

REPORT

Digital Frontiers Institute (DFI) 2019 Monitoring & Measurement of Results

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Country Case Study: Zambia

Abbreviations

ADFP	Association of Digital Finance Practitioners
BoZ	Bank of Zambia
CIDM	Certificate in Digital Money
CoP	Community of Practice
DFI	Digital Frontiers Institute
DFS	Digital Financial Services
DWC	Development Works Changers
FSD	Financial Sector Deepening
ICT	Information and communications technology
MMR	Monitoring and measurement of results
MNO	Mobile Network Operator
SDGs	UN Sustainable Development Goals
SSA	Sub-Saharan Africa
UNCDF	United Nations Capital Development Fund

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1. Introduction

This case study is one of a number of products undertaken by Development Works Changemakers (DWC) for the Digital Frontiers Institute (DFI), as part of its monitoring and measurement of results (MMR) process for 2019. DWC has conducted evaluative research of DFI's impact in two phases in 2019. The first phase explored the impact of DFI on a wide range of Digital Financial Services (DFS) practitioners in Sub-Saharan Africa (SSA), specifically looking at DFI's progress indicators. In the second phase, five case studies have been produced, two of countries, and three of institutions involved in DFS in Africa. The two country case studies are of Zambia and Uganda, while Bank of Kigali, MTN, and Accion were selected for institution case studies.

The key question informing the two country case studies is: "Over the last four years (2016-2019), how has the DFS landscape evolved in the country, and what has DFI's role been in this development, through its impact on practitioners and the institutions they serve?" This question has been explored through three data collection strategies:

- A high-level review of key literature and statistics on DFS in each country;
- An analysis of DFI's data on its activities in each country since 2016;
- Key informant interviews with up to seven practitioners in important sectors in DFS in each country, including the private sector, regulators and the development sector (see Appendix 1).
- Where appropriate, insights from relevant interviews from the first phase of the MMR process were also included.

It is important to note at the outset that digital financial services globally are in the midst of a revolution which has taken place in the last decade. In 2018 there were 886 million registered mobile money accounts in the world, growing by 143 million accounts from 2017 (an increase of 20%).¹ Mobile money is where most of the growth in DFS has occurred, with 272 mobile money deployments live in 90 countries in 2018. Out of these, 62 (22.7%) have more than 1 million 90-day active accounts, compared to 54 in 2017 and only 13 in 2013. Africa is at the epicentre of this DFS revolution, boasting almost half of the individual users.² This has dramatically improved financial inclusion rates across the continent: 43 percent of the population in SSA were financially included by early 2018, and in countries such as Kenya, Tanzania and the Democratic Republic of Congo, the financial inclusion rate more than doubled since 2012.³ The dramatic changes in DFS in Zambia and Uganda need to be understood in this broader context.

2. Digital Financial Services in Zambia 2016-2019

This section provides an overview of DFS landscape in Zambia and how it has evolved over the last four years. Zambia has a population of 17.6 million people, of which 9.8 million are adults.⁴ Zambia has a slightly larger number of females (51% of the population), and more people live in the rural

¹ United Nations Capital Development Fund (UNCDF) and Bank of Zambia (BoZ) 2019. *State of the DFS Industry 2018, Launch presentation*: (Page 6).

² International Finance Corporation (IFC) and Mastercard Foundation, 2018. *Digital Access: The Future of Financial Inclusion in Africa*. Report published by the IFC and Mastercard Foundation. (Pg. 6).

³ *Ibid.* (Pg. 11).

⁴ UNCDF and BoZ, 2019 (Pg. 8).

areas (57%) than dwell in urban settlements (43%). Of significance to both financial inclusion and DFS, Zambia now has an 83.4% mobile penetration rate, and 86.9% national network geographical coverage.⁵ This means that people are able to become financially included, through their cell phones, in remote areas where no formal bank branch has ever been able to reach.

2.1 Policy and regulatory environment

Zambia has a fairly strong policy environment and regulatory framework supporting the emerging DFS sector. At a broad level, the government has aligned its policies and development strategies with the United Nations 2030 Sustainable Development Goals (SDGs), in which financial inclusion is recognised as a key enabler of other development goals.⁶ Indeed, eight of the 17 SDGs reference financial inclusion as a key driver of their various aims, such as eradicating poverty; ending hunger; achieving food security and promoting sustainable agriculture; profiting health and well-being; achieving gender equality and economic empowerment of women; promoting economic growth and jobs; supporting industry, innovation, and infrastructure; and reducing inequality. The last decade has shown that digital financial services can and are radically improving financial inclusion across Africa and beyond.

The Government of Zambia’s Vision 2030 is aligned to the UN SDGs. This is the broad developmental strategy of the government, which is a long-term plan aiming to ensure Zambians live “in a strong and dynamic, middle-income industrial nation that provides opportunities for improving the well-being of all. It embodies values of socio-economic justice underpinned by the principles of gender-responsive, sustainable development; democracy; respect for human rights; good traditional and family values; positive attitude towards work; peaceful co-existence; and public-private partnerships (PPPs).”⁷

Falling under Vision 2030 as an important building block for its achievement, the current Seventh National Development Plan (2017-2021) also foregrounds financial inclusion as a key priority of the government. On pages 40-41 it states that a new financial inclusion plan will be formulated, and the government will prioritise access to banks and financial products: “In the financial sector, government policy will be that of ensuring stability in the bank and non-bank sectors, including enhancing financial market deepening to stimulate increased access to financial services to support economic growth.”⁸ On Page 130, it sets out its ICT infrastructure development priorities, noting that Zambia is rapidly embracing a vibrant digital economy but that the government has recognised the need to prioritise information and communications technology (ICT) development, especially broadband infrastructure. The Smart Zambia Master Plan is touted as the driver of this development process. Although the National Development Plan (2017-2021) does not specifically mention DFS, it is clear that the government wishes to provide an enabling environment for technology to enhance financial inclusion.

Zambia also has a National Financial Inclusion Strategy for the period 2017-2022, which was developed and is driven by the Ministry of Finance. This strategy aims to accelerate financial inclusion in Zambia, which the government recognises as playing a key role in wealth creation, economic growth and sustainable development. Its vision is “To achieve universal access and usage of a broad range of quality and affordable financial services that meet the needs of both individuals

⁵ *Ibid.*

⁶ See <https://www.uncdf.org/financial-inclusion-and-the-sdgs>

⁷ <https://www.sdgphilanthropy.org/index.php/The-7th-National-Development-Plan-of-Zambia>

⁸ <http://extwprlegs1.fao.org/docs/pdf/zam170109.pdf>

and enterprises.”⁹ (iii). Previously, Zambia had two financial sector development plans (2004-09 and 2010-14). The current National Financial Inclusion Strategy framework has DFS at its heart, seeking to drive the above vision through four drivers, all of which have DFS at the centre. Driver 1 is “widespread and accessible delivery channels” (including agents, mobile phones and so on); 2 is “diverse, innovative, customer-centric products” (here DFS is at the top of the list, as well as savings, credit, payments, insurance, pensions etc.); 3 is “finance for SME and agricultural sector growth”; and 4th is “financial consumer protection and capability” (with protection being particularly important in light on the many new DFS innovations that are emerging).

Two institutions in particular are assisting Zambia with its financial inclusion and DFS efforts. Firstly, Zambia is part of the Mobile Money for the Poor (MM4P) project of United Nations Capital Development Fund (UNCDF). The UNCDF launched MM4P in 2012 to ensure that the opportunities and benefits of digital finance would reach low income people in difficult markets. It targets several countries in Africa, including Zambia. The government of Zambia is a key partner of the UNCDF on this project, which has focussed on supporting the development of the DFS market in the country. Another multinational non-profit organisation called Financial Sector Deepening (FSD) has also operated in Zambia for a number of years, focussing on assisting to develop the DFS space through regulatory and policy support.

By all accounts, the various regulators in Zambia have been extremely receptive to the growth of DFS in the country. There are a number of regulators taking care of various regulatory aspects related to DFS: Bank of Zambia (BoZ); the Ministry of Finance; the Ministry of Information and Communications Technology (ICT); the Securities and Exchange Commission; the Pensions and Insurance Authority; the Rural Finance Expansion Programme; the Competition and Consumer Protection Commission; and the Zambia Information Communication and Technology Authority (ZICTA). All of these bodies contributed to the National Financial Inclusion Strategy. These bodies have an interest in providing enabling regulation for DFS. For example, the Bank of Zambia 2016-2019: Strategic Objective No. 3 is “To increase formal financial inclusion by 16 percentage points in order to contribute to enhanced living standards.” The BoZ knows that to achieve this, DFS growth is essential. Thus, agent banking has been permitted and a national switch is being developed, together with the enhancement of interoperability.

2.2 Developments in financial inclusion and access to DFS

The most recent statistics on financial inclusion and DFS in Zambia are provided in the latest UNCDF and BoZ *State of the DFS Industry* report for 2018. This report states that in 2018: “The DFS industry in Zambia experienced significant growth in terms of the number of active customers, agents and DFS providers. The industry went from having only 2% active DFS accounts from four providers in 2014, to 44% active DFS accounts from 18 providers in 2018. Between December 2017 and December 2018, active DFS accounts grew by 89%. Responding to the rise in active customers, the number of active agents grew from 22,965 to 46,747 in the same period.”¹⁰

In a presentation given by the UNCDF and BoZ in early 2019, statistics from this report were provided, showing that in Zambia in 2019, there were:

- 16.5 million registered DFS accounts;

⁹ Government of Zambia, 2017. *National Financial Inclusion Strategy 2017-2022*, (Pg iii).

¹⁰ UNCDF and BoZ, 2018 *State of the DFS Industry 2018*. (Pg. 12).

- 89% growth in active DFS accounts;¹¹
- 46 million transactions processed by agents;
- 478 agents per 100 000 adults;
- 46 747 active agents (Most Mobile Network Operators);
- Zambian Kwacha 589.9 million was the value of transactions processed by agents.¹²

The presentation also highlighted that the growth of active DFS accounts in the market has been largely driven by Mobile Network Operator (MNO) growth. MNO market share of active accounts grew to 89% in December 2018 from 62% in December 2017, while banks' share of active accounts declined from 34% in December 2017 to 11% in December 2018 (Pg. 14). However, as has been noted elsewhere, account dormancy remains an issue, with only 4.3 million DFS accounts out of the 16.5 million being active¹³ Indeed, as noted in the launch presentation, while there is growth in the number of active DFS accounts year-on-year, overall account inactivity still remains an issue for providers, with over 70% of registered accounts inactive. The report suggests that there is a need for providers to leverage data analytics for insights on customer behaviour; increase consumer education efforts; and engage in direct marketing and customer incentives focused on driving usage (Pg. 16).

However, on a more positive note, it was revealed that account activity rates are increasing; going from 15% in 2016, to 17% in 2017; and jumping to 26% in 2018. A quarter of bank and MNO accounts are active, while 50% of micro finance institute (MFI) accounts are active (Pg. 16). Similarly, it was reported that cash-in, cash-out, airtime top-ups, merchant payments, and person-to-person (P2P) payments have seen the biggest increase in active accounts (Pg. 17). There was also a growth in 2nd generation product use too, with 2nd generation products growing in value (by 43%) and in volume (by 72%). Table 1 summarises more statistics from the 2018 report:¹⁴

Table 1: DFS growth in Zambia

Number of active DFS accounts: 1 mill (2015); 1.3 mill (2016); 2.3 mill (2017); 4.3 mill (2018)	Number of agents per 100 000: 83 (2015); 136 (2016); 243 (2017); 478 (2018)
Number of active agents: 7304 (2015); 13 216 (2016); 22 965 (2017); 46 747 (2018)	Number of DFS providers: 10 in 2015); 18 since then
Continued growth and uptake of 2nd Generation products: The number of active users of 2 nd generation products grew from 1.3 mill in December 2017 to 2.3 mill in December 2018. These include loan	Growth of digital loans: Digital loans showed the highest growth rate in 2 nd generation products from 2017 to 2018, with more than US\$5.1M disbursed in Dec 2018

¹¹ According to UNCDF 2019 (10), annual growth rates of DFS accounts for the last three years have been 30% (2016); 77% (2017); and 89% (2018), showing a marked upward trend in the last two years.

¹² UNCDF & BoZ, 2019. *State of the DFS Industry 2018 Launch*, Intercontinental Hotel, Lusaka. 12 April 2019.

¹³ Stuart Lisulo on 12 Apr 2019. "73% of Digital Financial Services accounts dormant, notes UNCDF".

¹⁴ Statistics taken from UNCDF & BoZ (2019: 10-12).

repayments, digital loans (micro credit), bulk payments, merchant payments, internet banking, and utility bill payments.	alone.
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The UNCDF & BoZ presentation also notes (Pg. 13) that certain things have changed, especially the growth of partnerships between financial service providers (FSPs) and non-FSPs; the growth of 2nd generation products; increased customer education efforts; the growth of the fintech/innovation industry; and the expansion of the agent network. However, it also notes that other things in the DFS landscape remained the same, for example:

- The product development process still does not include the customer enough;
- Slow adoption of bank DFS products (less aggressive distribution model)
- Liquidity still a barrier in rural areas for agents
- Not enough use of data to inform marketing etc.

The report also highlights some ongoing challenges in the sector, including:

- high customer dormancy;
- need for partnerships to address liquidity issues;
- need viable business models to support rural market expansion;
- limited capacity for data analysis to support development: “limited internal capacity to support sufficient data analysis and reporting. This inadequate use of data could limit the ability for providers [to] test improved pricing, innovative products, marketing of products or review commission structures to improve profitability.” (Pg. 33).

Also reported was that 85% of DFS providers feel that DFS is a commercially sustainable business. Commercial viability was reported to have increased from December 2017 to December 2018 by 69% of the respondents (Pg. 32). Moreover, the average number of employees working in DFS increased by 16% by December 2018. Two thirds of these employees were focused on the agent distribution. 38% of survey respondents reported tracking sex disaggregated data, with women comprising 37% of the customer base, an increase from 33%.

As noted above, there are 18 DFS service providers in Zambia currently, offering a large range of products. Examples of these providers and their products are:

- Zoono Mobile Money Transactions: The largest and most successful DFS operator in Zambia. Zoono has kiosks all over the country, and the largest agent network of young self-employed entrepreneurs.
- Straight2Bank platform by Standard Chartered Bank Zambia for refugees;¹⁵
- Zanaco Xpress Agency Banking;¹⁶
- Accion-supported insurance product;¹⁷
- Zanaco and Mercy Corps developing AgriPay – the first platform for farmers.¹⁸

¹⁵ See <https://www.fsdzambia.org/financial-inclusion-is-digital-the-answer/>

¹⁶ See <https://www.techrends.co.zm/zanaco-drives-financial-inclusion-by-taking-banking-services-to-communities/>

¹⁷ See <https://www.accion.org/helping-families-in-zambia-cope-with-a-health-crisis>

3. The Role of the Digital Frontiers Institute (DFI) in Zambia

This section provides a summary of the role of DFI in Zambia, as shown on Table 2.

Table 2: Key statistics of DFI activities in Zambia since 2016

<p>Number of students trained</p> <p>244</p>	<p>Number of courses taken</p> <p>458</p> <p><i>Every single one of DFI's courses have been taken at least once in Zambia</i></p>
<p>Sectors in which students work</p> <p><i>Private Sector: 167</i></p> <p><i>Public Sector: 47</i></p> <p><i>Development Sector: 30</i></p>	<p>Face-to-face activities of students</p> <p><i>Community of Practice meetings: 48</i></p> <p><i>Alumni Meetings: 13</i></p> <p><i># unique students attending COP meetings: 101</i></p> <p><i># unique students attending Alumni meetings: 96</i></p>

As illustrated in Table 2, Zambia has had a large number of students taking DFI courses during the last four years. At 244, Zambia is the country with the greatest number of students trained by DFI in Africa. Between them, these students have taken 257 courses, and every single one of DFI's courses has been taken at least once by a Zambian student. Zambia also boasts two of the first four students globally to complete their certification in digital finance, through DFI.

Most DFI students in Zambia come from the private sector (private companies such as commercial banks, fintechs, mobile network operators and others). There have been 88 students from the private sector, which is 58% of the total number of students. A fairly large number of students also come from the public sector, including regulators such as the Bank of Zambia and the Ministry of Finance. Public sector students' number 39, or 25% of the total number of students. The development sector (NGOs such as FSD Zambia) has the smallest number of students, with 26 (17%).

¹⁸ See <https://mercycorporsagrifin.org/2019/09/12/building-zambias-first-digital-financial-services-platform-for-smallholder-farmers/>

While the courses use an online platform, 47 face-to-face Community of Practice (CoP) meetings have been held with the various course cohorts since 2016. These students have also formed an alumni association recently, which has so far met 13 times. In addition, in early 2019 DFI practitioners formed the Association of Digital Finance Practitioners (ADFP), which has registered and met several times.

4. Impact of DFI’s work in Zambia

In this section, we explore the broad impact of DFI’s role in Zambia since 2016. We examine how key role-players from the regulators, Financial Sector Deepening (FSD), the broader DFS industry, and the Association of Digital Finance Practitioners (ADFP) view DFI’s contribution to systemic change in the DFS space since 2016.

4.1 DFS evolution from the perspective of practitioners

Unsurprisingly, the six key informants interviewed for this case study all felt that the DFS landscape has rapidly changed and evolved in the last four years. Moses Sibongo, formerly of Zoono Mobile Money Transactions but now an entrepreneur and consultant, focussed on the rapid growth in financial inclusion: *“In the last four years the market has been progressing a lot. A lot more people are getting access. People have been able to send and receive money in different parts of the country and make payments through mobile services. Lots of people also had a lot of chances to learn more about it. So financial inclusion has really been growing and lots of people have also learnt on the importance of watching for fraud issues. Before there was a lot of financial awareness it was hard – some people were excluded. But right now even my aunt from the village is able to receive and send money!”* Mulenga Chileshe, also a consultant, and formerly with AB Bank, similarly focussed on the ubiquity and access of DFS: *“It is growing at a very fast rate and I do not know much of the data on this, but it has really made a greater impact in this country. There are a lot of operators, a lot of DFS providers coming on board and it is growing. Almost everyone is excited about the ease of doing transactions. Each road, especially in Lusaka, you find a lot of booths where DFS transactions are conducted. You see Moo Moo, Zoono and Airtel everywhere, on every corner. And in the evenings a lot of people are crowding these places. It is easier to do this than even walking to the bank. And you can buy goods and services through these platforms as well as send money.”*

For Joseph Michelo, of Zanaco Bank, the diversification of DFS products and services in the last four years has been notable, and allowed various social development challenges to be addressed:

“DFS and mobile money markets really evolved in the last four years. More players came in, more people came to know and appreciate it. More companies and government agencies want to use the channels. With MNOs there is a buy-in from corporates. For example, with the National Pension Scheme Authority payments, you can now pay and receive benefits through one of the MNOs. So they are also in talks with Zanaco to find out how customers can open accounts and have accountability. They need the pensioners to get their pension there. There is also a drought in Zambia – so the Food Reserve Agency is selling maize. But instead of selling only through the banks, people can deposit with agents and go with that receipt and get their bag of maize. So it is a huge change in DFS. Before, people would resist coming on board as an agent, but now they buy in. So in last four years there has been a huge buy in, acceptance and usage of DFS.”

Betty Wilkinson, the current CEO of FSD Zambia noted the importance of her organisation, along with the United Nations Capital Development Fund (UNCDF), in building the DFS landscape over the

last five years. According to Wilkinson, FSD and UNCDF came to an agreement that FSD would focus on policy reform, and the UNCDF would handle interactions with the market. Subsequently, both organisations started working in both realms. Wilkinson has also noticed a dramatic change in the last few years:

“In terms of how the market has changed, it's been fairly dramatic. When I first came, digital financial services were limited to cash-in cash-out. Nobody was using mobile money wallets. There was no access to the banks, there was no interoperability really. The survey of financial inclusion showed that, you know, only about half the population even knew what mobile money was. So there was very little understanding of the market; very little services delivery in the market and the strongest player was Zoono who is actually a non-bank financial institution. The mobile network operators that were the biggest ones, and MTN and Airtel both of them were just starting to get involved in this market and starting to understand that it had value. So since that time there's been a very dramatic turnaround in market availability in terms of what people understand. There are now large numbers of wallets. Last year, the number of clients went up to 89% and the number of agents doubled.”

Charity Chikumbi, also with FSD echoed her colleague's assessment: *“Ah...great changes have taken place...DFS began to grow in Zambia around 2011 to 2014... uh, when MNOs came into the space. Of course there was already a Zambian company called South Bay, that is well known to us. So we have seen a lot of growth. Activity has grown from a very small margins, from just over the counter transactions...So, the, the market has really grown to where now we have other known services. We have even financial education on the mobile phone, reaching thousands of people or users. So it's just from over the counter in 2016 mobile bank payments, to payment of utility services, the products have really grown, the agents have grown, the wireless holders have grown: drastic growth over time I must say.”*

4.2 DFI Role in capacity increases and career development of DFI practitioners

For the small number of practitioners who it was possible to interview for this case study, it is clear that their DFI experience had definitely led to increases in their DFS knowledge and skills, and at times to their career development.¹⁹

Moses Sibongo completed his Certificate in Digital Money (CIDM), before taking the Leading Money Markets and Operationalising Mobile Money courses. He is currently on the journey towards becoming a Certified Digital Finance Practitioner with DFI. Moses was formerly a channel lead at Zoono Mobile Money, managing the Eastern Province of Zambia for nine months. He then went on to become an entrepreneur for Zoono; a mobile money agent running a Zoono kiosk. He feels that this experience was helped by the DFI courses, which assisted him to understand what customers want from DFS. After his stint as a Zoono agent, Moses branched out into another entrepreneurial business which focusses on financial inclusion. He developed a mobile credit platform for rural entrepreneurs (such as bus drivers and informal traders) to enable them to borrow money and pay it back using their mobile phones. This endeavour has faced some logistical challenges so Moses also works as a consultant while he is developing this idea. On the contribution of DFI he testifies: *“Without DFI I don't think I would have started my own entrepreneur journey. It is because of DFI that I took the chance to set up a company and set up something to help the poor. I took the courses*

¹⁹ The broader survey of 30 practitioners and their managers from across Sub-Saharan Africa for the first phase of this MMR process confirms that this is an area in which DFI has made a major contribution.

out of my own pocket, but they really did help. The DFI training is so practical, and I want to continue learning, which is why I am becoming a certified practitioner.”

Moses has identified a district in Zambia where there are 25 000 people who survive through informal trading, but who have not yet been linked to DFS of any kind:

“I have learnt a lot on how to sell digital products to the poor and how the poor want products to be sold to them. I have access to over 25 000 people that are in need of financial products but nobody is available to take it to them. They need to know more about financial services because they lack a way of saving money. Instead they hide it under their beds and this kind of thing. But they don't have any way of saving that money and digitising it. The problem is that they need a credit history in order to borrow from the providers. Once they have a credit history they can go to MTN money or Zoono to ask for credit to run their businesses. My knowledge has helped me to offer a solution to these people. I have developed a product – a loan management system. Unfortunately, this needed finance to bring it to life and take it online. I did have a partnership with another company who were providing the platform. We did roll it out and lend to some rural marketeers and they were supposed to pay back using their mobile phones. But unfortunately, my partner since closed their business. I am still planning to resurrect this project.”

Charity Chikumbi, who works for FSD, is the first female Certified Digital Finance Practitioner and a DFI community of practice (CoP) facilitator. She feels that DFI played a role not only in her personal knowledge and skills acquisition, but also in the other students she has interacted with in CoPs and in the newly launched Association of Digital Finance Practitioners (ADFP):

“Yes, DFI has greatly played a role because, I guess people love DFS, but they don't have the language; they don't know the terms; they don't understand what the important things are; they don't understand the new cases and how they can be applied. So once they go through that...It's like, they [DFI] throw you in a jungle and they give you a map and all the tools you need to then create a path, and by the time you're graduating, you can get around everywhere so very well, it's no longer just a jungle. So people don't come in with a skill, but with a bit of skill. But the course just places everything so clearly and so very well structured and they emerge with, you know, growth, passion, because know they can sit on top of things and be in control.”

On her own journey, Charity Chikumbi feels that her capacity has been significantly enhanced due to the DFI courses, and that she has been better able to help build the DFS landscape as a result:

“So, the topic and the courses in Operationalising Mobile Money gives you the understanding of what each operator needs to effectively run a mobile money business. So when you work with service providers, you become very effective to help them because you have gained the skill in that area...Okay. And also the lessons on identity, electronic identity, it just makes you appreciate it, with involvement into electronic payments, you need electronic identity. And so that has helped me to work on the biometric project that is beginning in Zambia, which is at government level. So yeah, that is a lot of training. Also with the agri, the last mile in agri finance.... I'm working here with a project on people who are involved with rural agriculture finance in helping smallholder farmers develop. Ah, the concepts in the course may be, too advanced for a country like ours, like the access to a blockchain, storing data for farmers and so on. But it gives you the concepts on what is important for a smallholder farmer. And so as

digital experts, you are able to contribute effectively when the rural agriculture finance are planning their work on how to best assist farmers.”

Charity is effusive in her praise for what the course opens up for DFS practitioners like her: “...It makes you make sense of the things that you didn't see and in line with the name of the course. It's like you're blinded but immediately you go through that course, you begin to see so many things that are wrong. Based on that I was able to develop a blog on the problems that the female agents face. Because in Zambia, mobile money operators sit in a small booth which is not adequate. So all those things become so apparent after the training.”

Joseph Michelo, of Zanaco Bank, completed the CIDM, along with Leading Digital Money Markets, Product Management in Fintech, and Gender in Digital Financial Services. He is currently on the journey to become a Certified Digital Finance Practitioner. Although Joseph was promoted at work since starting his DFI courses, he does not attribute this to anything he gained from DFI. However, more recently he feels that he is beginning to reap the benefits of having completed the courses. In the last two months Joseph attended two job interviews as he is hoping to make his next career move. He reports that the interviewers were extremely impressed with his DFI certificates, and even expressed interest in the courses themselves. He feels that the outcome of the second interview in particular was influenced by his DFI knowledge. Another area where his new knowledge has been useful is in his engagements with other practitioners. As he reports: “When I meet others at the ADFP I have something to say. The product management course in particular is a very good course. It even helped me to explain things in the interview I had, like how to identify a product and roll it out to market. So I strongly believe my impending job change has been influenced by DFI.”

Mulenga Chileshe has completed the CIDM and Operationalising Mobile Money courses and is also registered for the Certified Digital Finance Practitioner journey. Until the 1st of July 2019, Mulenga was working at AB Bank, where he was an IT manager for close to five years. He currently works as an IT consultant for a medical university in Zambia, with a major project being the development of a student information system which would allow students to pay their fees using mobile money platforms. Mulenga feels that the knowledge and skills he gained from DFI impacted him most in his job at the bank: “Especially when I was at the bank, it impacted on me so well,” he said. “AB bank was going digital in terms of its products and services. It is a loan-based bank addressing the financial needs of micro-businesses. At the time I did the course it was the time we were going digital in terms of our product offering. So that encouraged and motivated me. On a personal level I have a dream to actually own a money loaning company one day. Studying that course helped me to look at the opportunities that are out there. So it really impacted on me positively on a personal level. And I appreciated more the direction that the bank was going in.”

From these few testimonies, it is apparent that DFI has made an impact in the careers of Zambian professionals who have taken its courses, through their acquisition and application of new knowledge and skills. It is interesting to note that a number of such practitioners have shifted their careers away from working in commercial banks, preferring to become consultants and entrepreneurs within the DFS space.

It is worth reiterating that Zambia has seen 153 practitioners trained in DFI courses, the largest number of any country in which they work. The small sample of practitioners interviewed for this case study suggests that DFI has had an impact on individual practitioners. If there has been a similar impact on the capacity, work and prospects of most of the 153 practitioners who have taken DFI courses, it is likely that these individuals have been able collectively to impact the DFS landscape in Zambia in a significant way.

4.3 DFI role in building capacity of government regulators

Aside from building the capacity of individual practitioners working in the private or development sector, DFI has also been able to play a role in building the capacity of various key regulators. They have been assisted in this endeavour by FSD Zambia. One of the most important bodies pushing for financial inclusion, including through DFS, FSD Zambia has itself had around 10 of its staff taking DFI courses, which its CEO Betty Wilkinson credits with increasing the capacity of their team. Not least because the first female Certified Digital Finance Practitioner (Charity Chikumbi) is a senior staff member of FSD. Charity is also one of the founding members of the Association of Digital Finance Practitioners (ADFP) in Zambia.

Because FSD adopted the strategy of working on financial sector policy reform in Zambia, it quickly came to see the DFI courses as a major tool for capacity building within the various government regulators. FSD therefore obtained funding to sponsor officials working for financial sector regulators to take DFI courses. As Betty Wilkinson explains, this was hugely beneficial:

"...The fact that we helped finance and, deliver...DFI [is significant]. It delivered a significant amount of better knowledge and a unified understanding about what this market is, what policies and practices affect people...And that not only did Zambians have the opportunity to take a course where they understood the same material, the same knowledge, same language and same approach, but they also started spending a lot of time with each other. So you had it in a safe learning environment, you had people from the private sector, you have people who are regulators of all stripes... people who are policymakers. So we've taken all of the team that runs the National Financial Inclusion Strategy and put them through the base courses of DFI. So you can try to facilitate some of the different players in the industry actually doing the...Digital Frontiers Institute courses. We did. It's a very interesting thing. We didn't actually tell them you should do this. What we did was we tipped, we opened the door for people to apply. And then they applied and then we said 'Okay, well, we know that your current salaries are not going to wear a fee like this.' So we picked up 50, 70, 90, in some cases we paid 100% of the cost in the first two years."

Wilkinson also argued that Charity Chikumbi has led the way in terms of FSD's strategy, by becoming the first certified female practitioner and by being the chair of the ADFP. She reflects further on FSD's strategic approach in the near future:

"The rest of us have also said, with this set of understandings what does it mean for our own program and innovation? Because the push now is to innovate using mobile money. How do we do it? How do you move to the rural areas? How do we move to women? Because there's clearly a gender gap. What about youth and how can they use it? Zambia is a very young country. The median age is 15.8 years. So what we're finding is youth really want to use it...the telco regulator just did an ICT survey - a major national one and discovered that, most of the people who have funds and most of the people who use mobile money are older. And so we're saying, Okay, what can we do about people who are older, what can we do about getting cell phones into the hands of people. So we're talking about can we lower the current almost 50% tax on activities in cell phones. And we've also been looking at what can we do in terms of products and services to encourage bundling, to encourage other activities. One of the things that we've seen is that youngsters form savings groups because that's the answer. That's an informal entry point in financial services, and it gives them a lot of good experience and mentoring. The young groups have said, gee, you know what, we don't want to have to bring the cash here. It's not safe. We don't want to do this. We'd like to actually do this via

mobile money. And so we said, Okay. So we're doing some experimentation now on running savings groups using mobile money rather than the cash."

FSD, as a key DFS player working closely with the regulators, is thus using its enhanced knowledge of the digital finance space to think about how it can strategically strengthen areas which need more attention. It will then lobby regulators so that these areas can be supported with appropriate regulation.

Charity Chikumbi agrees that FSD has managed to play a major role of building DFS capacity in regulators using DFI courses:

"Yes, so very true. We've trained, especially in the public sector, maybe a max of... about six from Ministry of Finance and maybe another six from Central Bank, so 12 to 16. We work with the public sector on the National Financial Inclusion Strategy. And through that attitude we know the government needs to drive this strategy in digital finance, but they didn't have the understanding and the staff to do that. So we made sure that people were trained and equipped to run that very effectively. So we sponsored most people who asked the Ministry of Finance in that need for Financial Inclusion Strategy and at the Central Bank too. We helped sponsor and we trained people in the market, who were key, to now be the implementors of that policy...who have imagined setting a stage for growth of DFS in Zambia in policy and regulation and product development, in every sphere of DFS according to what we understand, and we sponsored them and enabled them."

Indeed, on the day of Charity's interview for this case study, she was attending a workshop outside Lusaka where regulators were meeting to review the National Payment Systems Act. And as she explains, *"In that meeting, there were several people who've done the course and the facilitator of the meeting is a graduate of CIDM, and there were other students in there. So they're sitting in places of authority in policy, in modern development. They are very key people sitting around...and I hope they use the information that they have gained from us to build growth."* She warns, however, that even though the government does offer study fees to its employees, many of their employees would rather choose an academic course over a professional course like the ones DFI offers. The role of FSD Zambia in supporting government employees to take the DFI courses is thus important.

Kombe Kaponda, a Systems Network Engineer at the Bank of Zambia, provides valuable insight into the impact the DFI courses have had on him and his colleagues:

"...I'm an engineer by profession, so most of my work is hands-on, but in terms of just gaining appreciation and doing my job better, I found that the courses helped. I noticed a difference even with my colleagues, because the discussions now have changed. Everybody understands what the basics of digital financial services are. So we've moved to be at a level where even when you're trying to come up with a policy decision, people know the basics and you don't want to spend time on explaining what a cryptocurrency is...I think those who've done the foundational course [CIDM] have a basic understanding of what it is, have a basic understanding of what, you know, electronic transfers are, have a basic understanding of what consumer protection is. So when you're coming up with concept papers you don't deal with the basics, you deal strictly with the, the issues at hand. So that's been very helpful."

Kaponda and his colleagues have actually formed a small financial technology and regulation technology committee or "think tank" within the Bank of Zambia to make informed inputs into DFS policy and regulation. The DFI courses have been very helpful for this committee, as he testifies: *"The part-time role I'm playing with the Fintech and Regtech team, all the DFI courses have helped*

quite a lot because there are some case studies in the courses that we've heard what's happening globally. We refer to the standards, we refer to what's happening with money – anti-money laundering and combating financial terrorism. I enjoyed the courses, particularly on the blockchain and cryptocurrencies. So those, you find that you use them as you try and do some of this research, ah and I think that's where I draw most of my knowledge from."

Kaponda also feels that the collective impact of DFI on his unit has been notable: *"Oh yes, absolutely, and I think I was very instrumental in that, especially with...the Fintech and Regtech team I mentioned to you. I'm the chairperson there, so what I did is I got, I went to bank management and told them these are good courses and they enrolled. I have trained up to, I think 15 of my colleagues... and I hope DFI gives me credit for that."*

Kaponda notes that the Bank of Zambia is playing a major role in developing the DFS landscape:

"The evolution is ongoing. In terms of a strategy from the Central Bank, we are aware that digital is the way to go in a couple of years. So it's been evolving slowly. From each strategic planning cycle, you find that there's a component of digital financial services. I'm trying to address that. So the whole market is moving towards better servicing by digital financial services...It's not only DFI's contribution. There's been contribution from other players, ah from the World Bank, IMF is pushing for that and deliberate government policies to just make sure you know, not only is the financial sector digitally ready but all the other sections of the economy. We have a huge government project we're calling Smart Zambia. So we're trying to digitise most of these government services. So, that's a drive for the whole country, not just for ah financial services, but digitising every section of government services."

4.4 DFI role in improving the regulatory environment

As has been explored above, DFI has made a significant contribution to building the capacity of key practitioners and role players in the Zambian DFS space. This has in turn fed into the improved DFS regulatory environment in present-day Zambia. As Moses Sibongo remarked, *"The reason for the growth we have seen: when it comes to regulation, it is one of the fundamental parts that we cannot take away from the ecosystem."* Betty Wilkinson pointed to the policy reform work that FSD Zambia has been doing, along with the training work they have facilitated since 2016. She argues that this has made a fundamental difference especially to *how* the growth in DFS is occurring. She pointed to the need to ensure not only a good regulatory environment, but also the need for mobile money financial education (e.g. through radio programming), and the current infrastructure limitations of mobile money. The two big gaps in the market are now the dormancy of mobile wallets and the significant challenges of reaching out to rural areas. Wilkinson feels that the regulators have been extremely engaging on these issues:

"Okay, so very responsive is the answer. And the reasons why are also important. So right now, as we sit here 66 people including across the industry, and Bank of Zambia as regulator for mobile money, are sitting in a conference facility...going over the payments legislation line by line to revise it. Oh what we introduced – and I give UNCDF some credit for this because we do it together – we have something called 'feedback to action' where the government decides it needs to take action or the private sector triggers a complaint or concern. And then there's discussion about, you know, what should be done about it, and then the regulator's respond. So, the telco regulator comes in and the consumer protection regulator also comes in to discuss with Bank of Zambia and the market. They sit together for a day and they walked through everything that's been done so far. And then they come up with a set of recommendations which are almost all the time are implemented. And so the first example of

that was when they started talking about changing the amounts that were the ceilings for transactions and it was very interesting to us that the... market players the private sector was actually much more conservative in their demands and approach than the regular was, which is an interesting flip. So the regulators are very flexible. And in fact, they have a sand-boxing approach to much of this which...has been in place for quite some time."

Charity Chikumbi has herself been at the cutting edge of these changes because she works for FSD currently but was previously in the Bank of Zambia: *"I had just joined FSD from Central Bank. At Central Bank, I was the regulator for DFS: I was...in oversight. I was involved at one stage with the licensing of DFS businesses in Zambia. And after that I was involved with overseeing their operation, according to the Bank of Zambia regulations. I came with that to a development organization of FSD. And then here I was involved with helping the mobile money grow in Zambia. The first assignment as policy advisor was to help create an enabling legal environment for DFS to grow."* For Chikumbi, the regulators have been very supportive: *"They've been supporting us at every point and almost being accused of being too nice. So they've been with us throughout the way. They get too busy with other demanding issues. Sometimes they are unavailable, but generally they have been with the market with the development organisations. I don't think we have a problem and we have had a very good relationship."* However, Chikumbi notes that that mobile money agents who operate from kiosks often face problems with local municipal regulations (licensing, health issues etc.), which do not always favour the growth of these new opportunities.

Kombe Kaponda (Bank of Zambia) points to the value of the fintech and regtech think tank which he is part of, and the research they do which allows them to *"Advise mostly in supervision departments; the ones that are directly supervising the banks, the ones that are supervising the non-banks, and the reception for payment systems as well. So if there's a solution that's coming into the market, we have a say in that. [We] evaluate, work, and go to market, and also do a sandboxing."* He outlined how this body conducts research and *"And then we comment to management and say, 'okay, in terms of policy direction, this is the direction we think we need to take'. If we need to approve a product, we recommend that this is a proven product in the market, so we need to sandbox it and test it. And so we are, we're pretty much doing all the groundwork and feeding into people to make decisions."* This think tank also tries to educate the public on subjects such as cryptocurrencies and how to invest safely, through radio and television.

For Joseph Michelo (Zanaco), regulation has been accommodative, and he has seen little interference into operations in the digital space. He finds that regulators allow most innovations that are presented. His only concern is that the regulators do not treat the digital channels of banks the same as MNOs, because they have left the MNOs to charge higher prices for their services but have not allowed banks to raise their prices.

DFI, through its impact on FSD and key individuals in the regulators has added to an impressively enabling regulatory environment for DFS in Zambia.

4.5 Role of DFI in bringing DFS practitioners together

An area in which DFI has undoubtedly had a major positive impact has been in bringing together DFS practitioners from a wide range of sectors in Zambia to learn from and collaborate with each other. As Betty Wilkinson of FSD points out, Zambia is a small country but particularly through the newly formed ADFP, DFI has brought people together and they are all speaking the same language: *"I can talk to the private sector, I can talk to other regulators, I can talk to the policymakers, we're all speaking the same language, and we all see the same direction."* Wilkinson also thinks that it is important that a large number of people fostered relationships with people in other countries

through DFI, *“And so they could send a message to someone in Ghana and say, ‘What are you guys doing on this?’”* Kombe Kaponda agrees: *“Yes, that helps a lot because you have in those classes, you have people from different regions and people from different economies. So in terms of how digital financial services are being implemented, it’s quite different. And it’s a good way of learning from each other. Where you find out what’s happening in Pakistan, you have an idea of what’s happening in another region, and you can gauge where you are, and you actually get some good used cases where you can learn from what somebody in another part of the world has implemented. In terms of having diverse classes it’s brilliant.”*

Charity Chikumbi also sees DFI’s role in the area of bringing practitioners together as very important: *“So, one thing you can’t take away from DFI is creating a passion for DFS in Zambia. DFI has sort of decoded DFS in Zambia. It has demystified what DFS is. People are confident of what it is and it has also brought a lot of uniformity in understanding DFS in Zambia...it has also brought the practitioners closer, and removed suspicion. So it has encouraged collaboration...and no, we wouldn’t even have the association. We would never have thought DFS warranted forming an association. But it’s because of the DFI training that the people have been brought together with a common understanding, common goals.”*

The Association of Digital Finance Practitioners (ADFP) grew out of the DFI communities of practice and the alumni association which was formed. It has been formalised and officially registered as an industry association in 2019, with over 150 members.

One of the founding members, Charity Chikumbi explains the genesis of this important body: *“From the cohorts that I’ve graduated and having been a facilitator, I’ve come to know the strong students who have a strong passion as I have, and it was very easy then to assemble those to pioneer a Digital Finance Practitioners Association in Zambia to its launching. So I was able to network with other students, we worked together and we formed an alumni. From there, we had an active community of practice and we have formed an association and got it registered with the registrar of societies. And FSD is willing to give it some financial support, for it to begin to run...[and] we are currently working on a sustainability plan. You know that has taken long, but once we can convince FSD on our sustainability plan, then we’ll be a full-fledged professional association, like DFS in the country.”* Current vice chair Joseph Michelo explained that they have designed everything, including the constitution, the budget, and their way of operating. However, he points out that the association is in its infancy. Their main goal, he says, is to assemble a large body of practitioners and be a consultant on issues that need input, transcending workplace and sector. He feels that with a united voice they can be much more effective.

Charity Chikumbi stressed the importance of being recognised officially in order to have an impact, but also pointed out that is very new:

“Yes, it has impact because now we get recognition, we get invited to initiatives that are running around the country. So, it has potential, of course. But because it’s a part-time thing, until we get an administrator to sit in an office and administrate, like reach out to the resources available, we’ve had problems to effectively operate. But we’re working on finding a premises and employing an administrator. Once we have that person in place, then whatever we’ve been informed they’ll be able to communicate, make appointments and schedule meetings and draw the whole group to what is important. We’ve already began to be involved in one way or another. There’s a meeting coming up next week on digital markets and things like that. And we’ve been invited to that as ADFP expert. So we are already running with it and we’ll gain momentum as we go along.”

Chikumbi also feels that having regulators in the ADFP is crucial, something that is already happening: *“We have like five very active people from the Central Bank. In fact, the chairperson is from the Central Bank [Douglas Zulu].”* Kombe Kaponda is one of these, and he feels that the association has much potential to have a great impact on DFS in Zambia: *“I think its running but I think the onus now, it's up to us in country to see how best we can make it thrive.”* He feels that the association might need some support from DFI or FSD to help it to become truly effective. Kaponda also believes more practitioners should be trained in DFI courses so that a critical mass of practitioners can assist to move the DFS landscape forward.

5. Conclusion

This case study has shown that DFI has made a number of contributions to the rapid evolution of the DFS landscape in Zambia over the last four years. Firstly, by training a large number of practitioners (153), DFI has had impacts at an individual and institutional level. The fact that many of those working in crucial bodies such as FSD have taken the courses, and then undertaken to ensure that many regulators take the DFI courses, has meant that there is a common understanding of and energy around DFS developing in Zambia, with the potential to make a systemic impact. Through these role-players in particular, DFI has been able to impact DFS regulation and practice, something the newly-formed ADFP should be able to build on in future. Betty Wilkinson, CEO of FSD was unequivocal when asked if DFI has contributed to DFS in Zambia:

“Oh, I would say not even any question because when I arrived here, a lot of people had no idea what this market was about, including the regulators. As a result of them learning about this and having conversations with their seniors, that's what ended up driving the development of the payments department in the Bank of Zambia. Before that they had three people, now they have nine and it is a proper department with a Director. So that's actually come on in leaps and bounds. Through, you know, having had this capacity built on by people doing the course. And what's very interesting for me is that tech is usually a domain that's largely male in Zambia. What we're seeing is, in particularly in the regulator, there's a significant number of women who are in roles of power and responsibility, both in the regulators and also the person who's head of the National Pension Authority.”

Wilkinson shared that although FSD for the last two cohorts could only cover 50% of the DFI course cost, there was still a high demand for it.

Joseph Michelo also feels that DFI has made a marked impact: *“DFI's role in Zambia is that it has unified the DFS practitioners in Zambia. It has drawn different individuals from different organisations who might have never met, to share ideas together. The people are coming from fintechs, from credit bureaus, from consumer protection units, Ministry of Finance in charge of digitisation...So it has brought in quite a number of professional players who understand what the digital space looks like. If we look at number of people trained, it has been quite a lot, from public, private sector and regulators.”* Mulenga Chileshe feels similarly: *“DFI has brought in a whole new dimension in terms of how individual members view the future of DFS in Zambia. There is an entirely new crop of professionals that are committed to be the pioneers for DFS in the country.”* As noted above, the formation of the Association of Digital Finance Practitioners (ADFP), which arose out of the DFI community of practice, has played a major role in bringing DFS practitioners from different spheres together, with the potential to become a major driver of collaboration.

A key report on DFS in Africa notes the following: “For the market as a whole to evolve, successful collaboration and communication between market actors and regulatory authorities can make a marked difference.”²⁰ DFI’s courses have both facilitated such collaboration and communication, and gone beyond this by ensuring that these actors all have the same understanding of DFS and how best to take it to the next level.

Appendix 1: List of Interviewees from Zambia

	NAME	Company	Position	COUNTRY
1	Moses M. Sibongo	Self-employed	Consultant	Zambia
2	Betty Wilkinson	FSD Zambia	CEO	Zambia
3	Charity Chikumbi	FSD Zambia	Senior Management	Zambia
4	Kombe Kaponda	Bank of Zambia	Systems Network Engineer	Zambia
5	Joseph Michelo	Zanaco Bank	Regional Sales Specialist, Agency Banking	Zambia
6	Mulenga Chileshe	Self-employed	Consultant	Zambia

²⁰ International Finance Corporation (IFC) and Mastercard Foundation, 2018. *Digital Access: The Future of Financial Inclusion in Africa*. Report published by the IFC and Mastercard Foundation (Pg. 11).