bank or other authorised and/or regulated service provider (including a nonbank) which can be used to make and receive payments. Transaction accounts can be further differentiated into deposit transaction accounts and e-money accounts" (CPMI and WBG 2016, 70).

Trust/escrow account "Account by held by nonbank payment service provider issuing e-money with a deposit-taking institution to deposit the outstanding e-money float" (CPMI and WBG 2016, 70).

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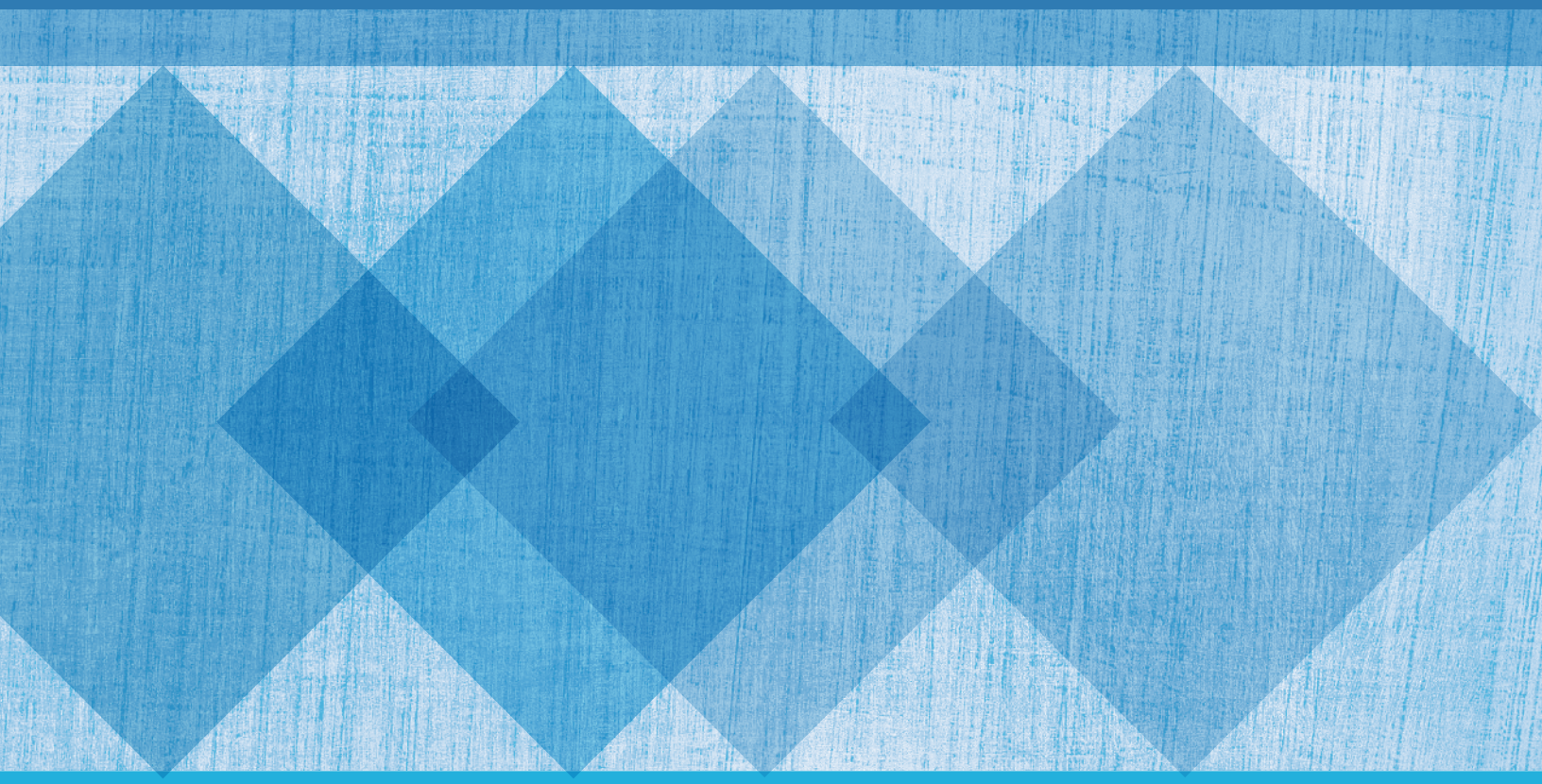

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