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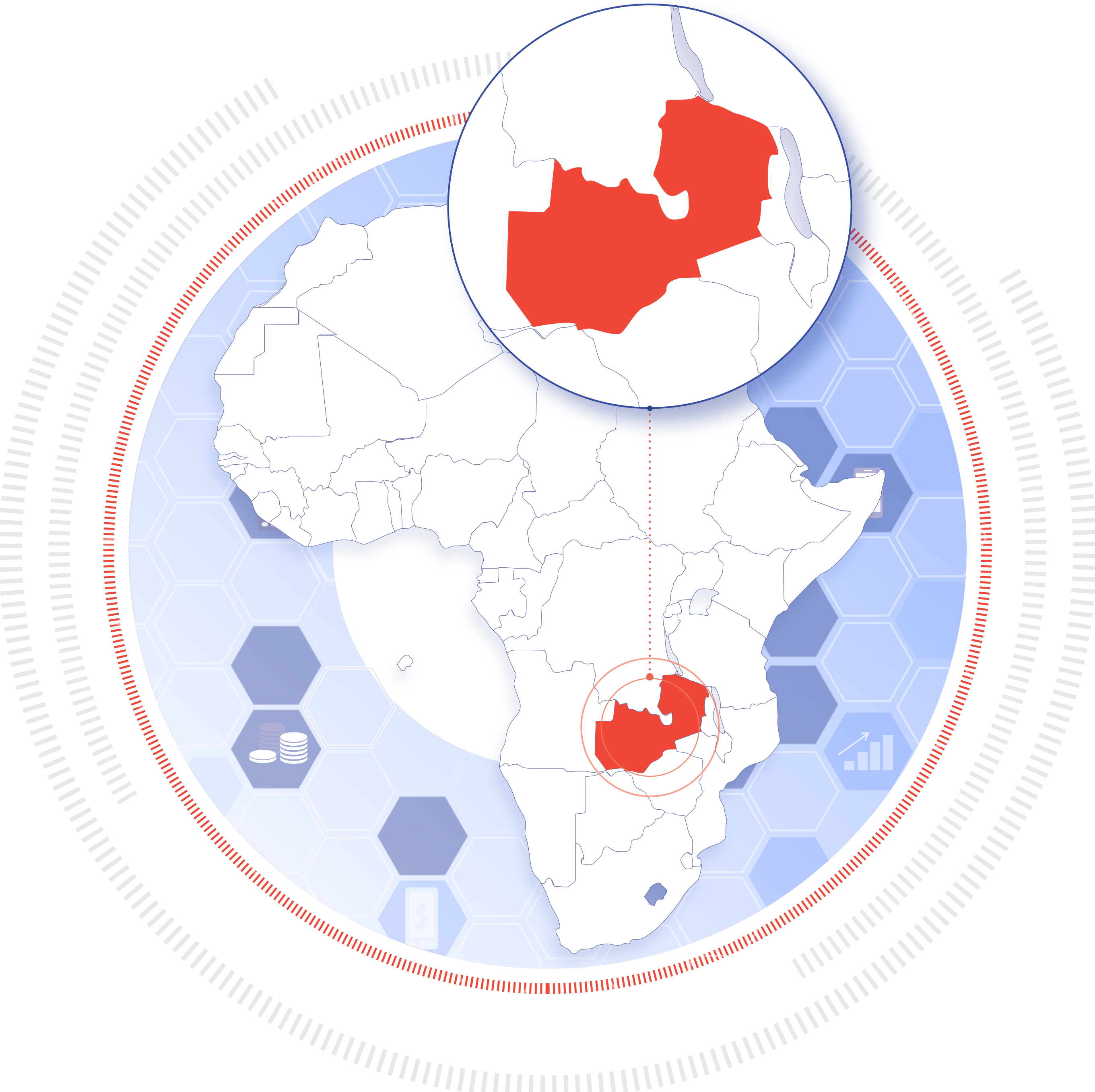

State of the Digital Financial Services Market 2017

Results from the UNCDF-MM4P Annual Provider Survey

UNCDF MM4P | Zambia

The Annual Provider Survey for Zambia was conducted by UNCDF MM4P in partnership with

mastercard foundation

UN CDF

About the UN Capital Development Fund

The UN Capital Development Fund (UNCDF) makes public and private finance work for the poor in the world's 47 least developed countries. With its capital mandate and instruments, UNCDF offers 'last mile' finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. UNCDF's financing models work through two channels: financial inclusion that expands the opportunities for individuals, households and small businesses to participate in the local economy, providing them with the tools they need to climb out of poverty and manage their financial lives; and localized investments that show how fiscal decentralization, innovative municipal finance and structured project finance can drive public and private funding that underpins local economic expansion and sustainable development.

About MM4P

UNCDF developed the MM4P programme to ensure that the opportunities and benefits of digital finance would reach low-income people in difficult markets. UNCDF provides a mix of technical, financial and policy support to policymakers, regulators, providers, distributors and users of digital finance in order to expand access to and usage of services that contribute to achieving the Sustainable Development Goals.

In Zambia, MM4P launched its programme in March 2015. The programme was launched in partnership with the Mastercard Foundation and is aimed at increasing active usage of digital financial services within the adult population, from 2% in 2014 to 35% by 2019. Using a theory of change based on the Making Markets Work for the Poor approach, the programme seeks to work with all digital finance providers, the regulators and the Government to achieve this mandate.

MM4P project team

The process to develop the Annual Provider Survey included gathering data, assessing the incentives of the providers in the Zambian digital finance context and surveying the insights of local stakeholders. The content of this report is based on information gathered during the month of April 2018 and represents data for the period of December 2016 to December 2017. The following project team members authored the report:

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Acronyms

Acronym	Definition
APS	Annual Provider Survey
ATM	automated teller machine
DFS	digital financial services
fintech	financial technology company
MNO	mobile network operator
OTC	over the counter
UNCDF	UN Capital Development Fund
US$ or $	United States dollar
ZMW	Zambian kwacha

Glossary[a]

Term	Definition
Active customer account	An active customer account is an account with which at least one transaction was conducted in the last 90 days. A transaction includes cash-in, person-to-person transfer, cash-out, bill payment and/or airtime top-up. Conducting a balance inquiry, resetting a personal identification number or completing another transaction that does not involve the movement of value DOES NOT qualify for a customer account to be considered active.

[a] As much as possible, standard industry definitions are applied. In particular, GSMA, a trade body representing the interests of mobile network operators globally, is the source of a number of definitions provided here. Unless otherwise noted, the source of all quoted text in the definitions is the latest report from GSMA: GSMA, *2017 State of the Industry Report on Mobile Money*, Appendix 3: Glossary (London, 2018).

Term	Definition
Agent, Agent outlet, Active agent outlet	An agent may be a proprietary agent (an agent who is managed by and operates under the exclusive branding of a particular provider) or a third-party agent, either of whom handles more than 30 transactions per month, including cash-in and cash-out. In many instances, an agent registers new customers too. The country's central bank, Bank of Zambia, defines an agent as a person or entity appointed by an e-money institution to provide certain e-money related services on its behalf. "In the case of mobile money, an agent outlet is a location where one or several provider-issued tills are used to conduct transactions for clients… Agent tills are provider-issued 'lines,' which can be SIM cards or POS [point-of-sale] machines, authorized and used to facilitate mobile money transactions… An agent outlet may operate tills issued by several providers; these are generally referred to as shared or non-exclusive outlets." "An active agent outlet is an agent outlet where any of the tills were used to facilitate at least one transaction within the last 30 days… The most important of these [transactions] are cash-in and cash-out (i.e., loading value into the mobile money system and then converting it back out again)."
Airtime top-ups	Airtime top-ups are funded from a customer account.
Automated (or Automatic) teller machine (ATM)	An ATM is "an electronic telecommunications device that enables the clients of a financial institution to perform financial transactions without the need for a cashier, human clerk or bank teller."[b] ATMs may be operated either offline or online with real-time access to an authorization database.
Bank account to mobile money account transfers	These transactions involve "a direct transfer of funds made from a customer bank account to a mobile money account. This transaction typically requires a commercial agreement and technical integration between the bank and the mobile money provider to allow direct transfers."
Bill payments	These transactions involve the payment of bills using digital financial services, "regardless of whether they originate from an account or are made over the counter."[c]
Bulk payments	These transactions are conducted from one account to many accounts, or from many accounts into one account. The former, such as salary payments or government transfers, may terminate in an account or over the counter. They are referred to as 'one to many.' The latter, such as several customers paying for utilities, comprise collections by an organization from multiple payers. They are referred to as 'many to one.'
Cash-in transactions	These transactions include deposits of any value from a customer into a wallet through an agent. They also represent "the process by which a customer credits [his/her] mobile money account with cash. This [process] is usually via an agent who takes the cash and credits the customer's mobile money account with the same amount of e-money."
Cash-out transactions	These transactions include deposits of any value from a customer into a wallet through an agent. They also represent "the process by which a customer credits [his/her] mobile money account with cash. This [process] is usually via an agent who takes the cash and credits the customer's mobile money account with the same amount of e-money."
(Agent) Commissions	Commissions are the revenues paid by the digital financial service provider to its agents. Generally, agents earn commissions by conducting transactions and onboarding new customers.

[b] Nair Vinu Uthaman and others, 'MAASC (Multiple Account Access using Single ATM Card),' *International Journal of Science, Engineering and Technology Research (IJSETR)*, vol. 3, No. 6 (June 2014), p. 1790.
[c] Nika Naghavi and others, 'Success factors for mobile money services: A quantitative assessment of success factors' (London, GSMA, November 2016), p. 21.

Term	Definition
Customer activity rate	Customer activity rate is the share of actively used registered accounts (i.e., at least one transaction conducted in the past 90 days).
Debit card	A debit card is an electronic card issued by a bank that provides the bank client with access to his/her account to withdraw cash or pay for goods and services. It eliminates the need for the client to go to the bank to remove cash from his/her account as he/she can just go to an ATM or pay electronically at merchant locations. This type of card, as a form of payment, also eliminates the need for cheques, as the debit card immediately transfers money from the client account to the business account.
Digital financial services (DFS)	The term DFS refers to a range of formal financial services accessible via digital channels, such as mobile money, agency banking, ATMs and debit cards, as opposed to traditional financial services accessed through physical visits to a provider's outlet.
Financial inclusion	Financial inclusion is the end state of the goal of all eligible citizens having access to and using a range of affordable, convenient and appropriate financial services. These services could be formal financial products/services that are provided by formal financial institutions (banks and/or non-bank financial institutions bound by legally recognized rules) or informal financial products/services that are unregulated and operate without recognized legal governance (e.g., village banks or village development funds).
Fintech	This entity is a financial technology company.
First-generation products	These products comprise basic DFS, such as person-to-person transfers, airtime purchases, bill (utility) payments, and cash-in and cash-out transactions.
Float	Float is "the balance of e-money, physical cash, or money in a bank account that an agent can immediately access to meet customer demands to purchase (cash-in) or sell (cash-out) electronic money."
Informal over-the-counter (OTC) transactions	These transactions occur when a customer provides cash to an agent who performs a transaction via an agent account to send funds to the wallet of a registered customer.
International remittances	International remittances can refer to the total number of cross-border fund transfers for inbound or outbound remittances. International remittances may also refer to the "cross-border fund transfer from one person to another person. This transaction can be a direct mobile money remittance or can be completed through use of an intermediary organization such as Western Union."
Know-your-customer (KYC)	"Financial institutions and regulated financial services providers are obligated by regulation to perform due diligence to identify their customers." The KYC term refers to these requirements and/or to "the regulation which governs these activities. The FATF (Financial Action Task Force) recommends a risk-based approach to due diligence for AML/CFT (anti-money-laundering and counter-financing of terrorism) controls. Due to the lack of formal identity documents in some markets, solutions such as [establishing] tiered KYC [requirements] and adjusting acceptable KYC documentation can help mobile money providers facilitate customer adoption and increase financial inclusion, especially in rural areas."
Liquidity management	Liquidity management is "the balance of cash and e-money held by a mobile money agent to meet customers' demands to purchase (cash-in) or sell (cash-out) e-money. The key metric used to measure the liquidity of an agent is the sum of [his/her] e-money and cash balances (also known as [his/her] float balance)."
Merchant payments	These transactions are movements of value from a customer to a merchant to pay for goods or services at the point of sale.

Term	Definition
Mobile microcredit (also microloans)	Mobile microcredit is a solution that enables mobile money customers to access small amounts of credit instantly via their mobile phone.
Mobile microinsurance	Mobile microinsurance is an option by which insurance premiums are paid from a mobile wallet through a mobile money platform.
Mobile money operator	A mobile money operator is "a company that has a government-issued licence to provide telecommunication services through mobile devices."
Over-the-counter transactions (OTC)	These transactions include money transfers or bill payments that are conducted without a registered account. "Some mobile money services [e.g., bill payments] are being offered primarily OTC. In such cases, a mobile money agent performs the transaction on behalf of the customer, who does not need to have a mobile money account to use the service."
Pay-as-you-go	Pay-as-you-go is an option by which an end customer makes a deposit for a product with the end goal of owning the device through a series of usage payments paid through a DFS channel.
Person-to-person transfers	These transactions originate from a customer DFS account and terminate in another customer DFS account.
Registered customers	Registered customers are the cumulative number of customers who have registered for a service, regardless of whether they are active.
(Agent) Revenue	Revenue comprises the total commissions earned by agents for all the transactions they conduct through their agent accounts.
Second-generation products	These products are more advanced DFS, such as microcredit and microinsurance products, loan repayments, merchant payments, push (to bank)/pull (from bank) transfers and international remittances.
Third-party operators	Third-party operators are DFS providers that leverage existing infrastructure of mobile network operators (MNOs). They are usually MNO agnostic and, in some cases, could be master agents or others acting on behalf of a DFS provider or an MNO, whether pursuant to a service agreement, a joint venture agreement or another contractual arrangement.
Transaction	A transaction could involve cash-in, person-to-person transfer, cash-out, bill payment and/or airtime top-up. A transaction does not include any other type of activity that does not involve the movement of value (e.g., balance inquiry).

Foreword

In November 2017, the Zambian Ministry of Finance unveiled the country's first National Financial Inclusion Strategy (2017–2022).[1] The strategy targets an overall increase in financial inclusion (formal and informal) from 59% to 80% and an increase in formal financial inclusion from 38% to 70%, by 2022. The strategy highlights four drivers that would be key to achieving these targets, including the following:

1. Widespread and accessible delivery channels: Automated teller machines, agents, branches, points of sale and mobile phones.
2. Diverse and innovative customer-centric products: Digital financial services (DFS), savings, credit, payments, insurance, pensions, etc.
3. Finance for small and medium enterprises for agricultural sector growth: Small and medium enterprise finance, agricultural finance, etc.
4. Financial consumer protection and capability: Disclosure, dispute resolution, business practices, financial education, etc.

The strategy reflects the key role DFS have played in driving an increase in formal financial inclusion in the country. Zambia has broken through the 'sub-scale trap,' with the percentage of adults with an active DFS account growing from 2% in 2014 to 18% in 2016 and then to 24% in 2017. Despite this growth, there is still a need to improve access to and usage of DFS among new and existing customers, including previously excluded segments of the population such as rural inhabitants, women, youth and refugees. This need presents an opportunity for DFS providers to offer innovative solutions that better meet customer needs and drive regular usage of affordable and accessible financial services.

The UN Capital Development Fund (UNCDF) developed the Annual Provider Survey (APS), which provides industry participants with a comprehensive view of the state of the DFS market in Zambia. The APS aims to deliver relevant information to DFS stakeholders so that they can make informed decisions regarding the growth of the industry. The 2016 APS and the Digital Chikwama Awards[2] inspired many industry stakeholders to work even harder to drive financial inclusion and make the DFS market more competitive and responsive to customers. We hope to do the same this year.

As this report will detail, while there has been some success on the part of providers to grow the active customer and active agent base, the level of activity is still lower than the sub-Saharan African regional average. Like last year, providers continue to report challenges developing partnerships to expand DFS into rural areas of Zambia.

The UNCDF programme MM4P will continue to support multiple key industry initiatives such as improved data analytics, greater incentives that drive increased activity among customers and agents, better agent network management and innovation.

While the Zambian DFS ecosystem has escaped the sub-scale trap, it still has miles to go before it reaches its full potential. Our vision continues to be aligned with the National Financial Inclusion Strategy, one in which Zambians are able to reach their familial, personal and entrepreneurial goals with accessible and affordable digital financial products and services.

Nandini Harihareswara

UNCDF-MM4P Regional Technical Specialist, Digital Finance

[1] See http://www.boz.zm/National-Financial-Inclusion-Strategy-2017-2022.pdf
[2] See https://www.linkedin.com/pulse/celebrating-advances-innovation-zambian-digital-financial-uncdf-mm4p/?published=t

1. State of the global digital financial services industry

Globally, DFS have become the leading payment channel for digital economies in emerging markets. There are DFS deployments in more than 90 countries. Of all low- and lower-middle income countries in the world, three quarters of them have DFS deployments.

Results from the 2017 Global Findex survey by the World Bank reveal an increase in overall financial inclusion.[3] Worldwide, 69% of the adult population had access to an account at a financial institution or a mobile money provider in 2017, compared to 62% in 2014.[4] Results also suggest that mobile money is a key driver of the increase in account ownership. Globally, 52% of adults made or received payments digitally at least once in the past 12 months in 2017, compared to 41% in 2014. In sub-Saharan Africa, 34% of the adult population made or received payments digitally in 2017, compared to 27% in 2014. Yet, 1.7 billion adults remain unbanked worldwide. Two thirds of these adults own a mobile phone, which offers new opportunities to bring the unbanked into the financial system.

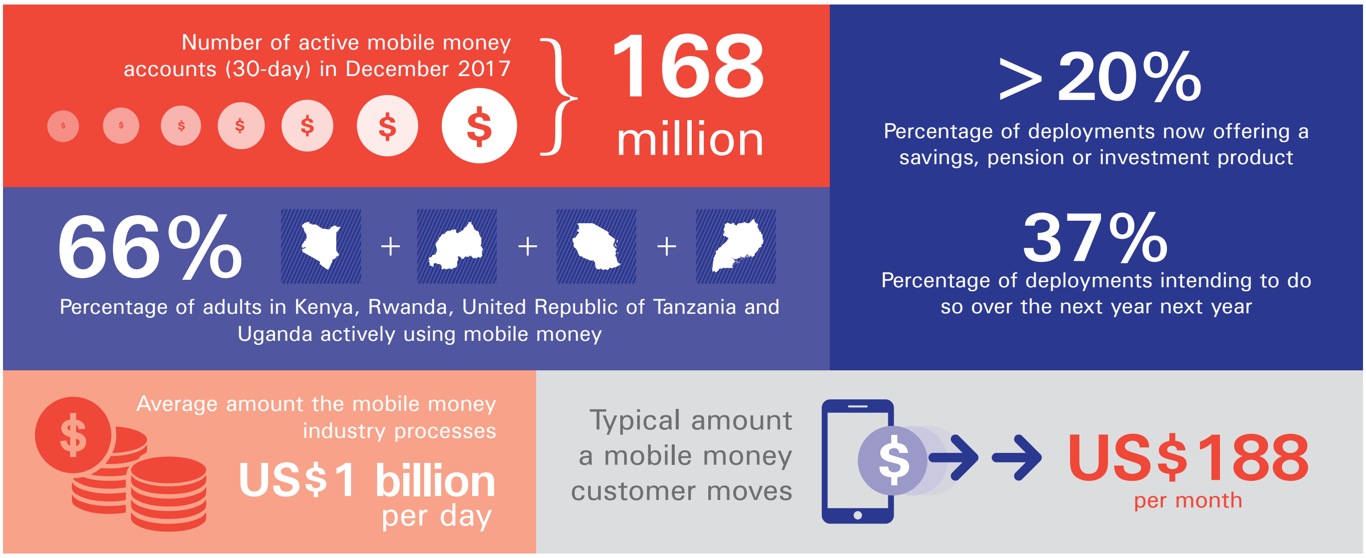
The findings of the 2017 State of the Industry report by GSMA show similar trends.[5] In terms of usage, the total value of transactions conducted through mobile money providers grew by 23% from US$26 billion in December 2016 to US$32 billion in December 2017. Of mobile money providers, 22% now offer DFS-enabled savings, which suggests DFS can serve as a tool for saving money and earning interest.

While feature phones and Unstructured Supplementary Service Data (USSD) transactions continue to be the most widely used interface for DFS users, 73% of providers delivered DFS through smartphones in 2017, compared to 56% in 2015. Agents remain the backbone of the DFS industry. Between 2015 and 2017, the number of registered agents increased by 17%. In 2017, there were 5.3 million registered agents, of whom 55% were active.

More providers, particularly mobile network operators (MNOs), are starting to recognize DFS as a source of direct revenue for their businesses, as they see a contribution by DFS of more than $2.4 billion in direct revenue and revenue growth of 34% year-on-year. Important trends include the increased adoption of smartphones and the participation of financial technology companies (fintechs), with a focus on the digitization of new sectors of the economy. Renewed efforts by companies and governments to reach the most vulnerable have led them to continue exploring the option of using mobile money providers as a payment platform.

Figure I highlights additional key facts and figures that capture the state of the global DFS industry.

Figure I
State of the global digital financial service industry (2017)



Source: Figure based on one found in GSMA, 2017 *State of the Industry Report on Mobile Money* (London, 2018), p. 8.

[3] Asli Demirgüç-Kunt and others, *The Global Findex Database 2017: Measuring Financial Inclusion and the Fintech Revolution* (Washington, DC, World Bank, 2018). doi:10.1596/978-1-4648-1259-0. Licence: Creative Commons Attribution CC BY 3.0 IGO. *Note*: All statistics cited in this paragraph are from this source.
[4] *Note*: This figure includes anyone with an account that was used at least once in the past 12 months.
[5] GSMA, *2017 State of the Industry Report on Mobile Money* (London, 2018). *Note*: All statistics cited in this and the following two paragraphs are from this source.

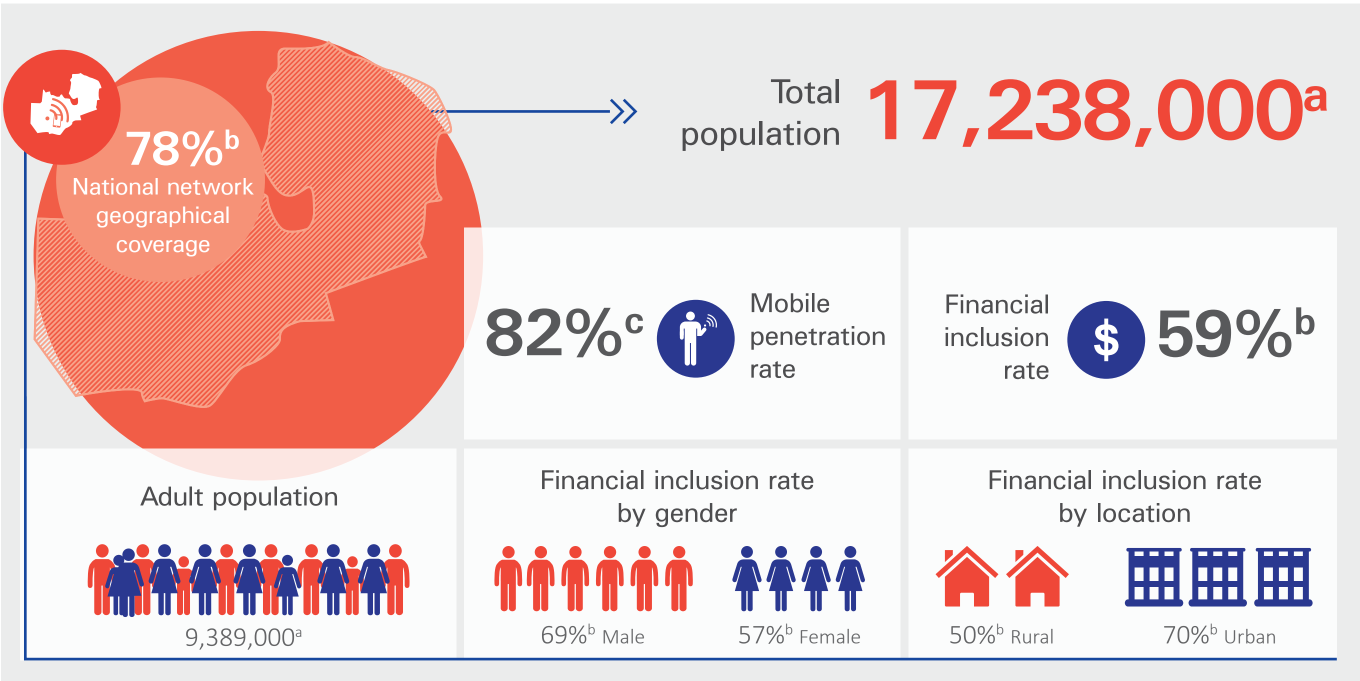
1. State of digital financial services in Zambia

Between December 2014 and December 2016, the DFS industry in Zambia experienced significant growth in terms of number of active customers, agents and DFS providers. The industry went from having only 2% of the adult population with an active DFS account from four providers in 2014 to 18% of the adult population with an active DFS account from 18 providers in 2016. This growth continued through 2017, with the percentage of adults with an active DFS account reported at 24%. To handle the increase in the number of active customers, there has been a 74% growth in the number of active agents. With an increased level of trust in DFS, demonstrated by the growth of active customers, there has also been an expansion in use cases and partnerships between financial service providers and non-financial service providers such as pay-as-you-go solar services.

As seen in several DFS markets across the world, there have been developments in the Zambian fintech sector. A preliminary scoping exercise conducted by the UNCDF-MM4P team revealed that there are at least 25 fintechs developing solutions across various sectors ranging from financial services to education, agriculture and health.

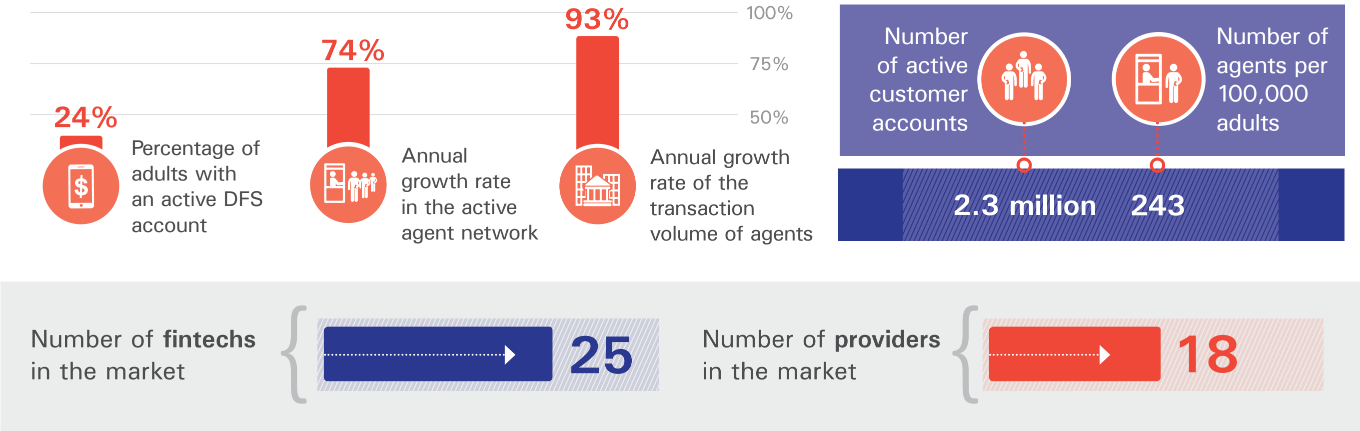
Figures II and III provide an overview of Zambia and the state of its DFS market.

Figure II
General statistics about Zambia



[a] UN World Population Prospects, 2017
[b] FinScope, 2015. See http://www.fsdzambia.org/wp-content/uploads/2016/05/FINSCOPE-REPORT-2015.pdf
[c] ZICTA, 2017. See http://onlinesystems.zicta.zm:8585/statsfinal/ICT%20Indicators.html

Figure III
State of the Zambian digital financial service market (December 2017)



2. Methodology

This report provides key insights into the state and development of the DFS market in Zambia, drawing on data collected through the APS. The survey is developed by the UNCDF-MM4P team and administered to DFS providers that offer DFS, including banks, microfinance institutions, MNOs and third-party providers. Survey data are self-reported and are validated with the support of the Bank of Zambia.

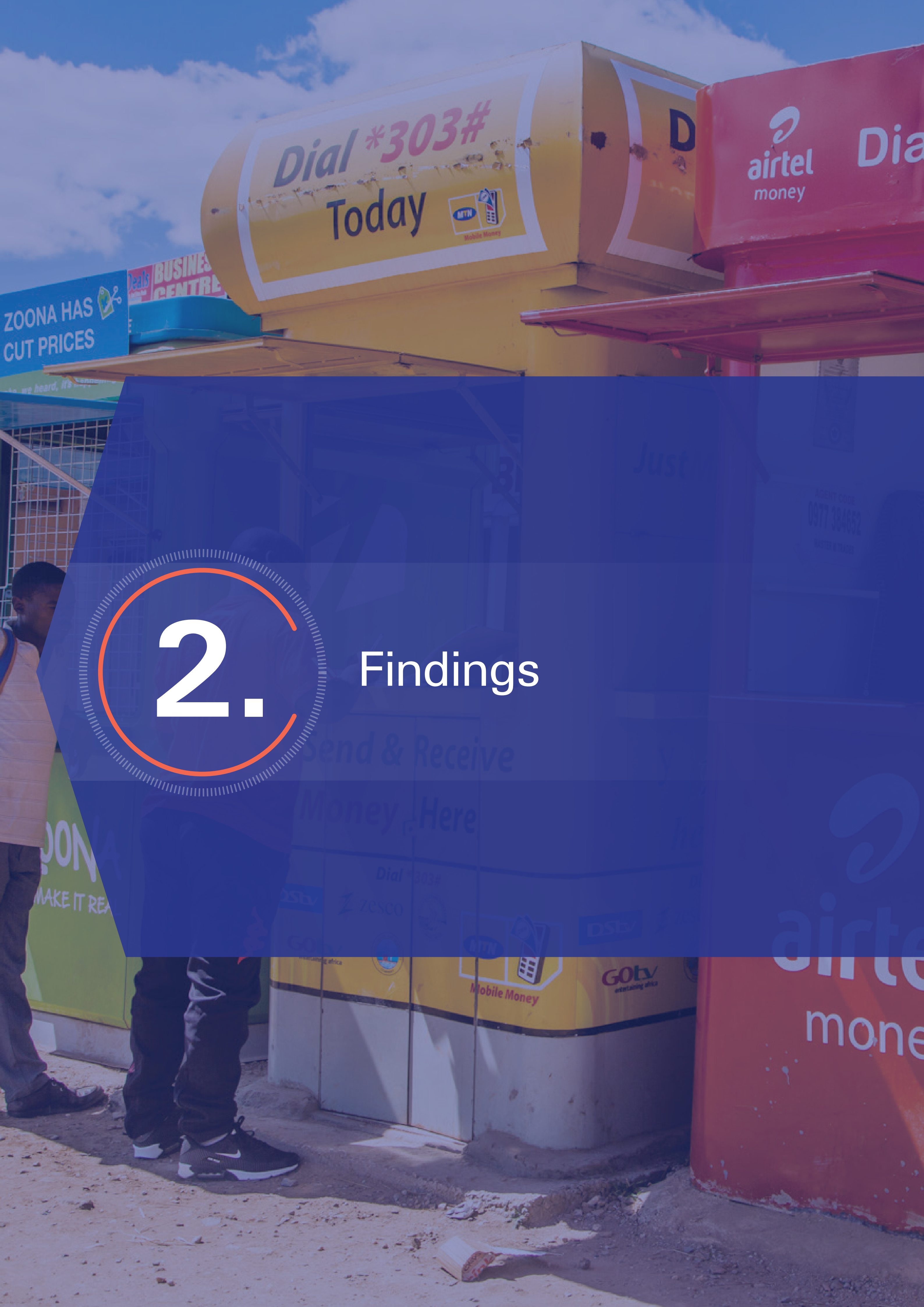
The survey includes both quantitative and qualitative questions. Quantitative data were collected on the following indicators:

- Total number of customers, registered and active (90 days)
- Number of unique active customers by service type
- Volume and value of transactions conducted by customers through customer accounts
- Volume and value of transactions conducted by customers at agent locations
- Number of agents, registered and active (30 days)
- Total volume and value of transactions at agent locations
- Commissions paid to agents

Qualitative information was collected on the performance of the institutions interviewed along with their strategic focus areas, key challenges and engagement level with the UNCDF-MM4P programme in Zambia.

Institutions are guaranteed that their submissions remain confidential per the United Nations standard policy on handling proprietary information supplied by its members. UNCDF signed non-disclosure agreements wherever it was required by the providers.

All data presented in this report have been aggregated and anonymized. DFS providers that participate in the survey receive a benchmarking report that allows them to gauge their performance relative to the rest of the market, in terms of adoption as well as usage of services and the distribution network.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2. Findings

1. Providers

As of December 2017, there were 18 DFS providers in Zambia. In 2017, the industry saw the launch of the third DFS by an MNO: Zamtel Kwacha. The merger of BancABC and Finance Bank, as Atlas Mara, was also launched. The DFS providers in Zambia include the following:

- **Banks/Microfinance institutions:** Atlas Mara, Barclays Bank, Ecobank, FINCA, First National Bank, Indo Zambia Bank, Investrust Bank, Standard Chartered Bank, United Bank for Africa and Zambia National Commercial Bank (better known as Zanaco)
- **MNOs:** Airtel, Mobile Telephone Networks (better known as MTN) and Zamtel
- **Third-party providers:** cGrate, Spargris (Kazang), SpeedPay, Zambia Postal Services Corporation (better known as ZamPost) and Zoona

Figure IV lists the digital financial products offered in the market as of December 2017. No new products were launched in 2017. Although the Zambian DFS market continues to be heavily dominated by first-generation products such as person-to-person transfers, airtime purchases, bill (utility) payments, bulk payments and cash-in and cash-out transactions, the country is starting to see more use cases for second-generation products such as pay-as-you-go solar services and merchant payments.

Figure IV
Types of products offered by provider type (December 2017)

Banks

First generation:
- Domestic person-to-person transactions
- Cash-in/Cash-out transactions
- Airtime top-ups
- Savings
- Bulk payments

Second generation:
- International remittances
- Bank-to-wallet and wallet-to-bank transfers
- Merchant payments

MNOs

First generation:
- Domestic person-to-person transactions
- Cash-in/Cash-out transactions
- Airtime top-ups
- Bill payments
- Bulk payments

Second generation:
- International remittances
- Bank-to-wallet and wallet-to-bank transfers
- Merchant payments
- Digital loans

Third-party providers

First generation:
- Over-the-counter money transfers
- Cash-out transactions (from bank)
- Airtime top-ups
- Bill payments
- Loan repayments
- Bulk payments

As was the case in 2016, the year 2017 witnessed a rise in the number of partnerships aimed at offering DFS. For instance, there was increased collaboration between banks and MNOs offering push (to) and pull transfers (from) bank accounts.

In December 2017, more than $5.2 million was transacted between bank accounts and MNO customer wallets, up from less than $10,000 in December 2016.

Of those providers interviewed, 75% reported that DFS represent a commercially sustainable business. This finding could be attributed to efforts by providers to continuously increase investment directed toward improving technical and organizational capacity.

In fact, for the second year in a row, all APS respondents mentioned an increased investment in DFS. Providers also highlighted that their key strategic focus areas were improving customer acquisition, increasing agent activity and developing new services through strategic partnerships.

As this report will underscore, providers will need to explore the possibility of directing more investment toward their understanding of customer and agent dormancy with the objective of implementing interventions focused on driving usage and adoption.

2. Customers

Registered and active customer accounts: In 2016, the annual growth rate of the number of both active and registered accounts was 24%. In 2017, the number of registered customer accounts increased by 75%, from 7.5 million in December 2016 to more than 13 million in December 2017. The number of active customer accounts increased by 77%, from 1.3 million in December 2016 to 2.3 million in December 2017.

As figure V(a) indicates, in absolute numbers, the growth of total registered customers was much higher than that of total active customers for the period of 2015 to 2017. This finding could be an indication that providers need to explore options that direct efforts toward improved customer education, product offerings, incentives and data analysis that drive usage:

- **Improve customer education efforts:** Providers could do so through direct marketing or below-the-line campaigns to educate customers on the value proposition of DFS.
- **Improve product offerings:** There is a need for providers to improve their product design processes to ensure that the products they launch have input from customers and meet the needs and expectations of customers. Partnerships between financial service providers and non-financial service providers could also increase the use cases for customers. Pay-as-you-go solar services, as well as bundled digital solutions for healthcare, agriculture and education, are just a few examples that could be explored.
- **Offer incentives to drive usage:** ‘Transact-and-win’ campaigns focused on use cases that drive ‘stickiness’ of DFS could be explored. Providers have had greater success when using airtime purchase as a use case; of active customers, 40% were found to purchase airtime from their account at least once a month.
- **Conduct data analysis coupled with a survey of inactive customers:** There is a need to better understand why consumers sign up for a service that they eventually end up not using. These insights could also highlight which improvements providers need to make to their existing products or new products in order to drive usage.

As figure V(b) highlights, there was continued growth in the percentage of adults with an active DFS account, growing from 18% in 2016 to 24% in 2017.

Figure V(a)
Number of registered and active customer accounts

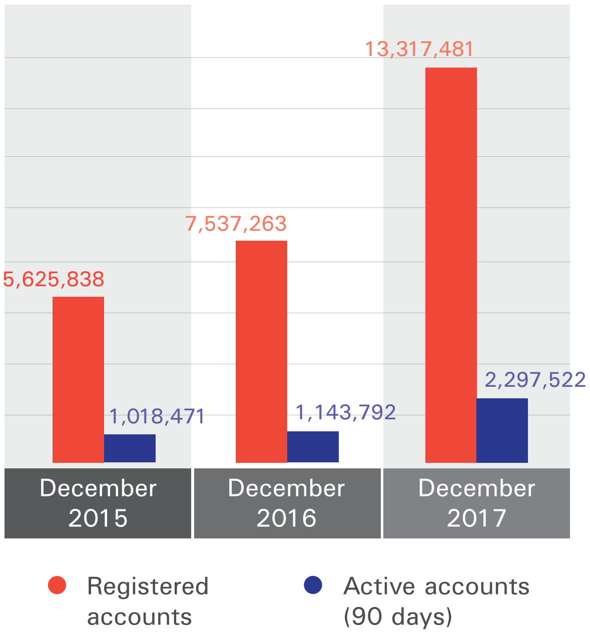


Figure V(b)
Percentage of adults with an active digital financial service account

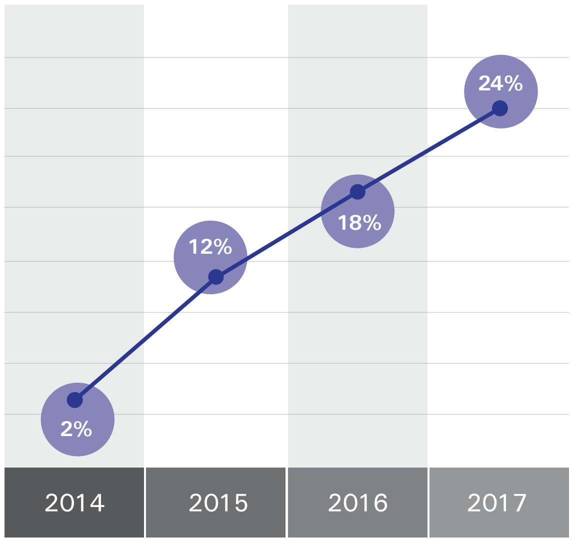
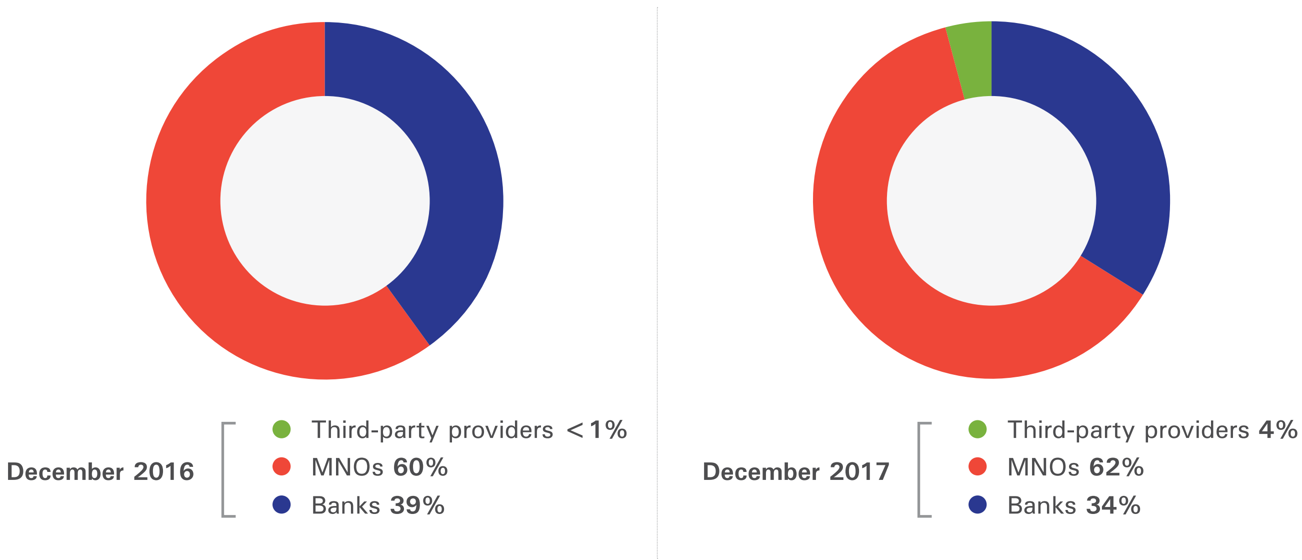


Figure VI compares the market share of active customer accounts by provider type in December 2016 and December 2017. In December 2017, 62% of active customer accounts were held by MNOs. From 2016 to 2017, the market share of banks slightly decreased from 39% to 34%, while third-party providers showed an increase from 0.4% to 4%.

Figure VI
Market share of active customer accounts by provider type



The customer activity rate is the share of registered accounts that are actively used (i.e., at least one transaction conducted during the past 90 days). While there was an increase in the customer activity rate from 2016 to 2017, figure VII(a) reveals that 83% of all registered accounts were inactive in December 2017.

All provider types exhibited an increase in their customer activity rate between December 2016 and December 2017, as figure VII(b) demonstrates. However, banks experienced a significantly higher customer activity rate of 49% compared to 12% by MNOs. A combination of surveys and additional data analyses of inactive customers could provide insights as to why customers remain inactive and what kind of initiatives and/or incentives providers could test to drive usage of their services.

Figure VII(a)
Customer activity rates by year*

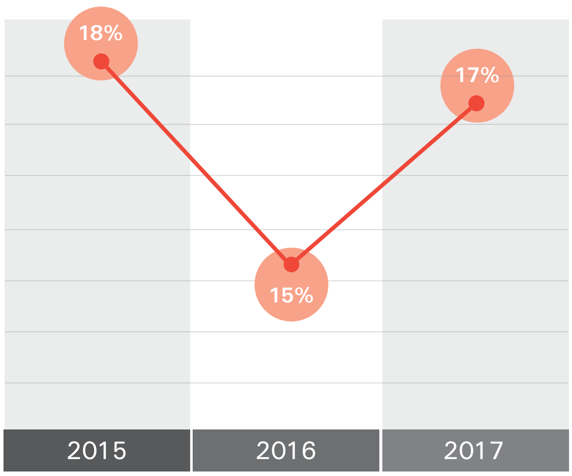
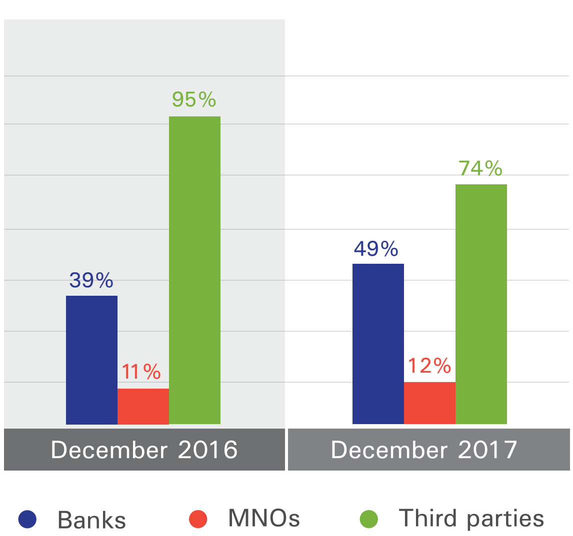


Figure VII(b)
Customer activity rates by provider type



* The customer activity rate for 2016 was adjusted from 11% to 15% based on additional provider data received since the publication of this report's predecessor, *State of the Digital Financial Services Market in Zambia, 2016*.

Volume and value of transactions: In December 2017, customers conducted 41.5 million transactions for a total value of ZMW 30.8 billion ($3.1 billion).[6] Figure VIII displays the share of volume and value of transactions in December 2017 by provider type. Banks contributed 44% of the total volume of transactions, corresponding to 93% of the total value of transactions. This finding is in line with the reported average transaction value for banks of ZMW 1,565 ($156) compared to ZMW 146 ($15) for MNOs and ZMW 17 ($2) for third-party providers.

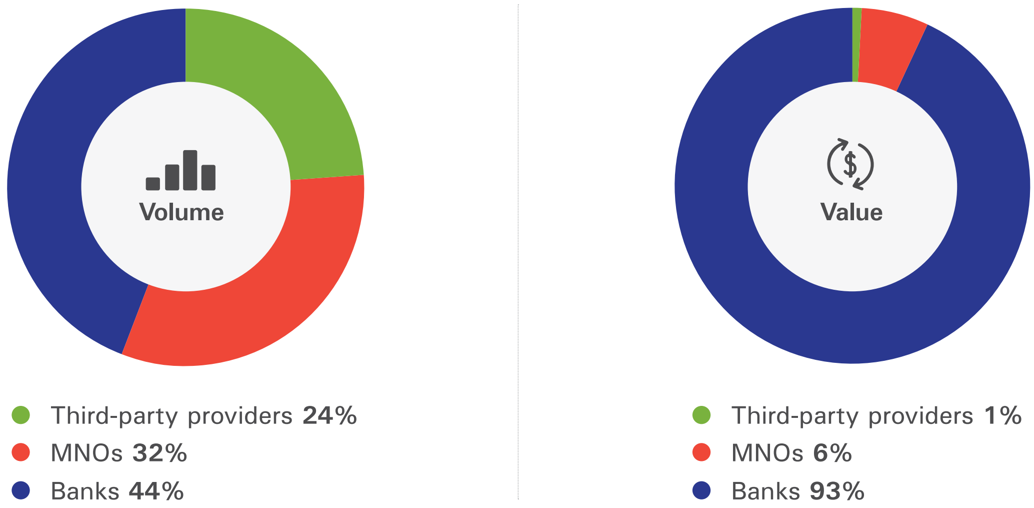
While 24% of the transactions were conducted by third-party providers, this amount only accounted for 1% of the total value of transactions in December 2017. These findings indicate the following:

- The low transaction value of third-party providers may have been due to the fact that many of their transactions are predominantly airtime top-ups, which are typically low in value.
- The fact that third-party providers processed 24% of transactions presents a potential case for banks and MNOs to explore super agency partnerships with third-party providers to convert over-the-counter (OTC) customers to wallet users.

[6] *Currency conversion rate*: US$1 = ZMW 10.0095 (*Source*: https://treasury.un.org/operationalrates/OperationalRates.php, 1 August 2018). *Note*: This report refers to the Zambian kwacha as ZMW based on guidance from the Bank of Zambia, the country's central bank, after a currency adjustment. This rate was used throughout this report when United States dollar equivalents were provided for Zambian kwacha.

Figure VIII

Share of the volume and value of transactions by provider type (December 2017)



The APS also aims to provide insights into how customers use DFS. To that end, figure IX shares the volume and value of transactions by product type for customers with accounts. 'Other' services referred to in the figure include bulk payments, push-and-pull transfers, international remittances and digital loans.

In terms of volume and value, cash-in and cash-out services constituted 36% and 86% of transactions, respectively, conducted by customers with wallets. This finding emphasizes the need for providers to address challenges related to liquidity in order to improve the customer experience.

Figure IX

Share of the volume and value of transactions by product type (December 2017)

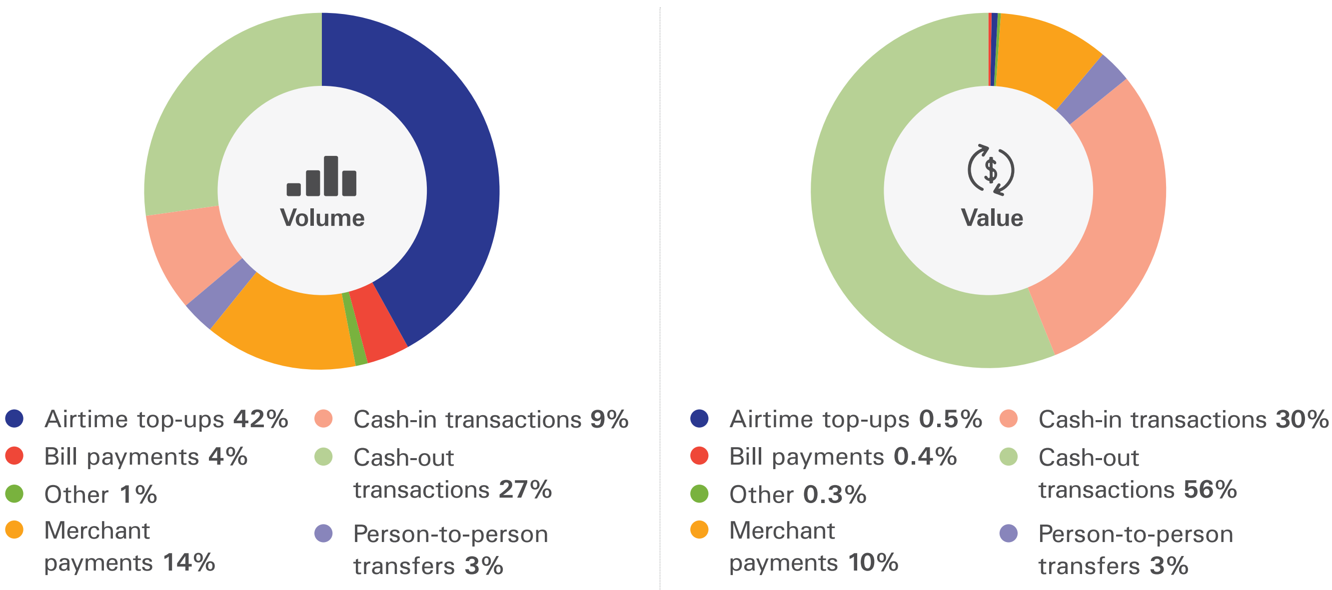
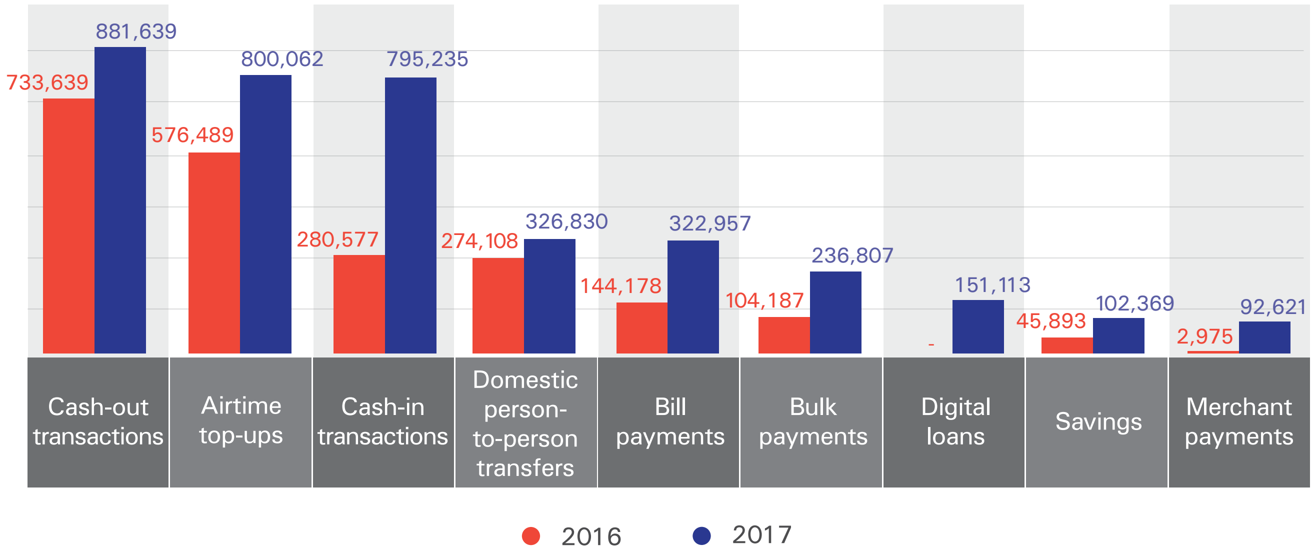


Figure X compares the number of unique active customers by DFS type in December 2016 and December 2017. There was a general growth trend in the usage of all DFS types in 2017. This annual growth was as low as 19% for person-to-person transfers and as high as 203% for bulk payments.

Figure X
Number of unique active customers by product type



> The number of customers conducting cash-in transactions grew by 183% while the number conducting cash-out transactions grew by only 20%.

Cash-in and cash-out transactions: The choice to leave more money in their wallets could be an indication of customers' increased trust in DFS, prompting them to use their wallets as a store of value and to conduct more transactions. If, in fact, customers are using their wallets as a store of value, there is potential for a savings product to be developed to address that use case.

Airtime purchases: The percentage of active customers purchasing airtime using their wallets increased by 39%. Similar to 2016, the continued growth of customers purchasing airtime using their mobile money wallets can be attributed to incentive schemes from providers that give extra talk time for airtime purchased through mobile money. It also proves the very strong business case for MNOs to allow for airtime purchase through mobile money, which offers very large savings to them. It may also push for more cooperation/integration between the airtime business line and the mobile money business lines.

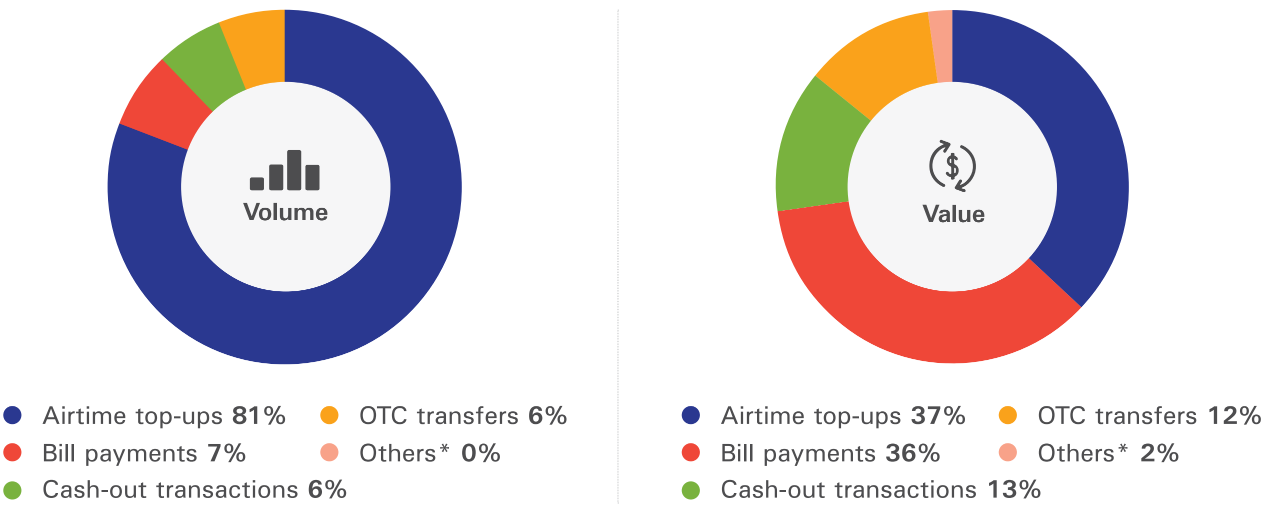
Bill payments, bulk payments and merchant payments: With active customer growth rates of 65%, 127% and 3,013% respectively, bill payments, (many-to-one) bulk payments and merchant payments registered the highest growth rates. This result could be an indication that second-generation products, while still nascent in the market, are beginning to take hold. Increased consumer education is likely to increase usage of these services.

Even though the numbers are still marginal in comparison to total transactions conducted by customers, there has been an increase in the use of second-generation products, particularly push (to bank) and pull (from bank) account, digital (micro) loans and bulk payments (one to many). With improved customer education efforts, the number of customers using these products is likely to increase.

OTC transactions: With four third-party providers offering DFS as OTC services, this report also aims to provide insights into the transaction behaviour of customers at agent locations.

Figure XI shows that airtime transactions accounted for more than 80% of the total number of transactions and 37% of the total value of transactions conducted by customers at agent locations. However, while bill payments represented only 7% of the total number of transactions at agent locations, they accounted for 36% of the total value of transactions.

Figure XI
Volume and value of over-the-counter transactions conducted by customers at agent locations (2017)



* Other OTC transactions include international remittances, loan disbursement services, insurance products, individual bank or microfinance institution deposits, bulk payments and individual bank or microfinance institution account withdrawals.

The fact that 75% of the total value of transactions at agent locations was conducted in cash is an indication that agents of third-party providers are a 'cash-rich' channel. This finding could offer an opportunity for banks and/or MNOs to take the following actions:

- Explore third-party providers as super agents to support the rebalancing of their agents in order to address the liquidity issue that was highlighted as one of the challenges providers face in the expansion of services.
- Partner with third-party providers as super agents to provide cash-in and cash-out services for customers with wallets.
- Incentivize agents of third-party providers to convert OTC customers to wallet users or to educate existing customers to drive first-time usage.

2. Agents

Agents perform a range of functions, including registering new customers, conducting cash-in and cash-out transactions, resolving customer queries, and combating money laundering and the financing of terrorism by enforcing know-your-customer regulations. With the right incentives, agents could be leveraged as a key channel for providers to drive increased adoption and usage of DFS by customers.

Registered and active agents:[7] Figure XII(a) reveals that, between December 2016 and December 2017, the number of registered agents increased by 57% from 40,039 to 62,876. Meanwhile, the number of active agents increased by 74% from 13,216 to 22,946. This finding corresponds to an increase in the number of active agents per 100,000 adults from 136 to 243.

Figure XII(b) indicates the market share of active agents by provider type. Of the 22,946 active agents in December 2017, 56% were MNO agents. Compared to December 2016, the market share of agents of MNOs decreased from 62% to 56%, while the market share of agents of third-party providers increased by 11 percentage points. The market share of banks remained constant at 3%.

Figure XII(a)
Number of registered and active agents

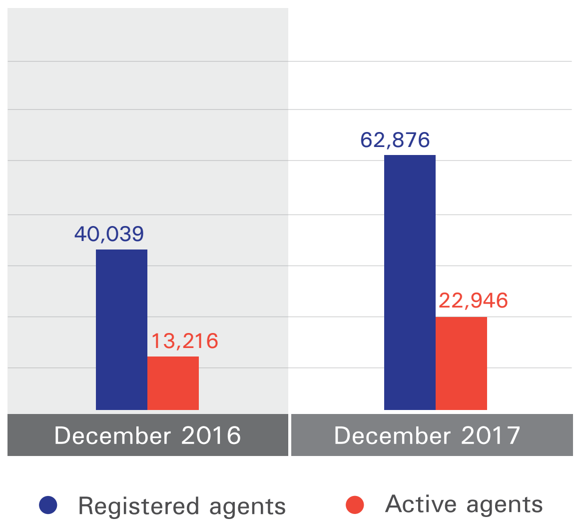
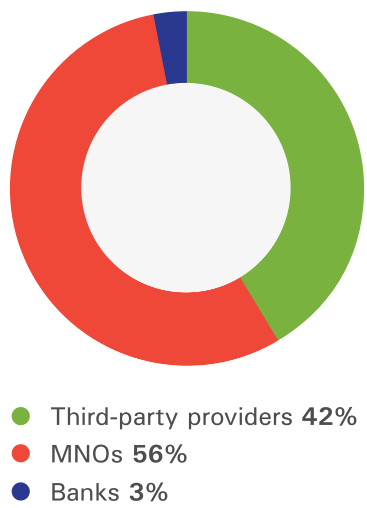


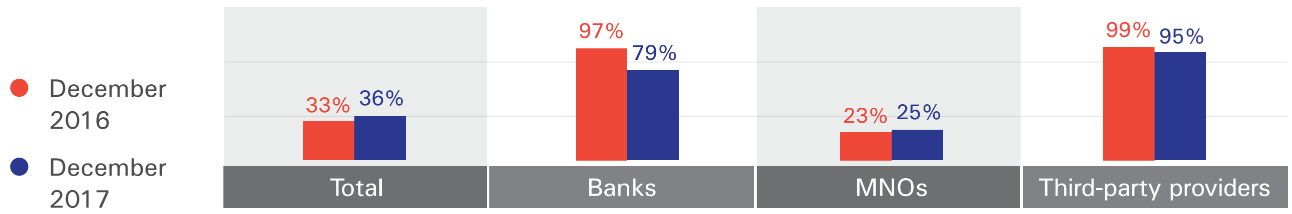
Figure XII(b)
Market share of active agents by provider type (December 2017)



The agent activity rate is the percentage of registered agents who are active (i.e., have conducted at least one transaction in the past 30 days). Overall, the agent activity rate increased from 33% in December 2016 to 36% in December 2017. However, 64% of registered agents were still inactive in December 2017.

Figure XIII shows the agent activity rate by provider type. Third-party providers exhibited the highest agent activity rate at 95% in December 2017, followed by banks. Even though MNOs had the highest number of registered and active agents, their agent activity rate was relatively low at 25%.

Figure XIII
Agent activity rate by provider type



[7] Active agents are those who have conducted at least one transaction in the past 30 days.

The high level of inactivity of agents, particularly of MNO agents, could be caused by several factors, including these:

- **Ineffective agent network management strategies:** If agents do not receive sufficient support, newly registered agents may struggle to grow their businesses while existing agents might be pushed to close their businesses due to unresolved issues.
- **Poor commercial viability of agent locations:** Setting up agent locations in areas where there is no matching customer demand could result in agents not being able to conduct enough transactions to remain viable.

Figure XIV highlights the number of transactions at agent locations in various months between December 2016 and December 2017. Both the volume and value of transactions significantly increased by December 2017, growing by 93% and 149% respectively.

Figure XIV
Volume and value (ZMW) of transactions at agent locations

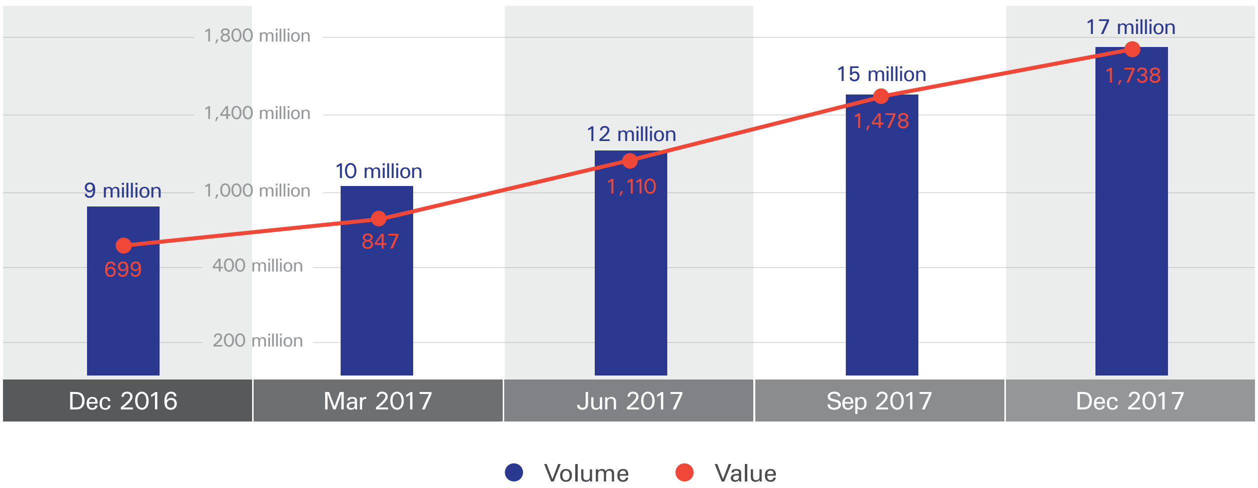


Figure XV(a)
Share of transaction volume by provider type

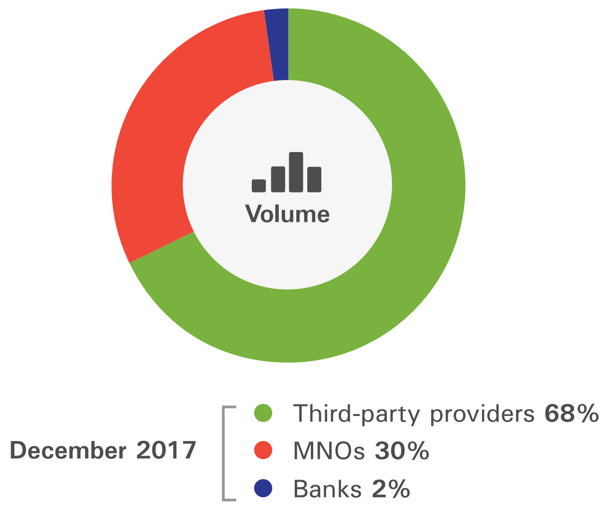


Figure XV(b)
Share of transaction value by provider type

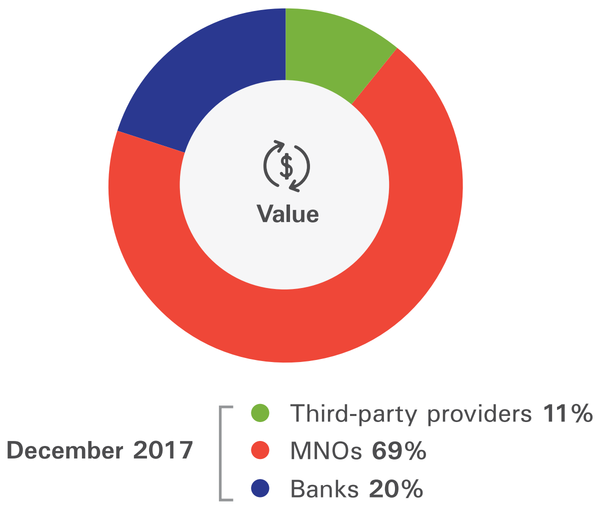


Figure XV(a) indicates that, in December 2017, agents of third-party providers processed 68% of transactions. However, as figure XV(b) reveals, the contribution of third-party providers to the value of transactions at agent locations was only 11%, which is the lowest share of the three provider types. In comparison, the volume and value of transactions for MNOs was 30% and 69% and for banks 2% and 20%.

Figure XVI(a) shows the average volume and value transacted per agent in various months between December 2016 and December 2017. In December 2017, each active agent conducted an average of 747 transactions (25 a day, in a seven-day workweek) for an average aggregate value of ZMW 72,954 ($7,288). There was a slight increase in the average number of transactions and a 38% increase in the average value of transactions per active agent.

Figure XVI(b) indicates that, in December 2017, bank agents had the highest average value of transactions. The reason is that banks tend to have the highest-income customers, who feel most comfortable conducting transactions of larger value with a "bank behind it." Third-party provider agents had the lowest average value of transactions, while they reached the highest average volume of transactions per agent. As highlighted earlier in this report, the high customer traffic at third-party agent locations presents an opportunity for conversion of OTC customers to wallet users.

Figure XVI(a)

Volume and value (ZMW) of transactions per agent

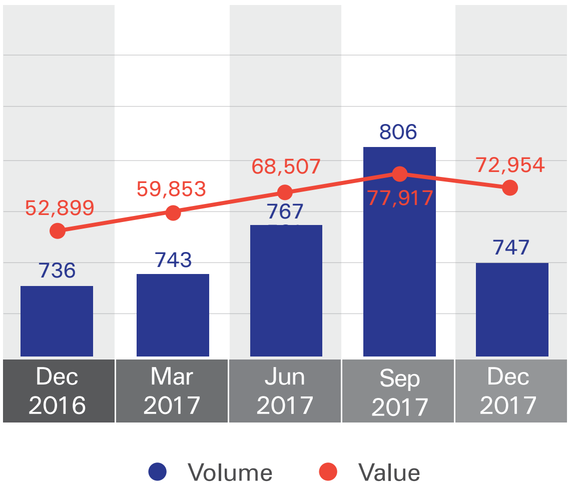
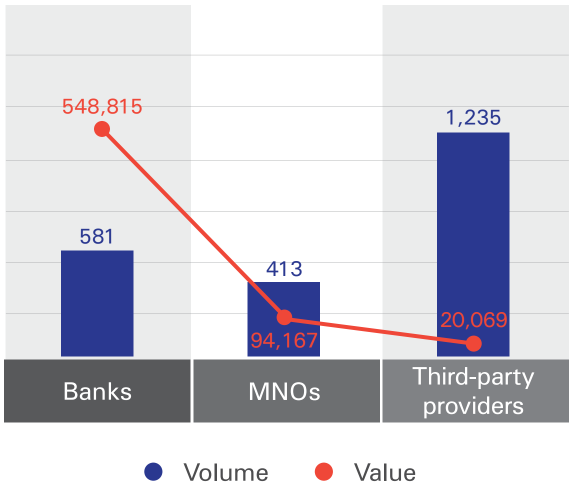


Figure XVI(b)

Average transaction volume and value (ZMW) per agent by provider type (December 2017)



Agent commissions: The increase in the volume and value of transactions conducted with agents discussed above resulted in an increase in the total value of commissions paid to agents. As figure XVII(a) reveals, between December 2016 and December 2017, the total monthly value of commissions paid to agents increased by 71%, from ZMW 8.9 million ($0.9 million) to ZMW 15.2 million ($1.5 million). Of the total value of commissions paid to agents in December 2017, 63% was paid to MNO agents, 26% to third-party agents and 11% to bank agents.

While the total value of monthly agent commissions increased, the average value of commissions paid per agent per month remained the same at ZMW 676 ($68). As figure XVII(b) indicates, at an average of ZMW 2,772 ($277) per agent in December 2017, agents of banks received the highest monthly commissions. In contrast, agents of third-party providers reported the lowest monthly commissions per agent and recorded a 21% decline from ZMW 512 ($51) in December 2016 to ZMW 407 ($41) in December 2017. The difference in the value of commissions paid to bank agents in comparison to both MNO and third-party agents could be attributed to the difference in transaction value size.

Figure XVII(a)
Total value of monthly agent commissions (ZMW)

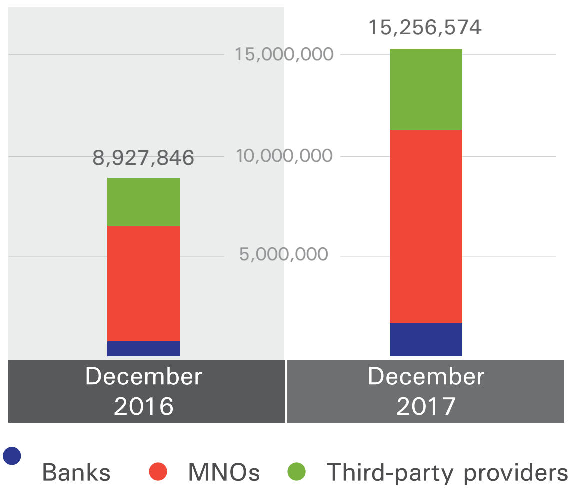
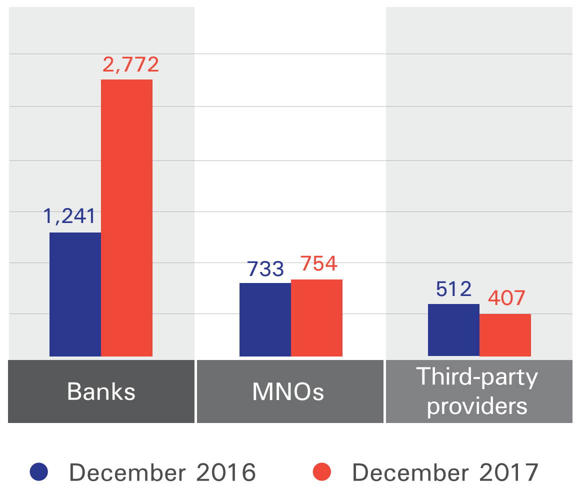


Figure XVII(b)
Average monthly commissions per agent by provider type (ZMW)



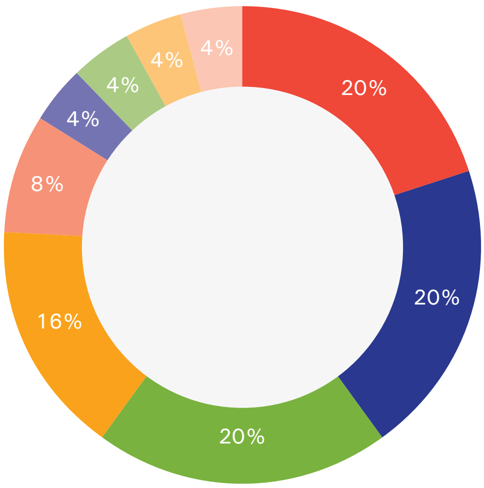
3. Innovation and fintechs

Innovative fintechs are disrupting the finance industry across the world, and collaboration between fintechs and traditional financial players could be key to bringing more Zambians into the formal financial service system.

As summarized in figure XVIII, a preliminary scoping exercise revealed that there are at least 25 fintechs developing solutions across sectors that range from financial services, pay-as-you-go solar, health, education to agriculture in Zambia.

Figure XVIII

Fintech landscape in Zambia based on UN Capital Development Fund scoping exercise



Fintechs are addressing vital needs in Zambia!

- Pay-as-you-go **20%**
- Payments and transfers **20%**
- Information and communication technology solutions **20%**
- Digital credit **16%**
- Agriculture **8%**
- Digital insurance **4%**
- Aggregator **4%**
- Financial management solutions **4%**
- Incubators and accelerators **4%**

Digital credit and insurance

KwikFin, JUMO, lupiya, MicroRe, ExpressCredit.co.zm

Pay-as-you-go

d.light, fenix intl, VITALITE, KAZANG SOLAR

Incubators and accelerators

BongoHive

Payments and transfers

SPEEDPAY, 543 KONSE KONSE, KAZANG, ZAZU, ZOONA

Agriculture

Aggregator

cellulant

Information and communication technology solutions

Probase, FIN GEN, NECOR, Zynle, MPS, OPENCBS

Research on specific user groups such as farmers, refugees and mothers in Zambia revealed a demand for tailored digital financial products, highlighting opportunities for fintechs currently in or potentially entering the financial inclusion sector to provide digital solutions that address the needs, wants and aspirations of Zambian customers. Innovative digital solutions could also address the significant customer dormancy issues the industry faces today.

4. Providers' performance and challenges

The APS included qualitative questions on the performance of the DFS providers. The following are the key insights garnered from their responses:

- Eighty percent of providers interviewed indicated that DFS represent a commercially sustainable business. Commercial viability was reported to have increased from 2016 to 2017. For a second year, a little less than three quarters of respondents highlighted the sustainability of DFS in their organizations.
- Across the various providers interviewed, the average number of employees working in DFS doubled in 2017. Two thirds of these employees were focused on agent distribution.
- Only 40% of respondents said that they track sex-disaggregated data. Of those respondents monitoring these data, 33% of their customers were women. In comparison, 55% of respondents track rural customers. They reported that 26% of their registered customers were rural customers.

DFS providers still encounter several challenges as they attempt to reach scale and sustainability. The most commonly reported challenges facing DFS providers are these:

- **Dealing with low product awareness of new and existing products.** Limited awareness is reflected in the high levels of customer inactivity.
- **Managing agent network.** Providers reported challenges with developing the right structures to successfully manage agent networks in both urban and rural areas in a cost-effective way. These struggles include managing, monitoring and providing liquidity to agents.
- **Developing viable business models to support expansion into rural areas.** Given the geographic spread and low population density of Zambia, providers said that developing the right partnerships and viable business models to expand into rural areas remains a challenge.
- **Conducting data analysis for reporting and decision-making.** Providers reported limited internal capacity to support data analysis and reporting. The lack of accurate and timely data weakens the justification for business models, pricing (and incentive) changes and expansion efforts within their organizations. Better data analysis could provide key insights to address a number of challenges that have been identified by providers.

The APS also sought to identify the key areas on which the providers wish to engage with the regulators. The four key areas of engagement the providers indicated were the following:

- **Low transaction limits:** 40% of respondents highlighted that the transaction limits for customer wallets are still low.
- **Interest earned on pooled funds:** More than 40% of the providers indicated that they would like to engage with the regulators on the interest earned on pooled funds.
- **Interoperability guidance:** The providers reported that more efforts need to be directed to the national switch and interoperability.
- **Framework to support innovation:** Fintechs shared a need for the regulators to develop a clear framework under which innovations can be tested and eventually approved.

3. Opportunities and the way forward

To sustain the continued gains in adoption and usage of DFS, providers should look to unlock future growth potential by addressing the following key drivers:

- **Key driver 1: Increasing customer activity rates**. The data collected indicate that more than 80% of registered customers are inactive. Even though there is no silver bullet to address this issue, providers could explore these options:

- Developing and communicating a clear proposition for wallet users.
- Building more accessible networks. Beyond increasing the number of agents, providers can focus on improving the activity rates of agents as well as expanding their reach into rural areas to serve currently excluded or untapped segments.
- Bundling product offerings. By partnering with providers of non-financial services, providers of financial services can offer bundled products that increase the stickiness of digital solutions and eventually of financial services. Bundling could include offering pay-as-you-go solar services, providing information services to farmers, connecting buyers and sellers of goods and services, etc.

- **Key driver 2: Strengthening the distribution network**. With only 34% of total agents being active, providers still need to explore and fix issues related to management of their agent networks. These efforts could include the following:

- Reviewing and adjusting incentives for agent network managers, from a focus just on acquisition to a broader focus on usage and even liquidity.
- Providing adequate data to agent network managers for agent monitoring, particularly to ensure the right support is being offered to the right agents (e.g., helping agents understand their customers' behaviour patterns, time frames and cycles so that the agents can manage their cash and e-float better).
- Rethinking the criteria for agent selection and onboarding.
- Reconsidering partnerships in the area of agent networks (e.g., it is clear that third-party operators have been successful in engaging customers in high-volume, low-value payments more than banks and MNOs).

- **Key driver 3: Developing partnerships**. This report has highlighted the opportunities that exist for potential partnerships in the DFS market. These partnerships could include these:

- Super agents. Banks and/or MNOs could explore the option of third-party providers serving as super agents, providing cash-in and cash-out services and potentially addressing the liquidity challenges faced by agents.
- Fintechs and innovation. When financial service providers develop an internal application programming interface strategy, it enables them to capitalize on their existing customer base while opening their systems to fintechs that could create new business opportunities by developing new products and expanding use cases for customers.

- **Key driver 4: Using data for decision-making.** The use of data for decision-making will only become more critical as the DFS landscape grows more complex. Developing internal data analysis and management capacity to support segmentation of customers and agents, reviewing pricing and/or incentives as well as monitoring usage trends could lead to key insights for expansion of DFS.

- **Key driver 5: Establishing supportive regulation and policy.** With the introduction and growth of second-generation products as well as the emergence of the fintech industry, regulation calibrated to enable affordable services for the financially excluded remains essential to the success of DFS.

Acknowledgements

The UNCDF-MM4P team would like to thank the following organizations for providing data to support the Annual Provider Survey.

Disclaimer

This report is based on data collected through the 2017 Annual Provider Survey of Digital Financial Services and internal analysis by the UNCDF-MM4P team.

Survey data

Survey data are self-reported and have not been verified independently by the UNCDF-MM4P team; however, data are thoroughly checked and crosschecked against other benchmarks and data sources.

Confidentiality

Data published in this report have been presented in a way to protect the confidentiality of each provider. Any specific references or highlights in this report have only been presented with the approval of the provider to disclose key performance information.

Limitations

All data in this report are self-reported. In some cases, providers submitted partial data. Most of the providers that participated in the survey did not have data disaggregated by gender and only half had data on rural/urban split, which limited the level of analysis that could be completed with the data.

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