CGAP V Completion Report

FY14-FY18

DIGITAL FINANCE FRONTIERS

The Digital Finance Frontiers (DFF) Initiative works with industry stakeholders to expand the range of financial solutions offered to lower income and poor people through digital channels. Mobile payments link more than 690 million poor people globally (GSMA 2018), enabling them to easily, affordably, and remotely send money, pay bills, repay a loan, or purchase pre-paid electricity. This potential for scale and the application of new technologies and tools (such as data analytics, satellite imagery, and real time customer interactions, among others) enable business models that make financial service provision for low-income customers more sustainable. CGAP partners with providers to test new technologies and solutions and identify their potential for advancing financial inclusion. We share learning and insights with industry to facilitate replication of successes.

CGAP

1. Description of Initiative's Theory of Change

Providers that aim to offer financial services to the base-of-the-pyramid (BoP) face a number of challenges. Integrating solutions with digital payments providers is complex and costly. Managing the customer journey with clients who are remote and with few or no physical touch points requires significant skills. New technologies such as advanced data analytics or automated customer interactions can help address these challenges, but providers often do not know what works, and they lack the resources to test these technologies on their own (in fact, it would be very inefficient if every provider had to experiment with a range of technologies on their own).

The DFF Initiative's five-year goal is to help expand the number of providers that "leverage digital payments and apply innovative business models to offer a broad range of services to poor people." The initiative does this by focusing on achieving the following supporting outcomes:

1. Third-party providers[1] are enabled to build solutions leveraging digital payments.
2. Reference providers[2] experiment with a range of "frontier"[3] digital financial services (DFS) targeting poor people.
3. Providers and funders use CGAP research to facilitate, develop, or enable the delivery of "frontier" DFS.

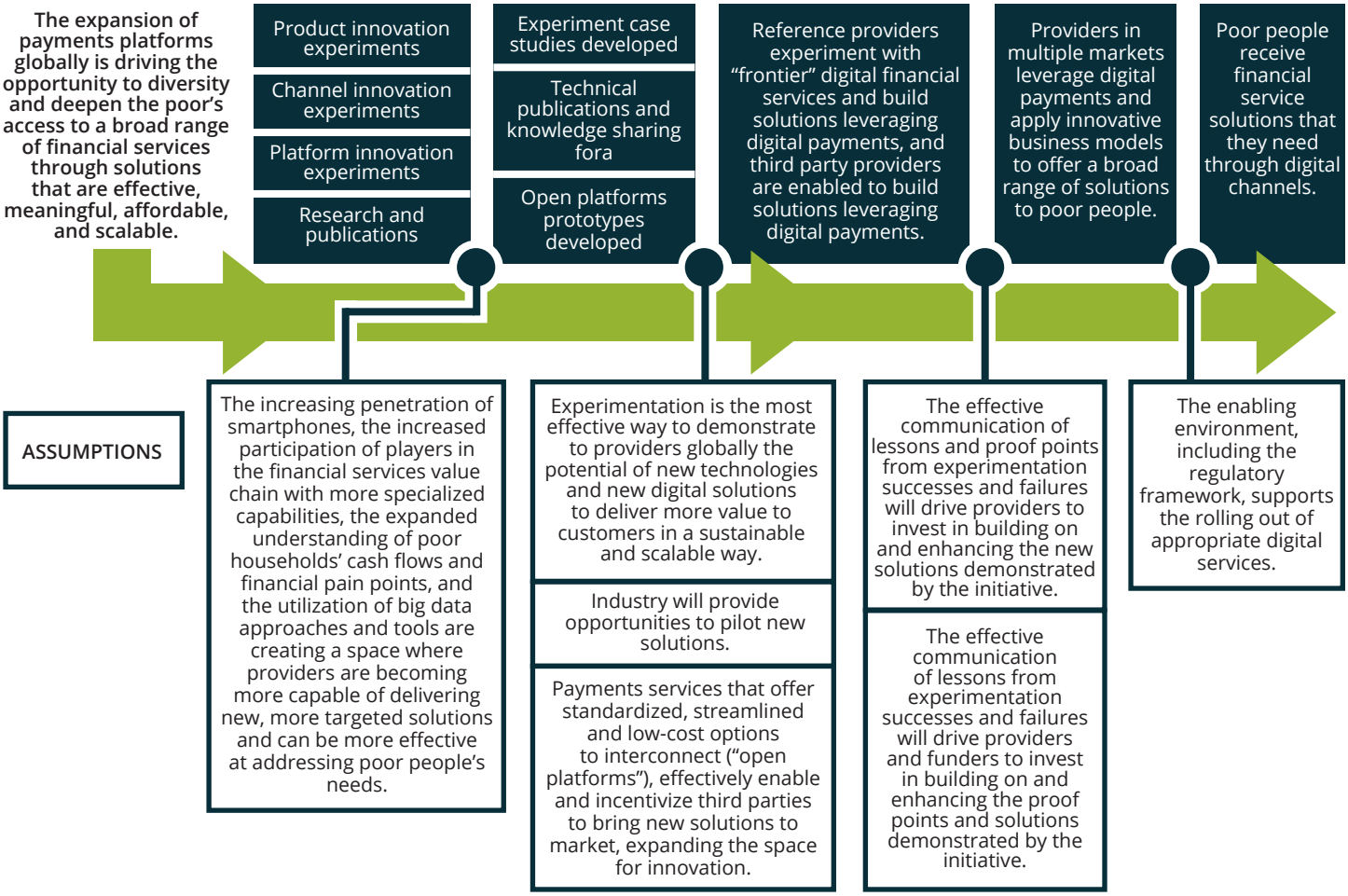
The initiative expects to achieve its impact through a combination of approaches: by removing barriers (the result of supporting outcome 1) and by demonstrating opportunities (the result of supporting outcome 2). Supporting outcome 3 results in a mechanism to expand influence across key stakeholders.

The DFF Initiative's Theory of Change rests on several assumptions (see visual on next page):

- Technology innovations, a better understanding of poor households' finances, and a broader diversity of players, enable providers to more effectively address poor people's needs.
- Experimentation can be an effective way to demonstrate the potential of new technologies and new solutions to deliver value to customers sustainably.
- Payments services that offer standardized, streamlined, and low-cost options to interconnect enable and incentivize third parties to bring new solutions to market, expanding the space for innovation.
- The effective dissemination of lessons and proof points from experimentation successes and failures allows providers to invest in building or enhancing new solutions.
- The enabling environment, including regulatory frameworks, in key markets supports the rollout of appropriate digital financial services (DFS).

1. Third-party providers are providers that are not involved in the provision of payments services, but can partner with payments providers to deliver services beyond basic payments.
2. Reference providers are those that have achieved some level of scale and are regarded as serious and credible operators; as a result, their achievements have a demonstration effect that can influence players in their market or in their region.
3. "Frontier" means essentially that services must: (i) offer the full product lifecycle (marketing, account opening, customer service, etc.) digitally; (ii) target, and have potential to reach, the mass market including lower-income and poor customers; and (iii) be a commercial deployment offered in an emerging market.

Theory of Change: Digital Finance Frontiers Initiative



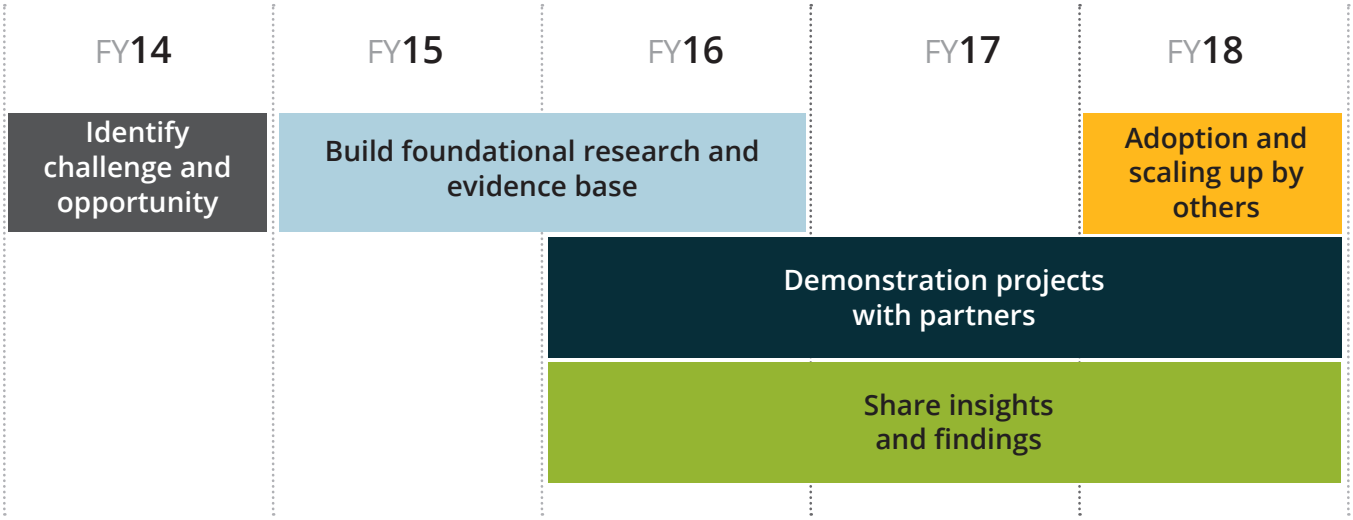
2. Evolution of the Initiative during CGAP V

The DFF initiative was launched in FY15. It began by exploring the potential for digital innovations through a global FinTech survey. This work helped develop a framework that CGAP used to support innovative pilots in emerging markets. Between FY16-FY18, the Initiative developed a portfolio of pilots in five areas: real-time interactions, smart & rich user interfaces, peer-to-peer social connections, location-based services/remote sensing, and digital data trails.

At the same time, a separate initiative, Digital Finance Plus (DF+), was conducting research on the impact of digital finance in broadening access to energy and water. That research identified the need to support broader experimentation across energy and other sectors. While complementary, both initiatives worked in the same geography, with similar providers, and supporting pilots with DFS.

In FY16, CGAP decided to merge the DFF and DF+ initiatives into a single effort. That year, the Initiative identified important barriers for integration between emerging solutions providers and established payment providers. In FY17, the merged initiative launched, including a new work stream focused on helping digital payments providers adopt Open APIs.

Throughout the life of this initiative, CGAP published and shared learnings and insights from its projects. At the end of FY18 (and moving into the first quarter of FY19), we expect to publish knowledge products synthesizing our learning with FinTechs and innovators in the digital finance space. Some dissemination efforts beyond FY18 will support broader replication and adoption of insights by others.



3. Achievements against the CGAP V Results Framework

Five-year Overall Outcome: Providers in multiple markets leverage digital payments and apply innovative business models to offer a broad range of solutions to poor people.

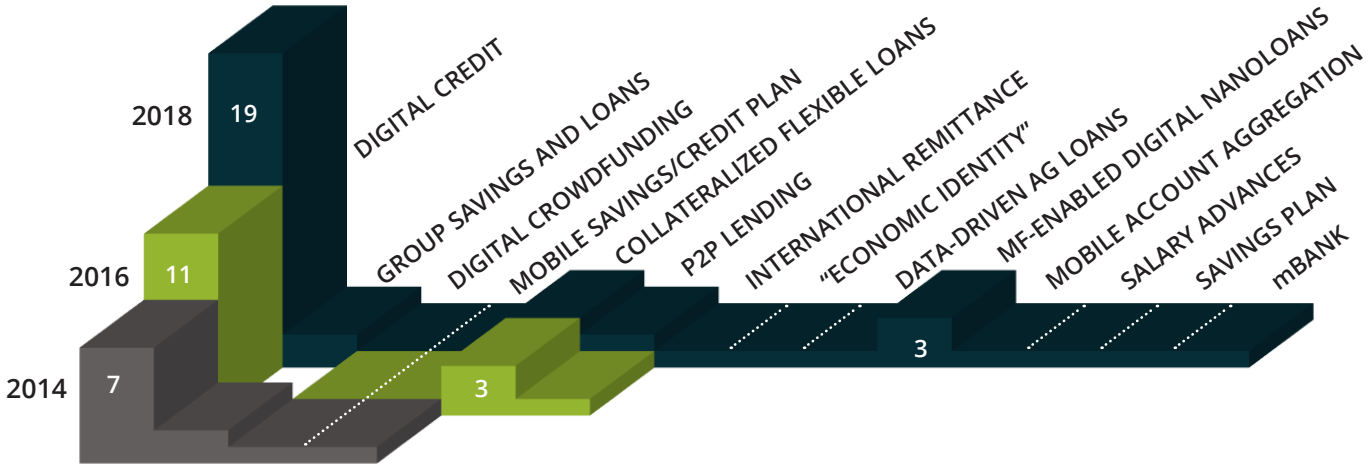
As mentioned above, a key factor in serving poor customers is the ability to manage the full lifecycle of a service digitally. The DFF Initiative defined its five-year outcome indicator in terms of the number of providers leveraging the digital channel to offer "frontier" financial services in emerging markets. We contracted different third-party firms[4] to track these products throughout the lifetime of the Initiative. In 2014, CGAP identified 11 frontier products, most involving early forms of digital credit. Few other products existed and most were either variations of credit or digitization of existing products. By 2016, this number had grown to 17. Some products ceased to exist while others resulted from the incursion of PAYGos into direct lending. At this time, peer-to-peer lending models also began to emerge. By 2018, the number of frontier products grew to 38 (see Appendix) and the number of countries where these products operated grew from five in 2014 to 15 in 2018. Digital credit remains the primary service being replicated and deployed across markets. However, a significant "long tail" of diverse products began to emerge.

4. Dalberg in 2016, and "BLE Solutions" in 2018

Digital Finance Frontiers Initiative Results Framework

Outcomes	Indicator number and title	Baseline	Interim target June FY16	Interim actual June FY16	Comments on interim actual against target	Endline target June FY18	Endline actual June FY18	Comments on actual against target
Five-year Outcome 5.0 **Providers in multiple markets leverage digital payments and apply innovative business models to offer a broad range of solutions to poor people**	**5.0.1** # of providers leveraging the digital channel to offer "frontier" financial services in emerging markets[5]	11	15	17	Exceeded	25	38	Exceeded
Supporting Outcome 5.1 **Third party providers are enabled to build solutions leveraging digital payments**	**5.1.1** % of digital payment providers surveyed who indicate that they have been influenced by CGAP activities in determining their approach to opening up their digital channels[6]	n/a	10%	10%	Achieved	33%	50%	Exceeded
Supporting Outcome 5.2 **Reference providers experiment with a range of "frontier" digital financial services targeting poor people**	**5.2.1** # of proof points developed by CGAP in partnership with providers showing the impact of promising technologies and/ or approaches to enhance the delivery of existing digital financial services	0	3	3	Achieved	9	16	Exceeded
	5.2.2 # of experiments with CGAP involvement testing new digital financial services[7]	0	1	1	Achieved	7	7	Achieved
	5.2.3 # of experiments conducted by CGAP in partnership with providers that demonstrate the benefit of linking digital finance and delivery of basic services	0	2	2	Achieved	4	6	Exceeded
Supporting Outcome 5.3 **Providers and funders use CGAP research to facilitate, develop, or enable the delivery of "frontier" digital financial services**	**5.3.1** % of stakeholders surveyed (providers and funders) who work/invest/ promote digital financial services and indicate they have incorporated input from CGAP's knowledge products or dissemination activities in their workplans, activities or approaches[8]	0	20%	65%	Exceeded	33%	74%	Exceeded

Figure 1. Growth and Diversification in "Frontier" DFS Offerings



Of the 38 frontier products that exist in the market today, the DFF Initiative worked closely with nine to support testing and refinement of core aspects of their offering, and with three others to help address emerging challenges in their business models or to explore potential avenues for growth.

The five-year target we had set in 2014 was 25 frontier products – essentially doubling the number we were seeing at the beginning of this work. We expected an accelerated expansion of digital credit but thought the "long tail" of products would not evolve as quickly without the expansion of smartphones. Today, we still believe the lack of smartphones is significantly holding back the development of "over-the-top" financial services (those offered by providers that leverage digital payments as "rails" for their delivery model), but this has not prevented the emergence of simple services delivered primarily through USSD.

Supporting Outcome: Third-party providers are enabled to build solutions leveraging digital payments.

Providers face several barriers in integrating digital payments in their offerings. Integrations cost thousands of dollars (10K to 100K USD), valuable resources (core engineering team), and lots of time

5. "Frontier" digital financial services are those that meet the following criteria: (i) the service must target, and have potential to reach, the mass market including lower income and poor customers; (ii) the service must be a commercial deployment offered in an emerging market; (iii) the service must use CGAP's attributes of digital channels in a meaningful way; (iv) the full product lifecycle (marketing, account opening, customer service, etc.) must occur over the digital channel; and (v) the service must have potential to either enhance the value on offer for customers, improve the sustainability for providers or increase the scalability of financial products/services.
6. "Digital payment providers" include Mobile Network Operators (MNOs), Mobile Virtual Network Operators (MVNOs), electronic money issuers, and banks. They must be in Africa or Asia with more than 20% market share in the payments space in at least one market, based on GSMA data as of December 2015.
7. "New digital financial services" refers to financial service offerings where the innovation is not centered on the channel, but on the value proposition to the customer, the sustainability for the provider or the scalability of the service. These may include completely new financial solutions, or solutions that are adapted from developed countries, higher-income segments or non-digital providers. These could be new credit, savings, insurance, or payment services, or could involve a combination of any of these.
8. In this context, stakeholders surveyed include providers (DF+ providers and mobile money providers) – as well as funders who invest in DF+ programs/research.

(anywhere from a few months to a year). CGAP is working with five providers across Africa and South/Southeast Asia (Zoona Zambia, MTN Uganda, Absa South Africa, BTPN Indonesia, and Wave Money Myanmar) to deploy Open APIs to effectively address the issues above. During the past two years CGAP has conducted several workshops to explore key topics and facilitate exchange of experiences, and more recently has published initial guidance for providers. This work will carry on into CGAP VI.

The indicator that was chosen to track this outcome was the "percentage of digital payment providers surveyed who indicate that they have been influenced by CGAP activities in determining their approach to opening up their digital channels." The five-year target was 33%, and the measured response at the end of this work was 50%. Providers and stakeholders interviewed during the evaluation process (conducted by BLE Solutions) indicated that CGAP facilitated access to key experts with valuable skillsets and deep knowledge of the topic, strategic funding, and a network of peers with whom they could share learnings. As a stakeholder mentioned: "*...as for Open APIs, there are not many other organizations working on this. CGAP has organized some of the better activities I have seen in the industry.*"

Supporting Outcome: Reference providers experiment with a range of frontier digital financial services targeting poor people.

A diverse range of businesses, including startups, are developing innovative products and services. Many aim to address the needs of poor customers, but it is difficult to determine their success since they are still at a very early stage. The DFF Initiative took an approach based on producing "proof points" as a basis to identify meaningful innovation and accelerate their growth. "Proof points" show how innovations produce value to consumers and to providers.

CGAP conducted 29 pilots to produce proof points for emerging innovations in digital finance. To structure this work, the pilots were organized into three portfolios: 1) digital delivery models (16 pilots); 2) high-impact solutions (seven pilots); and 3) digital finance for basic services (six pilots).

1. **Digital delivery models** involve innovations that support the delivery of products and services through digital channels. Our target for the indicator measuring the number of proof points[9] developed by CGAP in partnership with providers showing the impact of promising technologies and/or approaches to enhance the delivery of existing DFS was nine by the end of FY18. Overall, we conducted 16 pilots along five categories of innovations: 1) Real-Time Interactions (Juntos with Tigo, Juntos with Mynt, and Arifu); 2) Smart & Rich User Interfaces (Wave Money, Hover); 3) P2P social connections (MChanga, PesaZetu/Pezesha, and Social Lender); 4) Location-based services and remote sensing (FarmDrive, Apollo); and 5) Digital Data Trails (Advans Côte d'Ivoire rural and urban, IFMR, Davivienda, InvestED, and BioLite). We exceeded the number of pilots we initially planned to conduct, as we thought it was important to cover a minimum range of applications and we did not know *ex-ante* which models would work. Some pilots led to subsequent successes. For instance, one partner reported that the work with CGAP (which documented how an innovative tool that tracked customer behavior could help FSPs do better client segmentation) eventually led to a contract to serve 600,000 people. Not all pilots had clear and conclusive results, but most pilots produced valuable learnings for industry stakeholders. Learnings from this work are presented in a forthcoming publication, "FinTech for Financial Inclusion: The potential effect of emerging

9. A "proof point" is the evidence of impact (e.g., change in customer behavior, increased customer activity, reduced operating cost) that results from conducting a pilot in the field. A proof point is not a single data point, but a collection of data that explains how an innovation is useful for financial inclusion. The outcome of a pilot, either positive or negative, leads to specific learning about the technology or approach being tested. In general, each pilot leads to one "proof point."

technologies, services and delivery models on low-income finance," in the first quarter of FY19. Some insights from this work were published in the following blogs:

- What can Traditional Giving Teach Digital Fundraising Platforms?
- From Data to Customer Insights: 3 Tips for Providers
- Using SMS Messaging to Strengthen Your Agent Network, including a PowerPoint deck
- How SMS Messaging Can Change Financial Behavior, including a PowerPoint deck
- Do Peer to Peer Lenders Understand Risk?

2. **High-Impact Solutions** involve pilots that are testing new or modified financial services using digital technologies to more effectively address customer needs. This work involved not only piloting innovations but also understanding how they create value for customers. The indicator used was the number of experiments with CGAP involvement testing new DFS. The FY18 target was to conduct seven pilots, which we did: MicroEnsure (bundling credit for outpatient costs with insurance for inpatient expenses), Esoko/Tula (credit for agricultural inputs), Fundu (easing use of electronic money through "human ATMs"), Patasente (financing working capital for microentrepreneurs), People's Pension Trust (PPT; saving for old age), Pula (improving agricultural insurance), and MaTontine (improving value of ROSCAs). Projects with more significant progress (PPT, Patasente, and MaTontine) invested in gathering customer insights and the right firm capabilities. They had the right balance of technology and human interaction in delivery of services. The other four pilots were less successful. With support from Busara, CGAP conducted a deeper analysis of the perceived value by early users of these services, which allowed us to better understand the value of these innovations. Some insights from this work can be found in the blogs "FinTech Partnerships: Choose Carefully, Then Evolve" and "FinTech for the Poor: Not all Virtual, Not All Apps." Other more detailed learnings from this work will be presented in the forthcoming publication mentioned above, during the first quarter of FY19.

3. **Digital Finance Plus** involved pilots that explored how digital finance enables efficiencies in other non-financial value chains, leading to more low-income people gaining access to basic services. Work focused in three sectors: energy, water, and education. We had a target of four experiments conducted by CGAP in partnership with providers that demonstrate the benefit of linking digital finance and delivery of basic services by the end of FY18. We considered that a few/deep interventions would enable us to understand and demonstrate the challenges and potential for inclusion in other sectors. As we went along, we expanded this work through a series of smaller intervention across the three sectors. We concluded this initiative having conducted six pilots, thereby exceeding the target by two: Arifu/Akengo, PEG Ghana, Fenix, Rex Mercury, Safe Water Network, and Baobab+/Microcred (PAYGo-MFI partnership). We also conducted four studies on the role of DFS in other sectors: consumer value in PAYGo, potential for savings products with PAYGo customers, analysis of DFS in health, and innovations in digital payments for water (with GSMA, forthcoming). Learnings from this work were published in a series of papers and blogs.

Supporting Outcome: Providers and funders use CGAP research to facilitate, develop or enable the delivery of frontier digital financial services.

While the DFF Initiative works closely with providers to experiment and build the knowledge base on the potential of emerging technologies and innovations, we also make a deliberate effort to document and share insights with the broader industry. This supporting outcome is meant to keep us actively engaged in sharing lessons with key stakeholders and the rest of the financial inclusion community to facilitate

the replication and scaleup of successful models. We do this through partner events (gathering 100-200 participants from a broad range of organizations); targeted thematic workshops with providers; and direct presentations with funders. In addition to these outreach activities, we also share learnings through blogs and webinars and participation in key industry conferences and events.

The indicator for this outcome measures the "Percentage of stakeholders surveyed (providers and funders) who work/invest/promote DFS and indicate they have incorporated input from CGAP's knowledge products or dissemination activities in their workplans, activities or approaches." The FY18 Results Framework target was to achieve 33%. In the evaluation, 74% of providers who work, invest in, or promote DFS indicated they have incorporated input from CGAP and specifically DFF research, knowledge products, or dissemination activities in their work.[10] Quotes[11] by stakeholders noted: "*We use a lot of CGAP blogs, papers etc. because they are more timely than academic research*;" "*They [CGAP] are interested in finding things that work, that catalyze the market, not just studying the market, but looking at trends. This is unusual for multilaterals.*"

4. Overall Assessment of Achievement on Deliverables during CGAP V

The DFF Initiative focused on driving relevant experimentation in digital finance. Key achievements that resulted from this work are:

- **Put Open APIs on the radar as foundational element of digital ecosystems.** CGAP highlighted the importance of Open APIs to enable innovation ("Digital Rails: How Providers Can Unlock Innovation in DFS Ecosystems Through Open APIs"). This vision helped develop a concerted industry effort to experiment and create lessons on this approach.

- **Highlighted the importance of improving the way poor people interact with digital channels, and the potential for providers to influence customer behavior.** CGAP developed a guide for improving the design of Smartphone Apps to make interactions with low-income and less literate segments more effective ("Smartphones and Mobile Money: 21 Principles for UI/UX Design"). CGAP also published several blogs and PowerPoint decks showing the effects of using automated, mass scale SMS messaging to influence customer behavior (Using SMS Messaging to Strengthen Your Agent Network and How SMS Messaging Can Change Financial Behavior).

- **Produced early guidance for providers to develop digital credit offerings.** CGAP developed a Toolkit to help providers understand how to design and implement a digital credit offering: "An Introduction to Digital Credit: Resources to Plan a Deployment."

- **Supported key field experiments using data analytics to improve offerings for smallholder farmers.** CGAP supported MFI Advans in Côte d'Ivoire to design and pilot a fully digital credit product for cocoa farmers that had very positive results. We also supported the development of early scoring models using satellite data for smallholder lending through our work with Apollo Agriculture in Kenya, and the application of satellite image analysis for agricultural insurance through our work with PULA in Nigeria.

10. Based on phone interviews conducted by BLE Solutions as part of their evaluation work. Sample size included 19 stakeholders: four FSPs involved in digital delivery models; four providers of basic services using digital finance; six FinTech startups; and five CGAP members/funders.

11. As reported by BLE Solutions, firm contracted by CGAP to conduct DFF evaluation, June 2018.

- **Identified emerging business models driven by FinTechs and highlighted the challenges in working with early stage startups.** Our forthcoming publication, "FinTech for Financial Inclusion: The potential effect of emerging technologies, services and delivery models on low-income finance," summarizes lessons learned from our work with FinTechs to inform and influence funders interested in the FinTech space.

- **Characterized the impact of digital finance in the Energy Sector.** The DF+ work illustrated how digital payments enable business models that help address the energy access gap of approximately 1.2 billion people without access to electricity. CGAP published a Working Paper, "Access to Energy via Digital Finance: Overview of Models and Prospects for Innovation," and Brief, "Digitally Financed Energy."

- **Identified the challenges and opportunities of providing an energy service and a financial service in a single product bundle to low-income customers.** This work raises key challenges for the effective scaleup of the PAYGo sector and the potential replication of this model in digital asset financing in other sectors. CGAP published a Working Paper, "Access to Energy and Finance: An Integrated Approach to Capture High-Growth Opportunity in Africa," and Forum, "Strange Beasts: Making Sense of Solar PAYGo Businesses," in collaboration with IFC's Energy team.

- **Identified applications of digital finance in the Education and Water Sectors.** In the education sector, we identified ways in which digitization of payments as well as better financial products to smooth school fees could facilitate keeping children in school (Working Paper "Digital Finance and Innovations in Financing for Education,"). In the water sector, we published a Brief, "Quenching a Thirst: Digital Finance and Sustainable Water for All," highlighting promising areas where DFS can help achieve development objectives in the water sector.

5. Issues

Technology is becoming increasingly complex: Some areas of our work involve aspects that require deep technical expertise. For instance, the analysis of satellite images for scoring algorithms (e.g., Apollo project) or insurance products (e.g., PULA project) required us to learn more sophisticated data analysis techniques. We mitigated this by hiring experts who helped address the needs and extract adequate lessons for our work.

Working with innovators requires intensive work on-the-ground. Start-ups often overstate the extent to which their products are ready for the market. It is difficult to assess the information they share until one works directly with them. They often require technical assistance and support to conduct effective pilots.

Low capacity to implement innovations and capture opportunities. Many organizations have very weak capabilities for managing data. Organizations lacking systems and processes to systematically capture and store data face significant challenges in adopting data analytics approaches to improve their business. The complexity of data analytics applications can be high, and applying them with incorrect data or lack of technical understanding can lead to incorrect conclusions.

Positioning the financial inclusion story in the context of other sectors. A pre-requisite to explaining how financial inclusion can help advance the development objectives in other sectors (e.g. water, education, energy) is to take the time to understand the main barriers that each of these sectors face. Financial inclusion places a narrow lens around finance, and sometimes this makes it difficult to communicate the impact of financial inclusion to stakeholders outside financial inclusion.

6. Insights and Lessons Learned from Implementation

Leading DFS providers see the opportunity in opening their APIs; however, there are questions on how best to go about it. GSMA analyses have shown that mobile money providers that connect to significantly more third parties than their peers achieve higher activity rates.[12] Leading DFS providers see Open APIs as a mechanism to accelerate integrations. The main gap is the knowledge on how to do this – which APIs are relevant; how to address key security architecture issues; how to design sound contracts with third parties; what the ideal IT architecture looks like; and how to address pricing.

Microfinance risks being pushed to the sidelines unless MFIs invest and adopt strong data-driven business strategies and become digital banks. MFIs in Africa are struggling to address lower-income segments because their operating costs are too high, leading to larger loan sizes and difficulty in serving lower-income segments. Data analytics can reduce the cost of loan origination and bring improvements in other parts of the lending process, which can enable lower loan sizes and potentially, an expansion of addressable market. However, many MFIs will struggle to capture this opportunity unless they invest now in automating their processes, adopting better technology, and improving their data management skillset.

FinTechs continue to drive relevant innovation in financial inclusion, although there are still few successes. Funders can play a key role supporting the growth of this sector. FinTechs in Africa can advance financial inclusion in three ways, by: (i) reducing costs for incumbents; (ii) improving interaction with poor customers, and (iii) increasing or creating new value propositions for customers. Supporting development of early-stage innovation requires significant resources beyond financial support. Funders that want to accelerate development of use cases and progress in the digital economy will need to find local technology/business partners who can deliver targeted and specialized technical and business support to entrepreneurs.

Asset financing in the energy space is attracting significant investor attention as a potential asset class. However, there are still gaps that need to be addressed. PAYGo firms are struggling to develop sustainable financing operations that are integrated in their business. While some investors have taken steps to fund the early stages of growth, scaling up debt financing will require (i) better tools to manage credit risk; (ii) more transparency in the finance operations and metrics; and (iii) an industry consensus on basic parameters and benchmarks for sustainability.

Learnings from energy asset financing are creating opportunities in other sectors, where similar business models could finance income-generating assets. Although PAYGo Solar is still in a transition phase towards long-term sustainability, we are observing multiple other areas where similar models may be applicable and could expand access to a broader range of assets that are income generating, expanding the pathways to impact from access to finance. Promising applications can be found both in rural contexts (e.g. irrigation financing) and in urban ones (e.g. motorcycle taxi financing).

Digitization of payments improves service delivery models by making them more sustainable. In the context of basic services like energy, water and education, this helps achieve some of the SDGs. This is especially true for organizations with many employees and customers/beneficiaries who are spread throughout a large area. Utilities and education systems that adopt digital payments can be more efficient, and their operating model more sustainable.

12. https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2018/05/GSMA_2017_State_of_the_Industry_Report_on_Mobile_Money_Full_Report.pdf

Digital payments, Open APIs, and data analytics will increase opportunities for growth of the banking sector in Africa – although so far only a few banks have shown interest and limited success in retail banking. With a few exceptions, banks have remained largely on the side of financial inclusion efforts in Africa. With a few exceptions (notably, Equity Bank in Kenya with its MVNO Equitel; Commercial Bank of Africa; and Access Bank in Tanzania), most banks struggle to invest in retail banking, primarily due to the absence of effective means to engage with low-income consumers. The combination of Open APIs from mobile payments providers, the potential to apply data analytics, and improved automated customer-facing technologies will create new opportunities for banks to expand their operation into retail banking. However, to take advantage of these opportunities, a shift in mindset is required. For example, banks might need to be comfortable playing an enabling role (at times invisible to customers), allowing third parties to own and manage the customer relationship.

Ultimately, banks will have more opportunities to engage in financial inclusion as asset financing businesses will demand significant funding for growth. Locally-denominated debt would be an ideal funding source for growing finance-based businesses. There are different structures that can lead to that – Special Purpose Vehicles (SPVs), partnerships between PAYGos and banks, etc. Helping consolidate and mainstream the market for asset financing (in PAYGo and other sectors) will create more demand for local banks to engage in expanding access to finance.

7. Partnerships

Throughout the course of the DFF Initiative, there were opportunities to partner with different CGAP members to go deeper into different parts of our agenda:

- A partnership with **DFID** under the "Harnessing Innovation for Financial Inclusion" (HiFi) program helped CGAP conduct cross-cutting work on policy, in-country influence, and digital finance solutions along with the **IFC** and the **World Bank**. Under this program, the DFF initiative drove the "Solutions" agenda – supporting experimentation on the ground to develop new solutions in digital finance. DFID closely followed CGAP's work, looking for substantive industry learnings to channel insights to other internal units and field offices.

- CGAP's partnership with **Mastercard Foundation** (MCF) focused on digital finance experimentation, primarily with FinTechs and Digital Finance providers in Sub-Saharan Africa. CGAP met frequently with MCF, Caribou Digital (its learning partner), and other MCF investees to reflect on learnings and share insights under the broader theme of "Next Generation Financial Services."

- CGAP's partnership with the **European Commission** (EC) focused on experimentation and research with FinTechs, digital finance providers, and players in other sectors linking financial inclusion with broader development goals. CGAP and the EC periodically met to discuss learnings and find ways to incorporate insights into broader work the EC conducts in the field.

- Lastly, CGAP partnered with the **Bill & Melinda Gates Foundation** (BMGF) on a global agenda to explore the impact of Open APIs in digital finance. BMGF joined DFF's Advisory Committee and contributed actively to the development of our global agenda on APIs, identifying linkages with other agendas BMGF is supporting on payments systems, and helping identify key insights for the industry.

8. Next Phase for CGAP VI

Most of the work under DFF will continue under CGAP VI under a new structure and with a new set of objectives. The Open API program will be integrated with the Digital Rails Project to enhance the vision of how digital payments can facilitate the development of an open and interconnected ecosystem.

The FinTech workstream and learnings from Open APIs that relate to platforms and the enabling of new businesses will become part of the Digital Business Model Project. This work will continue identifying new business models led by startups, as well as emerging business models resulting from the digitization of incumbents (digital banks) and the different ways in which FinTechs and banks may partner.

Our work on data analytics will evolve into two different themes. It will feed into the Data Protection and Privacy Project, to help identify ways to improve data protection policies and empower lower-income customers to better manage their data. It will also feed into the Digital Business Models Project, where it will evolve into how the emerging data-driven business models work, what incentives they create and in what ways they underlie the engine that fuels the growth of emerging big-tech platforms.

The knowledge generated from Digital Finance Plus in the Energy, Water and Education sectors is the foundation of the Financial Innovations for Development Project under CGAP VI. This work will evolve in three ways: (i) expand analysis of the impact of financial inclusion in other development sectors; (ii) expand into other applications of asset financing, specifically productive assets; and (iii) expand into clearer policy messages for other sector stakeholders.

Appendix

List of products meeting the "Frontier" criteria (BLE Solutions, July 2018):

#	Country	Product/Solution
1	Ghana	Airtel Money Bosea
2	Multicountry	BanQu
3	Kenya	Branch
4	Zimbabwe	EcoCash Loan
5	Kenya	FarmDrive
6	Ghana	Fido Loans
7	South Africa	Hello Paisa
8	Kenya	Inuka Pap
9	Multicountry	Jumo
10	Kenya	KCB M-Pesa
11	Tanzania	Kikundi Account
12	Senegal	MaTontine
13	Kenya	m-benki
14	Kenya	M-Changa
15	Kenya	Micromobile
16	Kenya	M-KOPA Solar
17	Côte d'Ivoire	MoMoKash
18	Tanzania	M-Pawa
19	Tanzania	M-pawa-Sacco

#	Country	Product/Solution
20	Tanzania	M-POWER
21	Kenya	M-Shwari
22	Madagascar	MVola Avance
23	Madagascar	MVola Epargne
24	Philippines	Mynt Loans
25	Tanzania	Nala
26	Ghana	Pay Later (Ghana)
27	Kenya	Pezesha
28	Uganda	ReadyPay Solar & Education Loan
29	Argentina	Ripio
30	Kenya	Saida
31	Kenya	Shield
32	Nigeria	Social Lender
33	Kenya	Tala (formerly Mkopo Rahisi)
34	Tanzania	Tigo Nivushe
35	Paraguay	Tigo Paraguay - Credimóvil
36	Kenya	Timiza
37	Tanzania	Timiza Wakala Loans
38	Kenya	Zidisha