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Development Sector

Country assessment to facilitate digital financial inclusion in Ethiopia

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Executive summary

Digital technology provides an opportunity to reach the approximately 1.7 billion adults worldwide who remain unbanked. Digital financial services (DFS) can make a valuable contribution to the economic growth of a country. Digital financial inclusion (DFI) is key to the attainment of most (80 per cent) of the Sustainable Development Goals (SDGs). Notably, DFI is pivotal for the achievement of SDG 5, on the economic empowerment of women and gender equality, as it promises to extend financial access to the 35 per cent of women globally – nearly 980 million – who remain excluded from the formal financial system. Digital financial services have also provided a viable strategy in the context of the coronavirus disease (COVID-19) pandemic given the challenges created by the pandemic and the associated risks that threaten to expand existing digital and gender gaps.

This report presents findings from a country assessment undertaken to facilitate digital financial inclusion in Ethiopia and gives an overview of the current DFS landscape in the country. It also identifies some of the barriers to DFI and suggests how they might be removed.

Ethiopia has put in place various measures to facilitate an enabling environment for DFS. Those measures include:

- The embedding of DFS in its National Financial Inclusion Strategy (NFIS).
- Specific proclamations and directives on mobile and agency banking from the central bank (National Bank of Ethiopia).
- A Digital Transformation Strategy that highlights the need for improved digital financial services and inclusion.
- Authorization for fintechs to act as DFS providers.
- The establishment of a national task force for COVID-19-sensitive DFS, led by the Ministry of Innovation and Technology.
- The liberalization of Ethio telecom, which will enable increased market penetration, enhance the use of DFS, increase the efficiency of service delivery and improve customer experience, contributing to overall economic growth.
- The launch and roll-out in May 2021 of telebirr, an innovative mobile money solution by Ethio telecom that can be used to deposit, receive, transfer, make payments for utilities and receive international remittances. The solution aims to bridge the financial inclusion gap and allow customers to make online payments through an electronic account on their mobile devices.
- The National Digital Payment Strategy, with pillars for infrastructure, adoption and innovation. The aim is to support digital retail payment solutions and interoperability between financial and non-financial institutions.
- The e-Transaction Proclamation, which promotes the use of digital payments and innovative solutions for DFS and DFI.

The report also highlights the achievements and gaps in Ethiopia's enabling environment, looks at its infrastructure readiness and suggests potential actions that the country can take as it continues to nurture DFI and ensure inclusiveness.

The major findings on the challenges facing DFI are summarized below.

- Digital literacy is a major challenge. Consumer uptake of mobile banking has not changed much: an overwhelming majority of people in most Ethiopian cities, including Addis Ababa, still go to a physical bank branch to withdraw money or deposit savings.
    - Due to digital illiteracy, most people use mobile banking for a few specific services only.
    - Digital illiteracy increases the vulnerability of mobile banking users to fraud, due to risky practices such as users asking agents to enter their PIN codes.
- Cash remains the dominant mode of payment and currently, women account for only 30 per cent of DFS users in Ethiopia, and just 16 per cent of mobile banking users (nearly 8 million).
- Broader adoption of DFS is hampered by the absence of an appropriate framework for consumer protection, e-governance and cybersecurity, and by restrictive policies in the finance sector such as limits on transaction amounts.
- Operation in silos, lack of targeted interventions to promote digital financial inclusion among women and the disadvantaged, and socio-cultural factors present additional challenges to DFI.
- Lack of interoperability among DFS providers and the absence of a digital ID are further constraints on DFI.
- Liquidity management is hampered by Inadequate infrastructure (mobile grids, roads and electricity), affecting the availability of cash and electronic funds.
- While there has been a remarkable increase in the number of DFS channels, especially ATM and POS facilities, agency banking is still low. Limited value propositions also hinder the use of mobile banking services in Ethiopia.

The report shows that a holistic and comprehensive approach is a vital necessity in facilitating digital financial inclusion. The design and implementation of DFI strategies, policies and regulations require the involvement of stakeholders at all levels and a cross-sectoral approach that considers both the demand and the supply side.

There is thus a need to:

- Scale up existing achievements in digital financial inclusion and address the remaining gaps in the DFI landscape or ecosystem at all levels.
- Adopt international policy frameworks that strengthen women's financial resilience, support the post-COVID-19 pandemic recovery and address the economic challenges it has created.
- Ensure that DFI strategies and interventions are not confined to the finance sector. Instead, a cross-sectoral approach with the ICT sector is needed.
- Enable inclusive, interoperable digital financial payment services to help build a trustworthy, robust digital financial system.
- Institute cross-cutting capacity development for inclusive DFI through a holistic approach to build capacity of DFI actors at all levels.
- It is imperative to consider savings and credit cooperative organizations (SaCCOs) as part of the design, execution and review of future interventions for DFI.

Acronyms and glossary

AFI	Alliance for Financial Inclusion
AEMFI	Association of Ethiopian Microfinance Institutions
ATA	Ethiopian Agricultural Transformation Agency
ATM	automated teller machine
CB	commercial bank
COVID-19	coronavirus disease 2019
CSA	Central Statistics Authority
NGO	non-governmental organization
DFS	digital financial services
DFI	digital financial inclusion
ECA	Ethiopian Communications Authority
e-governance	electronic governance
EPA	Electric Power Authority
Ethio telecom	formerly Ethiopian Telecommunications Corporation
FI	financial institution
FSP	financial service provider
fintech	financial technology; a financial technology company
GPFI	Global Partnership for Financial Inclusion
GSMA	GSM Association
ICT	information and communication technology
ITU	International Telecommunication Union
KYC	know your customer
MFI	microfinance institution
MInT	Ministry of Innovation and Technology
NBE	National Bank of Ethiopia
POS	point of sale
SaCCO	savings and credit cooperative organization
SDGs	Sustainable Development Goals
SMEs	small and medium enterprises
SSA	sub-Saharan Africa

(continued)

UFA	universal financial access
UNCDF	United Nations Capital Development Fund
USSD	unstructured supplementary service data
WB, WBG	World Bank, World Bank Group

1 Introduction

1.1 Introduction

The National Financial Inclusion Strategy (NFIS) for Ethiopia acknowledges that basic public services such as utility service providers are not adequately linked with the financial sector. Cross-sectoral synergies play an essential role in driving financial inclusion and economic development, but they remain largely unexplored. Provision of mobile money services has been limited to financial institutions such as banks and microfinance companies. Only recently has authorization to engage in mobile money services been extended to telecommunication firms. The time is therefore opportune to explore the current landscape so as to enable effective implementation of digital financial services (DFS) by taking into consideration gender lenses. Additionally, given the impact of COVID-19 and gender disparities in digital services, digital financial inclusion (DFI) is fundamental for the recovery phase policy measures for Ethiopia. DFI is strongly aligned with the country's priorities, which include support for the scale-up of an inclusive digital transformation in the private and public sectors through accelerated digital connectivity and development of relevant digital payment platforms.

1.2 Methodology and limitations

1.2.1 Conceptual/methodological framework

Digital financial inclusion combines two concepts: financial inclusion and digital finance. These are defined as follows:

- **Financial inclusion** is a broad concept which has been variously defined (Nguyen, 2020)[1] but is generally understood as the sustainable provision of affordable and convenient financial services to the unbanked, previously excluded from the formal economy and financial institutions.
- **Digital financial services (DFS)** refers to a broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances and insurance. Digital channels used for these financial transactions include the Internet, mobile phones, automated teller machines (ATMs) and point-of-sale (POS) terminals.

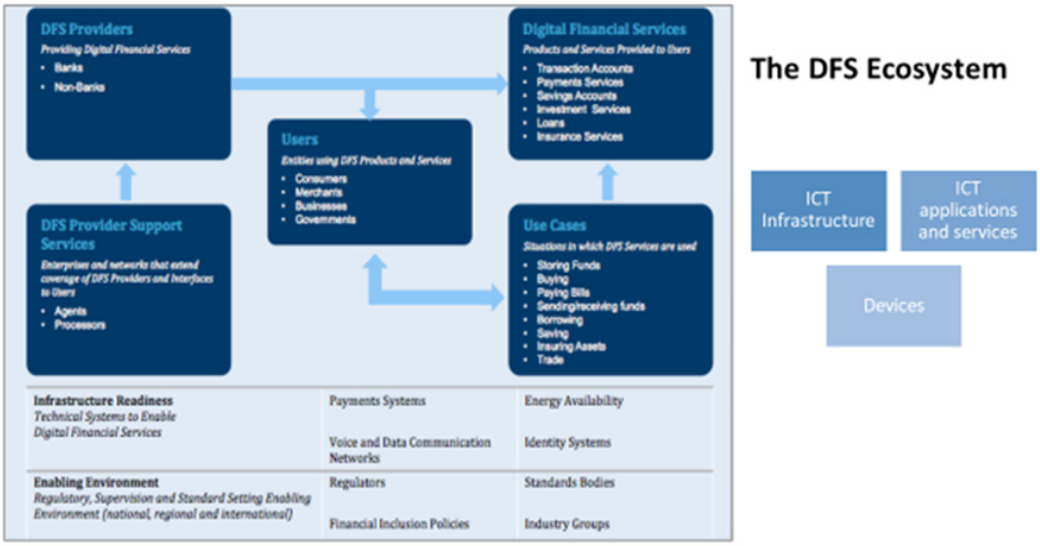
DFI thus refers to the deployment of cost-saving digital means to reach populations that are financially excluded and underserved with a range of formal financial services, suited to their needs and responsibly delivered at a cost that is affordable to customers and sustainable for providers (ITU, 2017 and World Bank, 2019).

The main components for digital financial inclusion include digital devices, digital payment platforms, a robust mobile network infrastructure, digital and financial literacy among consumers, and DFS applications.

[1] Thi Truc argues that despite the lack of consensus in its definition, financial inclusion is generally understood as the process of ensuring that people, especially members of financially disadvantaged groups, have easy access to and use of financial services from the formal financial institutions in a timely, adequate, and affordable manner, especially for financially disadvantaged groups.

DFI is a multi-level, multi-dimensional, multi-actor initiative that involves the increased digitalization of financial services and products and government services for payments and the disbursement of social benefits, as a means to accelerate or achieve financial inclusion in all sectors. DFI as an initiative is a multi-stage process that involves multiple determinants and touches on critical issues at each stage, as outlined by the Alliance for Financial Inclusion.[2]

Figure 1: The DFS ecosystem



Source: ITU-T Focus Group on digital financial services outputs (2017)

According to ITU (2017), a DFS ecosystem is a complementary framework, and DFI is considered as a multi-actor initiative geared towards enabling financial inclusion and building the digital economy through availability, affordability, convenience, and quality of financial services. The ecosystem describes the players and their roles within the ecosystem. These players include:

- **users** (consumers, businesses, government agencies and non-profit groups) who have a need for digital and interoperable financial products and services;
- **providers** (banks, other licensed financial institutions, and non-banks) who supply those products and services through digital means.

An ecosystem also requires **financial, technical and other infrastructures** and governmental policies, laws and regulations which allow those products and services to be delivered in an accessible, affordable, and safe manner.

There is a growing consensus in the literature on the importance of developing a multidimensional financial inclusion index on the basis of the three essential dimensions: access, availability and usage.

Table 1 depicts the key indicators.

[2] Based on information from the Policy Model For National Financial Inclusion Strategy from the Alliance for Financial Inclusion, 2020.

Table 1: Key indicators corresponding to the dimensions for measuring DFI

Dimensions of DFI	Description
1) Access (penetration of financial services) • Deposit accounts • Mobile money accounts	• Number of deposit accounts with commercial banks, credit unions and credit cooperatives per 1 000 adults • Number of registered mobile money accounts per 1 000 adults • Disaggregated numbers of men and women with mobile money accounts (this indicator will highlight any existing gender gaps in access to mobile money services)
2) Availability • Branches • ATMs • POS terminals • Mobile money agents • Mobile network coverage • Mobile phone ownership • Mobile phone penetration • Internet access • Access to electricity	• Number of commercial banks, credit unions, credit cooperatives and microfinance institution branches per 100 000 adults • Number of ATMs per 100 000 • Number of POS machines per 100 000 • Number of registered mobile money agents per 100 000 adults • Number of men and women with access to a mobile phone – lack of access to a mobile phone may hinder the engagement in digital finance
3) Usage • Deposits • Loans • Mobile money transactions	• Outstanding deposits with commercial banks, credit unions and credit cooperatives (% of GDP) • Outstanding loans from commercial banks, credit unions, credit cooperatives and microfinance institutions (% of GDP) • Volume of mobile money transactions (% of GDP) • Mobile money account usage (shows whether an account is in use or dormant)

Source: Adopted from Thi, 2020, which is mainly based on Sarma, 2015, 2016, and World Bank, 2012

1.2.2 Limitations

The DFI study has numerous limitations linked to the scope of work, particularly the constraints associated with the COVID-19 pandemic. The demand-side assessment relies on a small number of primary data sources, which may affect the accuracy of baseline data. Also, the limited engagement of stakeholders at this stage could have repercussions on the process and expected outcome. The lack of a universally accepted DFI measurement index is a methodological limitation. The age at which a person is put in the adult category varies, which is a challenge; so is the fact that cooperatives are not counted as formal financial institutions. Finally, the likelihood of double-counting or duplicate reporting of account holders by financial institutions (banks and microfinance institutions, MFIs) adversely affects the accuracy of data on the state of DFI in Ethiopia.

2 Digital financial inclusion concepts, global and regional comparisons

2.1 Introduction

This section provides a general overview of DFI and summarizes the growing prominence of DFI, its role in and its contribution to the achievement of the 2030 Sustainable Development Goals (SDGs), and the bidirectional relationship with economic growth. Additionally, the state of DFI with global comparison and implications are presented.

2.2 Overview of DFI: the concept, role and contributions

2.2.1 Articulating the concept of financial inclusion and the barriers

A study of the theoretical and empirical literatures reveals a universal consensus on the relevance of financial inclusion. Increasing access and recourse to adequate financial services by households and firms is essential for advancement, improving the lot of family units and increasing financial mobility (Durai T., 2019).

Various authors also highlight the different barriers that lead to exclusionary finance, generally falling under either the demand or the supply side. Demand-side barriers include low income, lack of awareness, poverty and illiteracy. Supply-side barriers include remoteness of branches, limited opening hours, cumbersome documentation and procedures, unsuitable products, language barriers and staff attitudes. Interestingly, FI is not restricted to opening a savings account at a formal financial institution. It signifies the creation of awareness about financial products; education and advice on money management; and the availability of debt counselling etc. by the institutions (Damodaran, 2013).

An inclusive financial system is vital to support the full participation of lower-income households in a wide range of financial services, including savings, credit, leasing, micro-insurance, local money transfers, mobile banking, etc., especially for women and entrepreneurs. Such a system recognizes market potentials and advances structural changes that enhance financial inclusion of households in the formal financial sector.

The empirical literature has also increasingly corroborated the pivotal role that policies and strategies play in avoiding the multi-dimensional constraints to FI. At least 35 per cent of the financially excluded emphasized barriers to account use that might be addressed by public policy. Among the most commonly reported barriers are high cost, physical distance, and lack of proper documentation, though there is considerable variation on the basis of geography and individual characteristics (World Bank, 2012).

2.2.2 Digital financial inclusion

2.2.2.1 The meaning and features of DFI: access and sustainability of FI

DFI involves the deployment of cost-saving digital means to reach populations that are financially excluded and underserved, bringing them a range of formal financial services suited to their needs that are responsibly delivered at a cost affordable to customers and sustainable for providers.

> "*Universal access to financial services is within reach – thanks to new technologies, transformative business models and ambitious reforms... As early as 2020, such instruments as e-money accounts, along with debit cards and low-cost regular bank accounts, can significantly increase financial access for those who are now excluded. " Jim Yong Kim, President, WBG. (World Bank, 2020a)*

The essential components of DFI include:

- Digital transactional platforms that enable customers to make or receive payments and transfers and store money electronically through the use of devices that transmit and receive transaction data and connect to a bank or a non-bank entity that is authorized to store funds.
- Customer devices, in the form of either digital devices that transmit information (e.g. mobile phones) or instruments that connect to a digital device such as a point-of-sale (POS) terminal (e.g. payment cards).
- Retail agents, with a digital device connected to the communication infrastructure used to transmit and receive transaction details, enabling customers to convert cash into electronically stored funds ("cash-in") and transform stored funds back into cash ("cash-out").
- Additional financial services – credit, savings, insurance, and even securities – that banks and non-banks may offer to the financially excluded and underserved via the digital transactional platform, often relying on digital data to target customers and manage risk.

2.2.2.2 DFI as a win-win situation: the benefits and risks

Financial inclusion is a win-win proposition that can be achieved through digital finance. DFI brings numerous benefits to users of financial services, digital finance providers, government and the economy. DFS can be more convenient and affordable than traditional banking services, allowing low-income people and people in developing countries to save, borrow and earn a financial return within the formal financial system.

Collaboration among public and private stakeholders is critical in facilitating and strengthening the impact of DFS. This is because regulation of electronic payments and electronic banking cannot be undertaken in silos but requires a collaborative approach for inclusive DFS (ITU GSR, 2016). This collaborative approach involves the participation of different players, including banks and other financial institutions, mobile network operators, financial technology providers, regulators, agents, retail chains and clients among others). DFS can reduce transaction costs and provide affordable, convenient and secure banking services to individuals in developing countries.

However, as the economy evolves, it needs to face the threat of cyberattacks. Thus, while acceptance of cashless payments is growing, adoption is being hindered by concerns such as security problems, limited network coverage, lack of merchant willingness, high transactional costs and users' lack of knowledge about technology (Durai T., 2019).

The ITU-T Focus Group on digital financial services draws attention to emerging threats to the security of DFS that can compromise stakeholders at every level within the ecosystem. The Focus Group emphasizes the need for safe and secure transmission of data, the use of hardware-enabled security on mobile devices to assure the security of information on those platforms and best practices for handling data within DFS provider systems and networks.

The Security Lab for Digital Financial Services[3] set up by ITU under the Financial Inclusion Global Initiative[4] (FIGI) aims to enable emerging economies better address the security challenges for digital finance and provide access to financial inclusion through, trusted, resilient infrastructure and secure applications.

2.2.2.3 Digital finance; beyond financial inclusion

The growing convergence between digital technologies (ICTs) and the finance sector has given an impetus to DFI worldwide. A Global Findex report shows how digital technology is creating opportunities to increase account ownership among the 1.7 billion adults who remain unbanked, and how DFS renders other benefits, including more intensive use of accounts among those who already have them. The importance of DFI thus goes beyond raising financial inclusion.

> ***DFI goes beyond expanding financial inclusion****: mobile phones and the Internet have given rise to a new generation of financial services. With their simplicity, these have benefited sub-Saharan Africa in particular. (Findex, 2017)*

But the shifting of payments online can still have other benefits, in addition to expanding account ownership and increasing account use. The Global Findex report suggests that digitalization can improve the efficiency of payments by increasing speed and reducing cost. It can also enhance security and lower the incidence of associated crime. Moving payments online has also been shown to increase transparency. Finally, by providing an important first entry point into the formal financial system, the shift to digital payments can lead to substantial increases in savings and the substitution of formal for informal saving (Global Findex, 2017).

2.2.3 The contribution of DFS to economic growth and achievement of SDGs

The United Nations considers financial inclusion to be an important enabler for the 2030 Sustainable Development Goals (SDGs), where it is featured as a target in eight of the seventeen goals. These include eradicating poverty (SDG 1); ending hunger, achieving food security and promoting sustainable agriculture (SDG 2); ensuring health and well-being (SDG 3); achieving gender equality and economic empowerment of women (SDG 5); promoting economic growth and jobs (SDG 8); supporting industry, innovation, and infrastructure (SDG 9); and reducing

[3] https://figi.itu.int/figi-resources/dfs-security-lab/
[4] https://www.worldbank.org/en/topic/financialinclusion/brief/figi

inequality (SDG 10). ICTs play a significant role in bridging the financial inclusion gap, and thus contributes to the achievement of the SDGs.

In general, a sturdy financial system is a pillar for economic growth, development and progress. A financial system that is inherently strong, functionally diverse, efficient and flexible is critical to creating a market-driven, productive and competitive economy. A mature system supports higher levels of investment and economic growth (Damodaran, 2013).

Digital finance alone could benefit billions of people, with inclusive growth adding USD 3.7 trillion to the GDP of emerging economies within a decade, according to a recent report by the McKinsey Global Institute. Over a decade, global flows have raised world GDP by at least 10 per cent. The value totalled USD 7.8 trillion in 2014 alone (McKinsey & Company, 2016).

Sethi and Acharya (2018) have described the positive and long-term relationship between financial inclusion and economic growth. In addition, panel causality tests show a bidirectional causality between financial inclusion and economic growth.

Financial inclusion models can support overall economic growth and the achievement of broader development goals. In SDG 17, on strengthening the means of implementation, there is an implicit role for financial inclusion, through greater savings mobilization for investment and consumption that can spur growth (UNCDF, 2019).

UNSGSA's 2018 compendium demonstrates how DFI supports progress towards additional SDGs: quality education (SDG 4), clean water and sanitation (SDG 6), affordable and clean energy (SDG 7), sustainable cities and communities (SDG 11), climate action (SDG 13), and peace, justice and strong institutions (SDG 16). (See section 5.2 for the details.)

2.2.4 Implications and indicative recommendations

The implications of the assessment results thus far are presented along with the corresponding indicative recommendations in Table 2:

Table 2: Implications and indicative recommendations

Implications:	Indicative recommendations:
• **DFI** is a system that has proven to be conceptually sound. • **Policies and strategies** play a crucial role in achieving objective inclusion, by removing one-third of the barriers. • **Digital finance** is an accelerator in the move towards achieving inclusive finance. • **The close link between DFI and economic growth** makes rapid action attractive. Moreover, **DFI exerts** a **profound effect** on most (82 per cent) of the 17 SDGs and acts as a multiplier. DFI is thus not merely an end in itself; it is a development goal that goes beyond the finance sector. • **DFI** creates huge opportunities for the **economic empowerment of women** and has a positive impact on combating **COVID-19**. At the same time, it is associated with certain risks.	1) A systemic approach is a vital necessity in facilitating DFI. Hence, the design and implementation of DFI strategies should aim to be holistic and comprehensive, involving a multitude of levels, actors, sectors and dimensions. 2) DFI policies and regulations need to be based on a critical examination of the existing context, including both demand and supply side barriers, unmet needs and priorities of stakeholders at all levels, the pros and cons of digitalization, etc. 3) It is imperative to speed up the convergence between ICT and the finance sector. 4) DFI strategies and interventions can extend beyond the finance sector using a cross-sectoral approach. 5) DFI strategies should be gender and COVID-19 sensitive. a) Gender mainstreaming in all sectoral policies and strategies is essential to the achievement of women's empowerment and gender equality. b) DFI strategies should involve a rigorous risk management component to reduce financial exclusion and mitigate risks related to the COVID-19 pandemic.

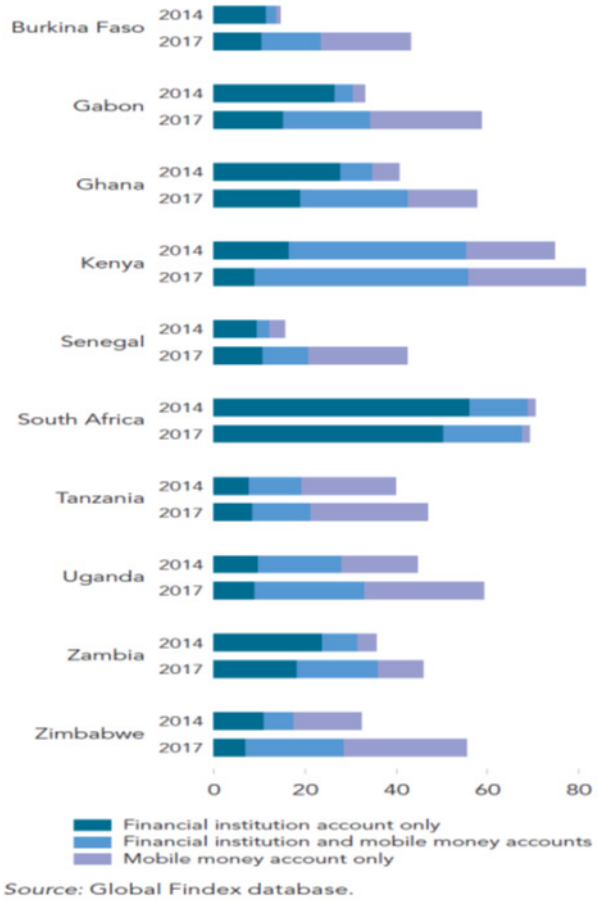
2.3 The state of DFI: global comparisons

Globally, 69 per cent of adults reported having an account in the year 2017. The Findex survey identifies account ownership as an important financial tool. Accounts provide a safe way to store money and build savings for the future, and make it easier to pay bills, access credit, make purchases, and send or receive remittances.

The survey report documents a remarkable increase in account ownership worldwide in the past decade. The share of adults with an account rose from 51 per cent in 2011 to 62 per cent in 2014 and then to 69 per cent in 2017. In sub-Saharan Africa (SSA) alone, account ownership reached 43 per cent, from 23 per cent in 2011 and 34 per cent in 2014. Globally, account ownership in 2020 was estimated at 77 per cent. The estimate for SSA and Ethiopia is 54 per cent and 41 per cent respectively.

The report also identifies the determinants of trends in increasing account ownership worldwide since 2011. In general, financial institution accounts have fuelled the growth in account ownership, mobile money accounts making up only a marginal share. Out of the total account owners (69 per cent), 64 per cent had a financial institution account, 3 per cent had both a financial institution account and a mobile money account while 1 per cent had only a mobile money account. By contrast, in SSA mobile accounts played a significant role. The 2014 Findex survey showed that 12 per cent of adults in the region had a mobile money account, compared with the global average of 2 per cent.

Figure 2: Mobile money has boosted account ownership in parts of SSA - Adults with an account (%)



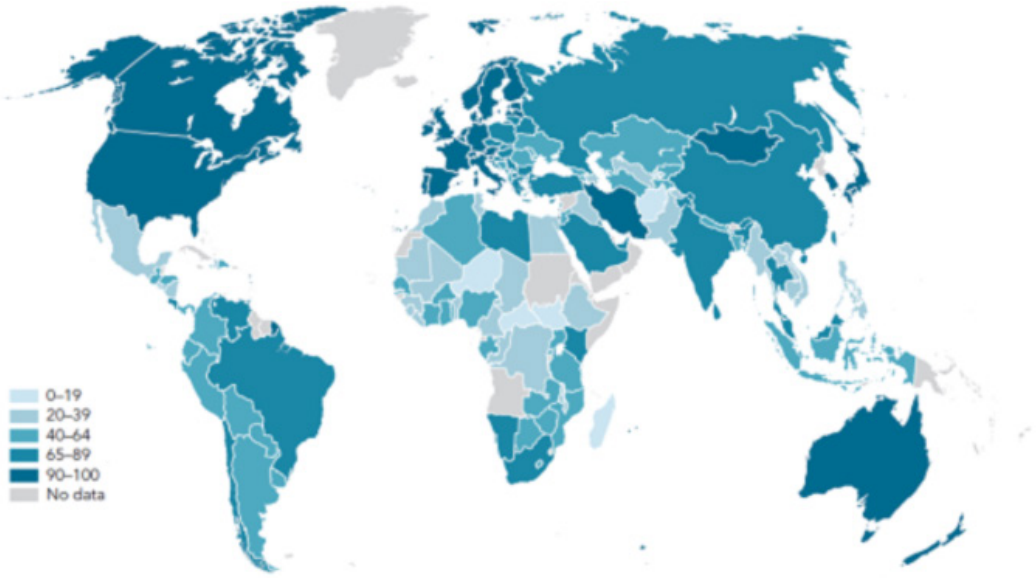
Source: Global Findex database.

Today SSA remains the global leader in the use of mobile money: 21 per cent of adults in the region have a mobile money account. Within this group, nearly half reported having no other account. Mobile money accounts are particularly widespread in Kenya, where 73 per cent of adults have one, and in Uganda and Zimbabwe, where that figure is 50 per cent. In 10 of the SSA countries, more adults have a mobile money account than have a financial institution account: Burkina Faso, Chad, Côte d'Ivoire, Gabon, Kenya, Mali, Senegal, Tanzania, Uganda and Zimbabwe. While mobile money accounts in 2014 were still essentially limited to East Africa, they have now spread to West Africa and beyond. In West Africa, the share of adults owning a mobile money account has risen to about 33 per cent in Burkina Faso, Côte d'Ivoire, and Senegal; 39 per cent in Ghana; and nearly 45 per cent in Gabon and Namibia.

Meanwhile, the world has witnessed a remarkable increase in account ownership, used by the World Bank and others as a marker of financial inclusion. The Findex survey reported that in 2017 some 1.7 billion adults (31 per cent) worldwide remained unbanked, down from 2 billion (48 per cent) in 2014. The disaggregated results show huge disparities in account ownership based on geography and socio-economic characteristics.

First, account ownership is nearly universal in high-income economies, at 94 per cent of adults, compared with 63 per cent in developing economies. It follows that virtually all unbanked adults live in developing countries, including SSA, where Ethiopia is situated.

Figure 3: Adults without an account, 2017



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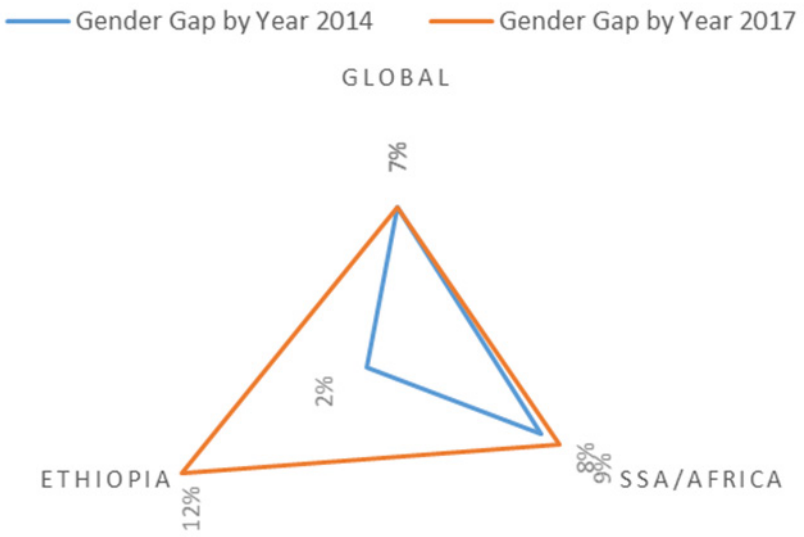
Source: The Global Findex, 2017.

Second, there is a persistent gender gap in account ownership, with women overrepresented among the unbanked. Worldwide, about 980 million women lack an account, making up 56 per cent of all unbanked adults. Figure 4 shows that the growth in account ownership since 2011 has not benefited all groups equally: women remain less likely than men to have an account.

Figure 4: Gender divide in DFI



Source: Global Findex, 2017.

Globally, 72 per cent of men and 65 per cent of women have an account, a gender gap of 7 percentage points. The gender gap is similar in developing economies, with 67 per cent of men but only 59 per cent of women having an account. However, the gender gap is much more pronounced for Ethiopia, and it is widening: since 2014, account ownership has risen by 18 per

cent among men, twice as much as it has among women. The gap increased from 2 percentage points in 2014 to 12 points in 2017.

Large disparities in account ownership are also observed between people in different demographic and socio-economic categories. The unbanked are disproportionately young: globally, 30 per cent are aged between 15 and 24. Unbanked adults are more likely to have a low level of education (62 per cent), to reside in rural areas, and to be unemployed (10 per cent more likely).

The barriers to financial inclusion

Globally, the lack of money is the barrier most commonly cited by the unbanked (see Figure 5). Nearly two-thirds of adults without an account said that they have too little money to use one, and roughly one in five cited this as their sole reason. About 30 per cent of the unbanked said that they do not need one. Cost is the third most common reason, cited by 26 per cent. A similar number said that they do not have an account because a family member already has one. Distance is a barrier for 22 per cent. Onerous documentation requirements are an impediment for 20 per cent. Lack of trust in the financial system is mentioned by 16 per cent of those without an account. Finally, only 6 per cent of the unbanked cited religious concerns as a reason for not opening an account.

Figure 5: Barriers for the unbanked (multiple response)

Source: Based on Global Findex, 2017

Mobile accounts are a valuable means of empowering the unbanked. Interestingly, 80 per cent of adults without an account are estimated to have access to a mobile phone. Mobile money services promise to expand financial inclusion by bringing basic financial services to people who remain on the margins of society (ITU, 2017).

We have seen that, since 2014, mobile money accounts have begun to spread more widely in sub-Saharan Africa. While the technology has taken root in other parts of the world as well, this may be the only region where more than 10 per cent of adults have a mobile money account. Nonetheless, the potential of technology to advance financial inclusion continues to be hampered by disparities in access to and use of mobile phones and the Internet, based on gender, income, etc.

A worldwide survey on access to mobile phones and the Internet brought to light the following;

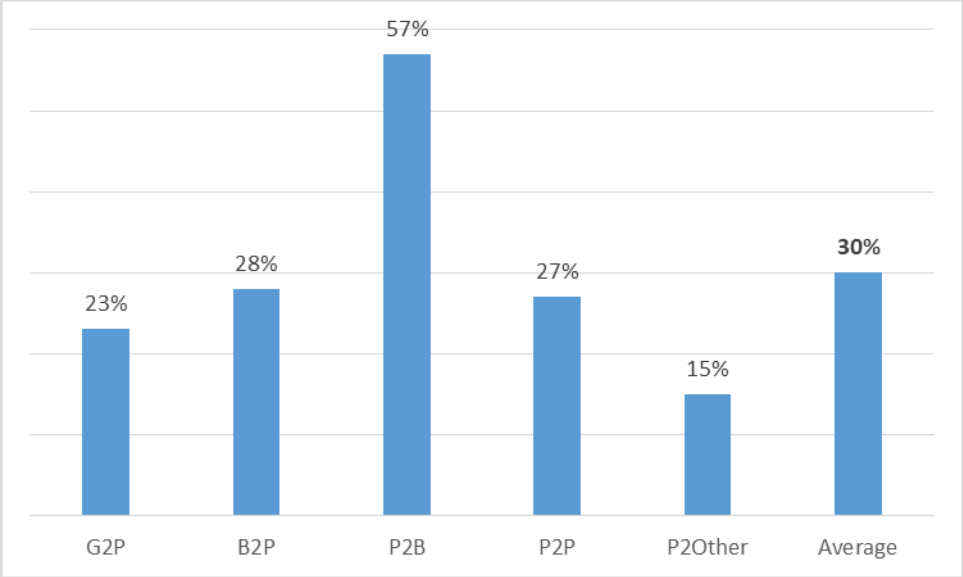
- √ **Mobile phones and the Internet have created new opportunities for providing financial services**. However, people's ability to use DFS depends on their having access to the necessary technology.
- √ **An increasing proportion of people around the world own a mobile phone and have access to the Internet**. For instance, in 2017 93 per cent of adults in high-income economies had their own mobile phone, compared with 79 per cent in developing economies.
- √ **Women are less likely than men to have a mobile phone**. In developing economies 84 per cent of men and 74 per cent of women own a mobile phone, a gender gap of 10 percentage points. The gap is even wider in some economies.
- √ **Having access to the Internet as well as a mobile phone brings a wider range of financial services within reach**. In high-income economies 82 per cent of adults have both a mobile phone and access to the Internet. In developing economies, only 40 per cent of adults – about half of mobile phone owners – have access to both.

2.3.1 Payments and the dominant mode of transfers

People need to make payments for a variety of reasons, from paying utility bills to making domestic remittances. They also need accounts to receive wages and salaries, or payments from government and so on. As the Findex survey shows, millions of adults opened their first account to receive digital payments; for them, digitalization offers a huge opportunity to reduce financial exclusion significantly.

About 30 per cent of adults worldwide use digital transfers. As depicted in Figure 6, payments from people to businesses (P2B) are the most common (57 per cent), whereas other payments for work is the smallest category (15 per cent). Again, there is significant variation between high- and low-income countries.

Figure 6: Relative importance of digital transfers (worldwide, 2017).



Source: Based on Findex, 2017

The dominant modes of transactions (i.e. using an account or in cash) is briefly outlined by the kinds of payments while highlighting the geographic disparities.

- **Payments from government to people (G2P)**: Globally, 23 per cent of adults reported having received at least one G2P payment in the previous year in the form of public-sector wages, a public-sector pension or other government transfer. With the exception of some low-income economies where G2P payments are received in cash, such as Ethiopia and Viet Nam for example, government payments are typically transferred to an account. This is the case for the overwhelming majority of people in developed countries (80 per cent). Such payments include all kinds of social benefit, such as subsidies, unemployment benefits, and payments for educational or medical expenses.
- **Payments from businesses to people (B2P)**: Globally, 28 per cent of adults reported having received at least one wage payment from a private-sector employer in the previous year. In high-income economies 85 per cent of these B2P recipients or wage earners reported receiving their wage payments into an account, while in developing economies only about half did so (46 per cent).
- **Payments from people to businesses (P2B)**: Worldwide, 57 per cent of adults reported having made regular P2B or utility payments for water, electricity, or trash collection during the year. In high-income economies the vast majority of the P2B payments are made directly from an account; in developing economies it is only one in four. That said, there is wide variation across developing economies. In Egypt, Ethiopia, Morocco, the Philippines and Viet Nam, for example, virtually everyone making utility payments does so in cash. A majority of those in Kenya and Malaysia pay directly from an account, as do about 40 per cent in China, Russian Federation, Türkiye and Uganda.
- **Payments between people (P2P)**: Domestic remittances are an important part of the economy in many places. They are used by 27 per cent of adults in developing economies, reaching 45 per cent in SSA. Account-to-account transfer is the dominant mode of remittance payment in developing countries, accounting for 46 per cent of the total. Indeed, domestic remittances are particularly important and are sent and received mainly by using an account in SSA, although there is variation among the countries. Kenya has the highest share using an account: among adults sending or receiving domestic remittances in the previous year, 89 per cent reported having used an account to do so (in most cases a mobile money account facilitated by the M-Pesa service). In other economies, including Ethiopia, Namibia, Nigeria and South Africa, people sending domestic remittances through an account are more likely to do so using an account at a bank or some other type of financial institution.
- **Other payments for work (P2Other)**: Around the world, most people getting paid for their labour receive payment in the form of a salary or wages from an employer, whether in the public or private sector. Some receive other payments for work, such as the proceeds from the sale of agricultural products or from self-employment. About 15 per cent of adults in developing economies reported having received payments for the sale of agricultural products in the prior 12 months. Most said that they received these payments in cash, with only one in five recipients of payments for agricultural work reporting payment into an account. However, in SSA countries such as Kenya, Zimbabwe and Uganda, mobile money is more widely used, averaging about 40 per cent of recipients.

2.3.2 Use of accounts for digital payments

Owning an account is an important first step toward financial inclusion. To fully benefit from having an account, people need to be able to use it in safe and convenient ways. The 2017 survey on the use of accounts for digital payments revealed that 52 per cent of adults or 76 per cent of account owners around the world reported making or receiving at least one digital payment in the previous year.

The overall changes since 2014 indicate that digital payments are on the rise. Between 2014 and 2017, the share of adults around the world making or receiving digital payments rose by 11 percentage points, from 41 to 52 per cent.

Disaggregation of the results on account usage shows a number of disparities:

- **The use of digital payments is generally high in developed economies; already in 2014 it was nearly universal among account owners**. This compares with two-thirds for developing countries. Specifically, in 2017, 91 per cent of adults (97 per cent of account owners) in high-income economies reported that they use their accounts for digital payments, as compared with 44 per cent of adults (70 per cent of account owners) in developing economies. In Kenya, due to the widespread adoption of mobile money accounts, the use of digital payments is nearly universal among account owners; indeed, the share reporting their use, at 97 per cent, is as high as that in high-income economies.
- **The use of accounts for digital payments also varies by gender**. In developing economies, men are on average 5 percentage points more likely than women to make or receive digital payments: 72 per cent of male account owners use digital payment, compared with 67 per cent of female account owners. This gender gap has not changed since 2014 despite an overall increase in the use of digital payments. The gender gap in the use of digital payments varies substantially among developing economies. In some instances, it reaches double digits, for example in Bangladesh, Egypt, Ethiopia, Morocco and Pakistan.

2.3.3 Saving, credit and financial resilience

The 2017 Global Findex data also showed how and why people save and borrow and shed light on their financial resilience when faced with unexpected expenses. The results are summarized as follows:

Savings: 48 per cent of adults around the world reported having saved or otherwise set aside money in the prior 12 months. In high-income economies that figure was 71 per cent, while in developing economies it was 43 per cent.

- Globally, 27 per cent of adults or just over half of savers reported having saved formally: 55 per cent in high-income economies vs 21 per cent in developing economies saved in formal financial institutions.
- More account ownership does not necessarily translate into more formal saving. Globally, 42 per cent of account owners reported not having saved any money in the previous year, yet almost a third of unbanked adults save.
- In terms of the purpose, globally, 21 per cent of adults reported having saved in the prior 12 months for old age. Saving to start, operate, or expand a business was reported by about 14 per cent in both high-income and developing economies. Saving for a business was especially common in sub-Saharan Africa. In Ethiopia, Kenya, Liberia, Nigeria, Uganda and Zambia, for example, 29 per cent or more of adults reported having done so – twice the global average.

Credit: Globally in 2017, 47 per cent of adults reported having borrowed money in the prior 12 months, including through the use of a credit card.

- The most common source of credit in high-income economies is formal borrowing; in developing economies, it is a family member or friend.
- In high-income economies borrowing took the form of credit card use more often than formal borrowing.
- The main purposes of borrowing included to buy land or a home, for health or medical purposes and to start, operate or expand a business.

Financial resilience: Financial inclusion is not an end in itself but a means to an end. When people have a safe place to save money and access to credit when needed, they are better able to manage financial risk. To understand better people's financial resilience when faced with unexpected expenses, the 2017 Global Findex survey asked respondents if they could come up with an amount equal to 1/20 of gross national income (GNI) per capita in local currency within the next month. Globally, 54 per cent of adults reported that it would be possible for them to come up with this amount. In Ethiopia, a low-income economy, that figure was 57 per cent.

2.3.4 Implications and indicative recommendations

The implications and indicative recommendations from the results thus far are presented in Table 3.

Table 3: Implications and indicative recommendations.

Implications:	Indicative recommendations:
1) Multifaceted divides remain widespread, despite progress globally on DFI. 2) Ownership and use of mobile technology and the Internet has increased worldwide. Nonetheless, the share of digital payments remains marginal (around one per cent globally), mainly due to the limited use of ICT technologies for DFI. 3) ICT has significantly advanced DFI in Africa. Nonetheless, significant gender and income differentials remain a structural barrier that perpetuates the persistent and ubiquitous divides in financial inclusion. 4) Payments represent a huge opportunity to improve the lot of about a quarter of the unbanked worldwide. 5) Financial inclusion is about far more than just account ownership.	1) DFI strategies, both by design and implementation, need to prioritize interventions that narrow the major disparities across gender, age, geography etc. 2) It is essential to embed viable strategies to tap into the potential of ongoing advancements in ICT. 3) Affirmative action is required to promote wider adoption of ICT technologies, in particular mobile phones for disadvantaged groups including women and youth. 4) Digital payments including G2P, P2B and P2P should be promoted as a strategy for moving towards financial inclusion. 5) Account usage should be as important as account ownership in measuring inclusiveness.

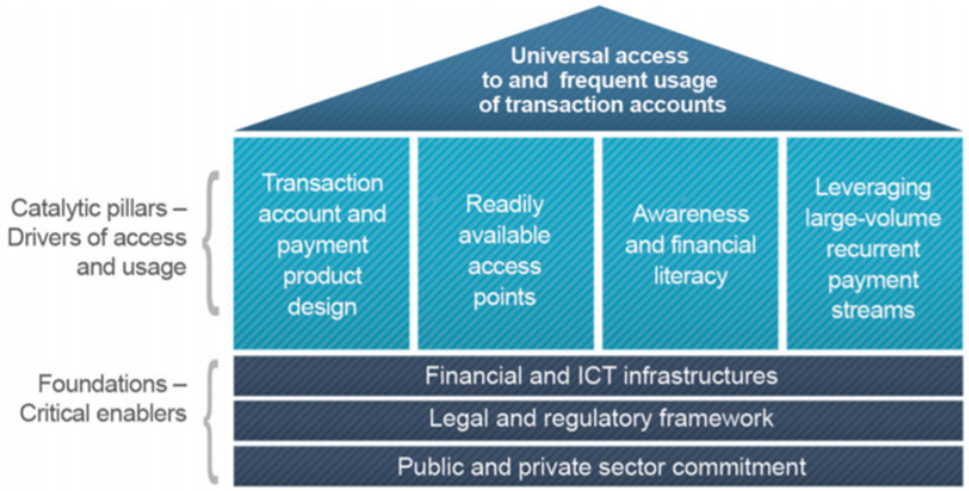
2.3.5 Multi-stakeholder engagements

Commitment from stakeholders, legal and regulatory frameworks, and financial and digital infrastructures are critical enablers for payment systems and the provision of payment services, access to and usage of transaction accounts. The ease with which accounts can be reached for usage, awareness and financial literacy further facilitates recurrent payment streams for financial inclusion purposes.

The Financial Inclusion Global Initiative (FIGI) is a collaboration led by the World Bank Group, ITU and the Committee on Payments and Market Infrastructures (CPMI), with support from the Bill and Melinda Gates Foundation. This initiative focuses on country implementations in order to meet the goals of the Universal Financial Access programme, and also aims to further strengthen public and private sector commitment and to improve legal and regulatory frameworks, financial markets and digital infrastructure for financial access and inclusion.

Figure 7 illustrates the interrelation between the foundations, the catalytic pillars and the end objective of achieving universal access to and usage of transaction accounts.

Figure 7: The interrelation between the foundations, the catalytic pillars and the end objective of achieving universal access to and usage of transaction accounts.



Source: Payment aspects of financial inclusion (2016)

DFI plays a pivotal role in the attainment of universal financial access (UFA) targets. With the prospect of reaching billions of new customers, banks and a widening array of non-banks have begun to offer DFS for financially excluded and underserved populations, building on the digital approaches that have been used for years to improve access channels for those already served by the formal financial sector. DFS, including services involving the use of mobile phones, have now been launched in more than 80 countries, with some reaching a significant scale. As a result, millions of formerly excluded and underserved customers are moving from exclusively cash-based transactions to formal financial services – payments, transfers, savings, credit, insurance, and even securities – accessed with a mobile phone or other digital technology. The trend is accelerating with the emergence of ever more new technologies (World Bank, 2020a).

Meanwhile, the use of financial technology, in particular mobile money, has been spreading widely in Africa. Of the 395.7 million registered mobile money accounts in sub-Saharan Africa, 145.8 million are active (GSMA report 2018).

Nonetheless, the DFS landscape in Africa faces various challenges, especially in the areas of enabling policies and regulations, infrastructure readiness and the digital divide.

2.3.6 DFS and the COVID-19 pandemic

The literature on DFS and the COVID-19 pandemic also uncovered opportunities and risks of particular interest for developing countries. The pandemic and the need for social distancing have put a spotlight on DFS: DFS allows for social distancing, it allows governments to disburse funds to those in need quickly and effectively, and it allows many households and firms to rapidly access online payments and financing. However, risks to stability and integrity, always present, may worsen if the use of DFS is scaled up quickly in times of crisis without appropriate

regulations and safeguards. At the same time, efforts to ramp up the use of DFS should not exacerbate existing divides across users (Itai, 2020).

In support of the above, the GSMA report (2020) shows that COVID-19, by casting a spotlight on digital connectivity, has had a profound impact on the digital landscape in sub-Saharan Africa and around the world. Thus, the social distancing measures put in place to curb the spread of the pandemic have shown the value of connectivity for social and economic wellbeing. The pandemic has highlighted the importance of a robust and inclusive digital economy, underpinned by universal, fast, reliable Internet access and a range of digital services for individuals and businesses. The mobile industry in SSA has largely risen to the challenge of keeping individuals and businesses connected during the pandemic, despite changes in data consumption patterns.

Anecdotal evidence corroborates the pandemic's positive contribution to DFI in Africa and Ethiopia. A recent article (Bavier and Dzirutwe, 2020) presents significant cases that demonstrate the positive impact of COVID-19 on DFS in Africa. Similarly, mobile money has started to flourish in Ethiopia; especially following the pandemic. A *Deutsche Welle* article (Deutsche Welle, 2020) reports that new regulations and the global COVID-19 pandemic are starting to change how Ethiopians pay their bills, overcoming the long-standing obstacles to the use of mobile money in the country: bureaucracy and consumer reluctance.

2.3.7 DFS and its impact on women's empowerment

DFS empowers women to earn more and build assets. This greater financial power improves gender equality and fuels economic growth. DFI creates a huge opportunity for the achievement of SDG 5, as it extends access to unbanked populations especially in Sub Saharan Africa where approximately 35 million women remain unbanked according to the Global Findex Report, 2017. Table 4 summarizes the challenges to economic empowerment of women and some solutions.

Women's financial inclusion = a down-payment on achieving the SDGs.

Ensuring that women have access to formal financial services can help to address many of the economic gaps between men and women worldwide. The World Bank Group's gender strategy puts women's economic empowerment – and the financial services necessary to achieve it – high on the agenda. (WB, 2016)

Table 4: DFI as a solution to challenges to women's economic empowerment

Challenges to women's empowerment	DFS solutions
Women are 7% less likely to be involved in the formal economy than men, reducing their ability to control their own finances.	DFS gives women **greater control over their own finances**, including safe, convenient, and discreet access to banking accounts.
Woman-owned small businesses face a credit gap of USD 1.7 trillion globally, limiting their ability to grow their business.	Digital channels help collect useful data on women business owners, leading to a **better understanding of their needs** and **more comprehensive creditworthiness assessments**.
The lack of sex-disaggregated data hinders policy-makers and financial service providers in designing policies and products that meet the needs of women.	DFS helps collect sex-disaggregated data, which helps policymakers to **develop female-friendly policies**, and providers to design **better DFS products for women**.

Source: UNSGSA, 2018

Finally, country-specific experiences (summarized in Table 5) clearly indicate the strong and positive impact of DFS to empower the unbanked populations especially women in line with SDG 5.

Table 5: Country experiences on the impact of DFI on SDG 5

- **Kenya**: When **female-headed households** adopted mobile money, the country saw a **22 per cent drop in extreme poverty and a 20 per cent increase in savings** between 2008 and 2014. In addition, 185 000 women left farming jobs for better, more stable jobs in business or retail.
- **Niger: Women** who received social transfers via their mobile phones **were better able to control this income and reprioritize household spending**. As a result, their families benefited from better nutrition and their households were more likely to grow cash crops than those who received social transfers in cash.
- **India**: In a government workfare programme reaching over 100 million people, when women received benefits digitally into their account, this led to **increased employment**. The biggest impact was on women whose husbands had expressed the most opposition to their wives working.
- **South Africa**: The use of digital cards for government safety net transfers enhanced women's decision-making power in the household and led to a **92 per cent increase in the likelihood** of their participating in the labour market.
- **Dominican Republic**: One-third of low-income women who had previously been rejected for loans **were considered creditworthy** using alternative data and a gender-differentiated credit scoring model.

Source: based on UNSGSA (2018)

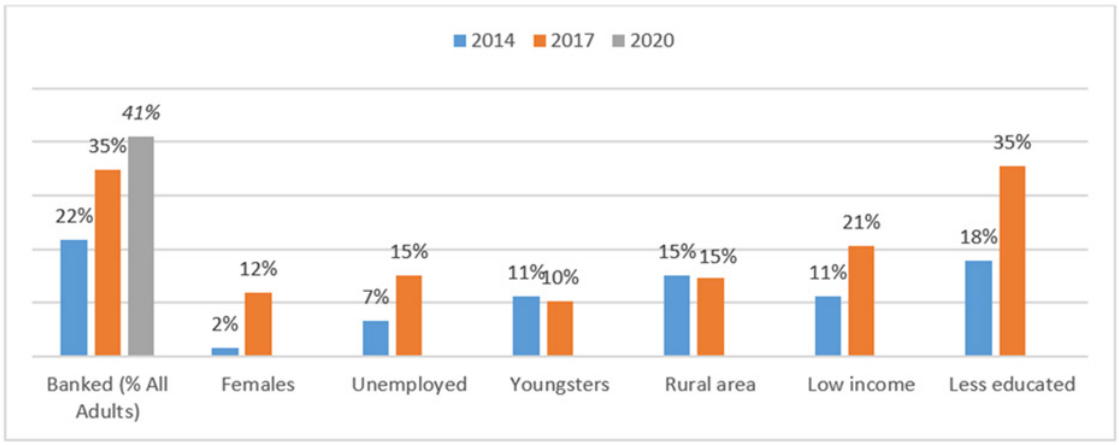
3 The digital financial inclusion landscape: country context

3.1 Current status and trends of DFI

The population of Ethiopia is estimated at 114 million, of whom 62.7 million are adults (aged 15 years or older). Of these, 37 million are unbanked, or about 59 per cent of all adults. Analysis shows only modest progress over the past five years. While the percentage has declined slightly since 2016, when it stood at 66 per cent, in absolute terms the number of adults without an account remains virtually unchanged at 37 million.

The gender aspect of financial exclusion has been much more pronounced over the years. Nearly 22 million women are currently estimated to be financially excluded; the gender gap was 12 per cent in 2017, up from just 2 per cent in 2014. Similar divides have been observed among other categories of the population. As portrayed in Figure 8, adults who are unemployed are far more likely to be unbanked than those who are employed, with a 7 percentage point gap in 2014 vs a 15 point gap in 2017. The same has been observed with young adults, rural residents and those less educated.

Figure 8: Trends in the divides: Ethiopia's unbanked by basic characteristics (percentage points, in 2014 vs 2017)



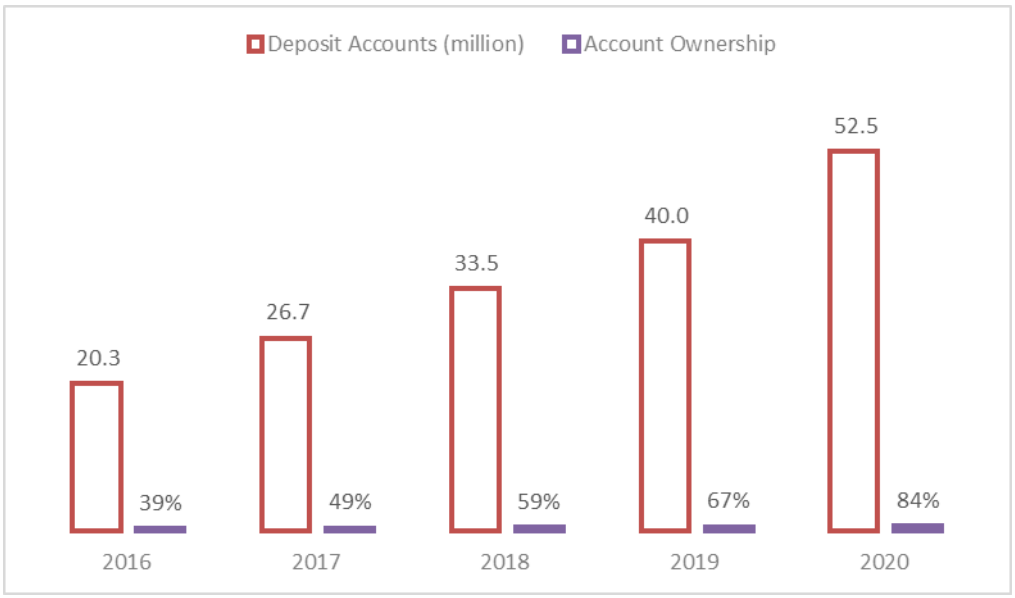
Source: Based on Global Findex database for Ethiopia, 2014 and 2017

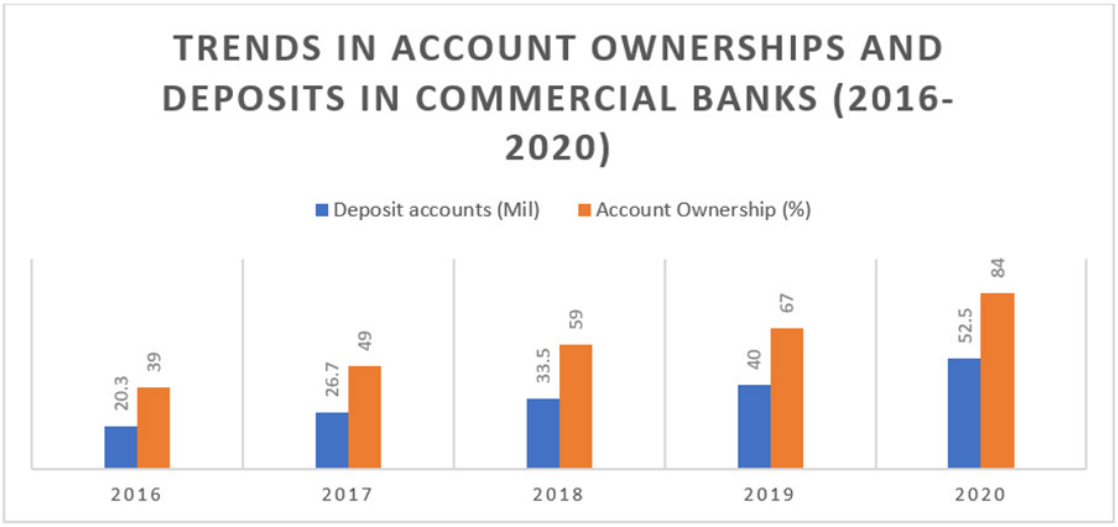
Account ownership, as reported by the financial institutions (FIs, including banks and microfinance institutions), has been increasing consistently and in parallel with the growth of the adult population during the past decade. The number of adults with deposit accounts in the FIs has more than doubled, from less than 33 million in 2016 to 74 million currently.

Nonetheless, supply-side data on account ownership may not be accurate, especially considering that the global average lies at 69 per cent, and even developed countries have an average of 94 per cent. To eliminate the risk of double-counting, the number of deposit accounts in commercial banks only was used, which gives a figure of 84 per cent for account ownership in 2020, or 52.5 million; up from just 20.3 million in 2016.

Figure 9 illustrates this comparison. (See also tables 3.2 and 3.3 under Annex 3.)

Figure 9: Trends in account ownership (2016 -2020) – deposits only in commercial banks

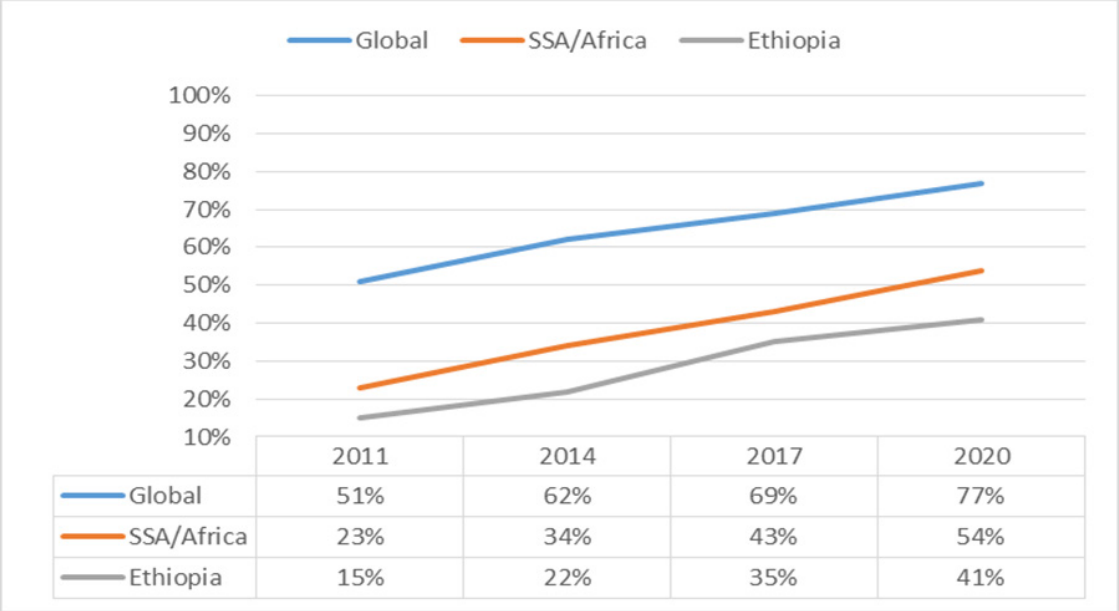




Source: Based on NBE raw data and annual reports (2016 to 2020)

If viewed from the demand side, financial inclusion in Ethiopia has been on the increase since 2011, increasing from 22 per cent to 35 per cent by 2017, and was projected to reach 41 per cent in 2020. Although this broadly follows the global and SSA trajectory, the country continues to lag behind, even by SSA standards. Figure 10 juxtaposes the data for Ethiopia with the trends at the global and SSA scale.

Figure 10: Global comparison of account ownership (demand side, 2011 to 2017) and projection for 2020



	2011	2014	2017	2020
Global	51%	62%	69%	77%
SSA/Africa	23%	34%	43%	54%
Ethiopia	15%	22%	35%	41%

Source: Based on Findex 2017 (the 2011 figure for Ethiopia is our own projection from the Findex database and NBE raw data, as are all the figures for 2020)

The current state of DFI in Ethiopia has been assessed for the dimensions of access, availability and usage, along with an aggregate score, as shown the Table 6. Ethiopia's aggregate score for all three indicators is 774, which is 47 per cent of the international average (1 387 points). For the access indicator, Ethiopia's performance is 64 per cent of the international average; for availability, the indicator is 15 per cent of the average; and for the usage indicator, it is 62 per cent.

Table 6: Measuring Ethiopia's DFI vis-à-vis international average for access, availability and usage

Dimensions of DFI	Ethiopia *(average for 2016 and 2019)*	Interna-tional average	Relative score *(as percentage of international average)*
1) Access (penetration of financial services)			
• Deposit accounts: number with commer-cial banks per 1 000 adults	735	742	99%
• Mobile money account: number per 1 000 adults	2	406	1%
Sub-total	**737**	**1 148**	**64%**
2) Availability			
• Branches: number of bank branches per 100 000 adults	*9*	*13*	*69%*
• ATMs: number per 100 000 adults	8	22	35%

Table 6: Measuring Ethiopia's DFI vis-à-vis international average for access, availability and usage (continued)

Dimensions of DFI	Ethiopia *(average for 2016 and 2019)*	Interna-tional average	Relative score *(as percentage of international average)*
• Mobile money agents: number per 100 000 adults	20	203	10%
Sub-total	**37**	**238**	**15%**
3) Usage			
• Deposits: Outstanding deposits with com-mercial banks (% of GDP)	29%	42%	70%
• Loans: Outstanding from commercial banks	24%	33%	72%
• Mobile money: Value of transactions (% of GDP)	0.1%	10%	1%
Sub-total	**53%**	**85%**	**62%**
Aggregate	**774**	**1387**	**47%**

Source: Commutation based on NBE raw data and Thi, 2020

3.2 An overview of the financial sector

The Ethiopian financial sector is comprised of formal and semi-formal financial institutions (FIs). For the former, there are 18 commercial banks[5], 38 microfinance institutions (MFIs), and 15 insurance companies that are operating under NBE regulation.

Table 7: Overview of financial service providers (at the end of Q3, 2020)

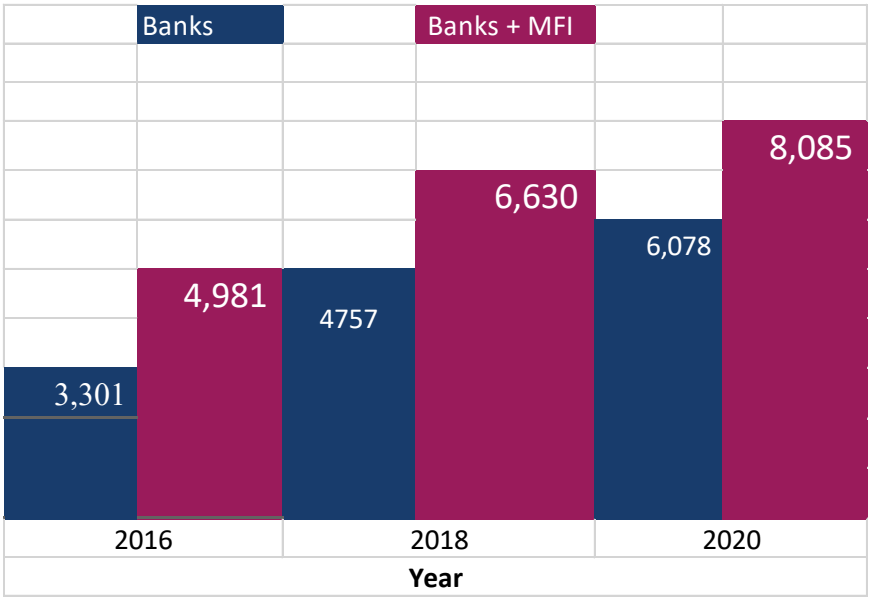
SN	Financial service providers	Number (branches)	Accounts/clients		Remarks
			Deposits	Loans	
1	Commercial banks	18 (6 078)	52 460 000	21 586 122	Includes ZamZam Bank
2	MFIs	38 (2 007)	288 537	5 342 054	
3	Financial cooperatives (SaCCOs)	22 620 (94% rural and 6% urban)	5 384 559 (42% females)		Regulated by separate agency (FCPA), and not by NBE.
			5% (ETB 17.4 billion)	ETB 20.4 billion	

Source: Based on NBE data, 2019-2020.

[5] This includes ZamZam bank, an Islamic bank that was licensed by NBE in October 2020.

Ethiopia has witnessed a rapid improvement in the physical availability of banks and MFIs in the past five years. As can be seen in the Figure 11, the total number of FI branches (banks and MFIs) reached 8 085 in 2020, from 6 630 in 2018 and 4 981 five years ago. This means the number of branches on aggregate increased by 62 per cent, and has been rising at a mean annual rate of about 13 per cent for the past five years.

Figure 11: Number of branches (banks and all FIs) by year: for 2016, 2018 and 2020



Source: Based on NBE raw data for the period from 2016 to 2020

Further analysis showed that banks accounted for 66 per cent of that in 2016 and 75 per cent in 2020. Likewise, there has been a significant increase in the number of POS and ATM terminals. The total number of bank branches reached 6 078 in 2020 – an almost twofold increase in five years (NBE, database, 2013-2020).

However, the distribution of banks is observed to be geographically skewed in favour of urban centres. Thus, about 53 per cent of bank branches are located in Addis Ababa (Ayalew, 2019).

Savings and credit cooperative organizations (SaCCOs) are another important constituent of Ethiopia's finance sector, as semi-formal FIs that are regulated by a separate government entity, the Federal Cooperative Agency (FCA). As of the end of 2012, there were 22 620 primary SaCCOs, established by a total of 5 384 559 adults. Of those, 94 per cent (21 300) were rural SaCCOs (RuSaCCOs); and 42 per cent (2.3 million) of the membership was female (FCA, 2019).

Empirical evidence showed that the SaCCOs have untapped potential but also capacity gaps.

Evaluative studies in the four main regions of Ethiopia suggest that RuSaCCOs are the preferred FIs for about 11 per cent or one in every ten smallholder farmers. Their attractiveness is due in

large part to location: for most farmers RuSaCCOs are located within a three-kilometre radius, compared with eight kilometres for the formal FIs.[6] (ATA, 2019/2020).

Finally, some of the implications along with indicative recommendations are presented in Table 8.

Table 8: Implications and indicative recommendations

Implications:	Indicative recommendations:
1) Dramatic growth in the number of branches (banks and MFIs) as well as ATM/POS terminals, showed the remarkable progress in the physical availability of financial Infrastructure, although this was not reflected in the number of agents. 2) SaCCOs are widely considered to be an important source of finance for the unbanked population of Ethiopia. The RuSaCCOs are strategic from the equity perspective, given that they lie within easy reach for the vast majority of unbanked Ethiopians (location advantage, physical proximity to the farmers). In support of this, the new cooperative sector roadmap acknowledges the structural barriers and sets out strategies in support of the emergence and growth of SaCCOs as vibrant financial institutions FIs. Thus, the inclusion of SaCCOs as formal financial institutions would have a considerable impact on the success of DFI, in addition to being relevant in view of their context-specificity and consistency with the definition and international standards for promoting and measuring FI.	1) Due attention should be given to DFS while capitalizing on the notable achievements in the availability or proximity of access points. 2) The recognition of SaCCOs' potential as a formal financial institution is essential. It is imperative for the second phase of the NFI to include the SaCCOs as part of the design, execution and review of the interventions for DFI in the future. 3) Facilitating the piloting of mobile and agent banking with selected SaCCOs in urban and rural areas would help the government make informed decisions for scaling up the on-going digital finance pilot initiative.

3.3 The supply of DFS in Ethiopia

3.3.1 Evolution of mobile and agency banking in Ethiopia

In Ethiopia, DFS started ten years ago: the pioneer was M-Birr, set up in 2009 for mobile banking service. Although mobile and agency banking has been expanding since 2010, progress has been slow and the potential remains largely untapped. Despite the slow pace of penetration, fundamental and concrete evolution in the sector has occurred during that time. When M-Birr started operation, the idea of mobile and agent banking was new to the majority of Ethiopians. There was also no legal framework for conducting business operations and providing DFS. With time, numerous opportunities, benefits, and challenges became a practical reality in the mobile and agency banking sector. These are briefly outlined below (EBR, 2020).

[6] The average distance between RuSACCO office and farmer' homesteads was estimated to be three km, and all of the RuSaCCOs are located within a five km radius. By contrast, other FIs like MFIs and banks are virtually non-available at less than five km. Surprisingly, however, the farmers mostly do not view the SaCCOs as the most reliable institutions. Out of the total (37 per cent) who dealt with formal FIs, about two-thirds hold their savings in banks or MFIs, despite the greater distance. Only 11 per cent preferred RuSaCCOs for savings and loans.

To start with, the opportunities that were found to facilitate the advancement of DFS include**:**

- The recent regulatory reforms, including permission for fintechs to engage in agency banking, promotes private sector investment and help create more job opportunities in the financial sector.
- The limited availability of FIs like banks in regions outside Addis Ababa was an opportunity for mobile banking agents, allowing them to fill the gap, especially in rural parts of the country, by accepting cash deposits and withdrawals using mobile phones.
- The country's population of over 110 million people represents untapped domestic potential.
- Pastoral livelihoods in regions like Somali lend themselves to mobile banking.
- Increased connectivity, with mobile users approaching 50 million, also presents an opportunity.

Mobile banking has proved to be relevant to Ethiopia, especially for women and in the context of the COVID-19 pandemic. Benefits include:

- The practical experiences of M-Birr served as input for the formulation of policy and regulation. The channels/platforms were also instrumental in evaluating the opportunities and bottlenecks and thus creating an enabling environment.
- Further investment is attracted, as the places where the demand for mobile banking is high are identified.
- Mobile banking is user-friendly, available around the clock, and convenient for mobile users in rural areas as well as cities. Its practical uses include diversified services such as buying telephone airtime, paying electricity bills, cash-in and cash-out, purchasing travel tickets, and purchasing goods and services.
- Initiatives that target the expansion of financial inclusion also use mobile banking as a method of improving financial service provision in rural areas. The sector has seen fundamental changes, challenging the legacy model of financial inclusion based on branch expansion.

Experts in the industry have argued that M-Pesa in Kenya succeeded in large part because it is a telecom-led mobile money platform. Unlike M-Pesa, mobile banking technologies in Ethiopia have been bank-led. Nonetheless, considerable potential remains to be exploited: mobile phone subscriptions in the country have grown to over 53 million.

Notwithstanding the improvements in the past ten years, therefore, mobile and agency banking has not been advancing at the expected pace and level. The major challenges and barriers include:

- Inadequate infrastructure, such as mobile grids, road and electricity, remains a major challenge, affecting the liquidity management of agents for cash and electronic funds alike.
- Digital illiteracy is a major challenge; it explains why the use of mobile banking remains marginal. An overwhelming majority of urban dwellers, even in Addis Ababa, still go to banks to make withdrawals and deposits.
    - Due to digital illiteracy, most people use mobile banking for a few specific services only.
    - Digital illiteracy increases the vulnerability of mobile banking users to fraud. Lack of awareness is a security threat, with practices such as users asking agents to enter the PIN code for them.

- Transaction limits in the revised mobile and agent banking directive are cited as a regulatory barrier that hampers the development of mobile banking services in Ethiopia. The ceiling for daily transaction has been increased by only ETB 2 000 from the previous amount of ETB 6 000, despite fluctuations of inflation and demand and consequently, mobile banking has been constrained by similar restrictions. .

3.3.2 DFS channels and existing platforms

Currently, various DFS channels are being adopted by about three-quarters of the 17 commercial banks operating in the country. As can be seen in Table 9, ATM/POS service is supported by all the banks. Next, Internet and mobile banking services are available from 88 per cent and 82 per cent of the commercial banks, respectively. Mobile wallet services are currently provided by 11 (65 per cent) of the banks, while prepaid card services are being offered by only six banks (35 per cent), and only to foreign nationals.

It is worth noting that MFIs are not included in the analysis, but five MFIs, including Somali MFI, have been partnering with M-Birr in the delivery of mobile and agency banking services, as stated previously.

Table 9: Banks providing DFS, by DFS channel, with remarks on applications

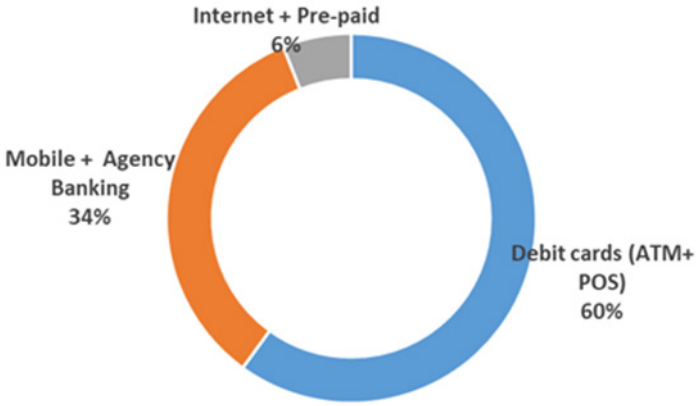
DFS channel	Number of commercial banks	%	Remarks on applications
Debit card (ATM/POS)	17	100.0%	All banks
Internet banking	15	88.2%	Except Enat and Debub Global
Mobile banking	14	82.4%	Except Enat, Debub Global and Awash
Mobile wallet	11	64.7%	Except Enat, Debub Global, Addis, Nib and Zemen
Prepaid cards	6	35.3%	Only Awash, Abyssinya, CBE, United, Wegagen and Zemen (limited to foreigners)
Average	13	74%	

Source: Based on NBE data, 2019-2020.

ATM/POS is the dominant channel (60 per cent), while mobile and agency banking account for about one-third (34 per cent). The rest (6 per cent) is for the Internet and prepaid cards.

This is reflected in Figure 12.

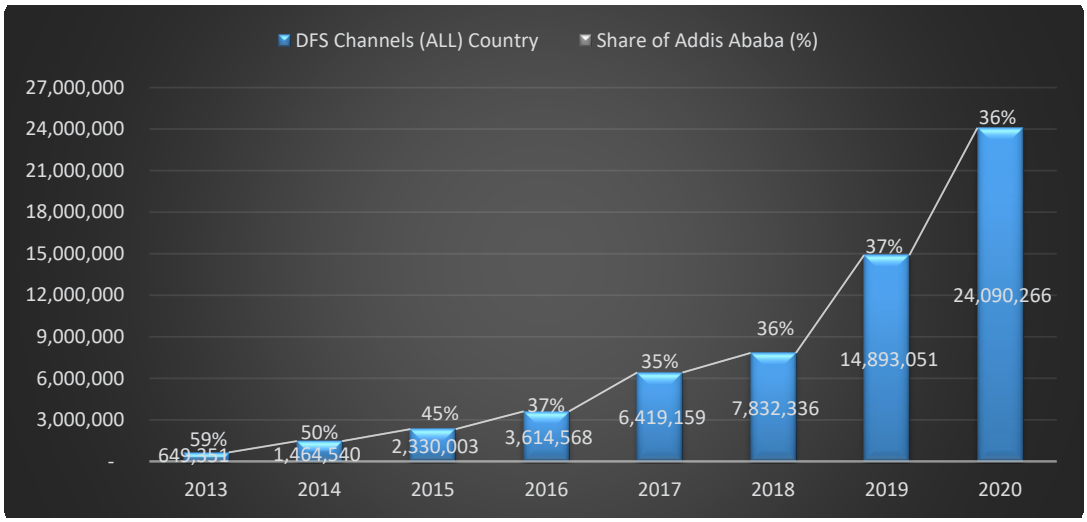
Figure 12: Percentage share of DFS channels



Source: Based on NBE data, 2019-2020

The DFS landscape showed encouraging developments in terms of service availability throughout the country. Accordingly, Addis Ababa's share has declined from 59 per cent in the year 2013 to 36 per cent in 2020. Although the geographical divide remains significant, DFS channels are more evenly distributed than bank branches, which remain highly skewed towards Addis Ababa, at 53 per cent.

Figure 13: Trends in the number of costumers (all DFS) percentage share of Addis Ababa)



Source: Based on NBE payment data as of June 2020

The assessment identified six platforms that support the delivery of mobile and agency banking services, which are presented in Table 10.

Table 10: DFS platforms for mobile and agency banking

Existing platforms:	
telebirr	telebirr
M-BIRR	M-Birr
Amole	Amole
Birr	CBE Birr
HelloCash	Hello Cash
ebirr	E-Birr

Source: Based on EBR, 2020 and websites of the platforms and adopters/banks

M-Birr was the first platform, operational since 2010. BelCash is the service provider for Hello-Cash, which is widely used by Lion, Wegagen, and United Banks. CBE-Birr is the only platform that directly owns and operates its infrastructure. E-Birr is used by the Cooperative Bank of Oromia (CBO). Although data on the size of the platforms by payment volume is not available, preliminary observations showed that CBE-Birr dominates P2G payments for utility bills. E-Birr has announced the signing of a contract with the Ambo City Administration and CBO for the outsourcing of utility bills (water and transportation).

In May 2021 Ethio telecom launched telebirr, an innovative mobile money solution that provides services for deposit, withdrawal, transfer, utility payment and international remittances. It aims to bridge the financial inclusion gap and enables customers to make online payments through an electronic account on their mobile devices.

3.4 Users and usage of DFS

The potential and actual demand for DFS in Ethiopia has been assessed using raw supply-side data obtained from the NBE. The results of the analysis are summarized in Table 11. A total of 16.5 and 26.9 million people reportedly subscribed for the use of various DFS in Ethiopia as at the end of June 2019 and 2020 respectively. However, not everyone in the subscriber base actually made or received a payment digitally.

In 2020 about 12 million people, or 19 per cent of all adults, were active users of the DFS service, i.e. made at least one digital transaction. The annual volume of DFS transactions is ETB 241 billion, a significant increase from ETB 42 billion in 2016. In terms of GDP, that is an increase from 2.7 per cent in 2016 to 7.1 per cent in 2020. The total transaction volume including mobile and agency banking in 2020 came to ETB 9.41 billion, compared to 1.34 billion in 2016.

The transaction volume for all DFS channels in 2020 was ETB 71 billion, making up about 3 per cent of GDP. This is a great contrast to the situation five years earlier, when the economic contribution of DFS transactions was close to zero (0.35 per cent).

Table 11: Summary of selected indicators on DFS use and usage in Ethiopia (2016-2020)

Indicators	Number and percentage by year				
	2016	2017	2018	2019	2020
All DFS subscribers	4 991 495	8 973 651	9 900 689	16 488 986	26 897 720
% of adults (15+)	9%	16%	17%	27%	42%
Active transactions (all DFS)	1 305 203	3 439 695	4 244 105	5 012 161	12 205 029
% of adults (15+)	3%	6%	7%	8%	19%
Value of Transaction (ETB billion)	42	65	107	139	241
% of GDP	2.7%	3.4%	4.8%	5.1%	7.1%
Mobile and agency banking only					
All users	**1 328 544**	**2 474 175**	**2 779 520**	**4 647 301**	**9 353 034**
% of adults (15+)	2%	4%	5%	8%	15%
Value of transactions (ETB billion)	5	13	17	31	71
% of total DFS volume	12.9%	20.4%	15.8%	22.3%	29.7%
% of GDP	0.35%	0.68%	0.76%	1.15%	2.10%
Mobile money only					
Number (all users)	33 156	80 124	143 534	178 986	270 016
% of adults (15+)	0.06%	0.15%	0.25%	0.30%	0.43%
Value of transaction (ETB billion)	1.34	2.51	2.83	4.71	9.41
% of GDP	0.1%	0.1%	0.1%	0.2%	0.3%

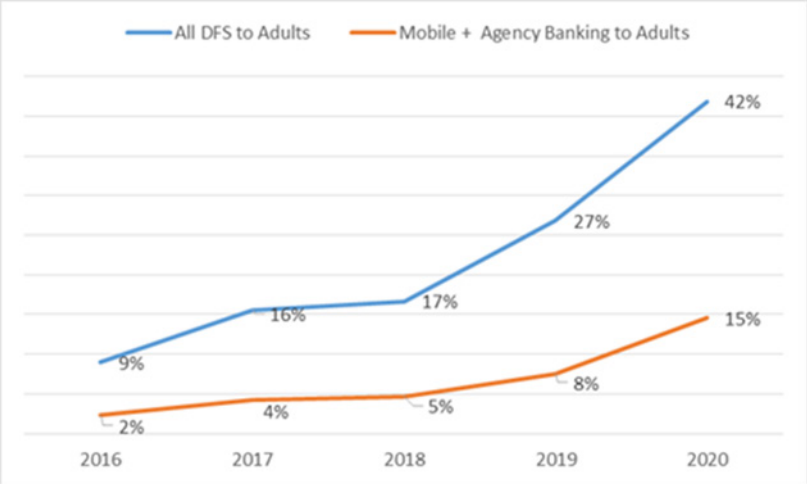
Source: Based on NBE payment data as of June 2020. See also Table 3.4 in Annex 3.

Regarding the mobile and agency banking component of DFS in Ethiopia, the number of users has now reached nearly 9.4 million, or 15 per cent of all adults. With a transaction volume of ETB 71 billion, this channel accounts for nearly 30 per cent of DFS and contributes 2.1 per cent

to GDP. For mobile money, the number of users is 270 000 (0.43 per cent of adults), and the transaction volume is ETB 9.41 billion, 0.3 per cent of GDP.

In terms of coverage, the trend analysis results displayed in Figure 14 show that about 42 per cent of adults are currently using all DFS channels, as opposed to 15 per cent for mobile/agency banking only. The situation in 2016 was 9 per cent for all DFS and 2 per cent for mobile/agency banking users.

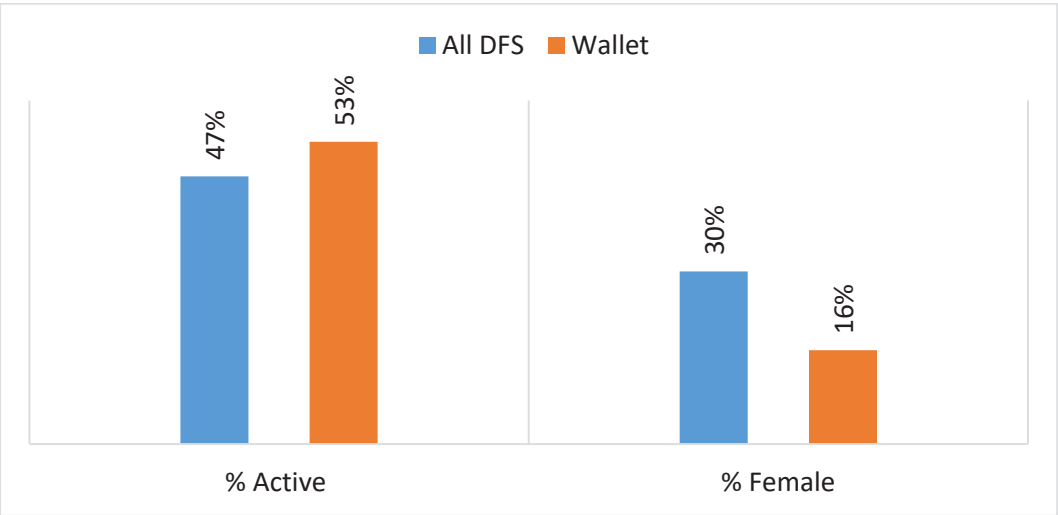
Figure 14: Trends in the coverage of all DFS vs mobile and agency banking only



Source: Own, based on NBE payment data as of June 2020

Disaggregation of the assessment results also unveiled huge gaps in terms of usage and gender. About 53 per cent of the 7.99 million wallet accounts are active. This is slightly higher than the 47 per cent active DFS users. However, the gender divide is remarkably high. Only 30 per cent of DFS users are women. The difference is even more pronounced for wallet users: as Figure 15 shows, women account for only 16 per cent.

Figure 15: Disaggregation of active accounts by gender



Source: Based on NBE, ibid

3.5 Demand-side findings on DFI in Ethiopia

Bessir (2018) presents the country's standing in terms of financial inclusion and highlights the following.

1) **Double-digit growth in account ownership**: In 2017, the percentage of adults with an account rose to 35 per cent, up from 22 per cent in 2014. Account usage has improved, with 26 per cent of adults saving at financial institutions as compared to 14 per cent in 2014; and 11 per cent of adults borrow from financial institutions, compared with 7 per cent in 2014.
2) **People rely more on informal institutions for their financial needs**: Although 62 per cent of Ethiopians reported saving money in the previous year, only 26 per cent saved formally at financial institutions, while 38 per cent saved with a person outside the family or at an informal savings club. During the same period, 41 per cent of Ethiopians said they borrowed money, but only 11 per cent borrowed from financial institutions. The rest borrowed from family or friends (31 per cent) or from a savings club (8 per cent).
3) **Wide gender gap**: Women account for a disproportionate share of the unbanked, and the gap is widening. In 2017, the gender gap increased to 12 per cent, from being virtually insignificant in 2014. Today 41 per cent of men have an account, compared with 29 per cent of women, whereas in 2014 account ownership was essentially even, at 23 per cent of men and 21 per cent of women. Account ownership among men has nearly doubled in three years, but for women it has increased by only eight percentage points.
4) **Wealthier households are more likely to have an account**: Among adults in the richest 60 per cent of households within Ethiopia, 43 per cent have an account, compared with 22 per cent among the poorest 40 per cent of adults. In general, women, rural residents, those less educated and the unemployed are less likely to have an account.
5) **Key barriers for financial inclusion**: Among the unbanked adults surveyed, 85 per cent reported insufficient funds as a reason for not opening an account. Distance (cited by 20 per cent) and lack of documentation (cited by 11 per cent) were mentioned as the second and third most common barriers to financial inclusion. The cost of financial services is cited as a barrier by only 5 per cent of those without an account. This is not surprising considering that banks and MFIs provide the basic financial services, such as opening an account and making deposits and withdrawals, free of charge. The minimum balance to open an account is Birr 25, less than one US dollar.
6) **Cash is by far the most popular method of payment**: Virtually everyone (99 per cent) relies on cash to pay utility bills and receive payments. This is in sharp contrast to Kenya, for example, at 12 per cent, and the region as a whole, at 59 per cent. (See Figure 3.1 in Annex 3, which compares Ethiopia with peer countries in Africa.)
7) **Ethiopia's access to and usage of DFS is still low**: Ethiopia has not taken advantage of digital financial services that, elsewhere in sub-Saharan Africa, have driven access to and usage of financial services. This is illustrated in Table 12, which shows that in 2017 only 12 per cent of adults in Ethiopia made or received digital payments, compared with the SSA average of 34 per cent and the figures for the neighbouring countries of Kenya and Rwanda, 79 per cent and 39 per cent respectively.

Table 12: Access to and usage of DFS: situating Ethiopia within sub-Saharan Africa

Selected indicators (in per cent)	Ethiopia	Kenya	Rwanda	SSA average
Made or received digital payments in the past year	12	79	39	34
Mobile money accounts (age 15+)	0.3	73	31	21
Debit card ownership (15+)	4	38	5	18
Paid utility bills using a mobile phone (out of all adults who paid utility bills)	0	82	44	23
Paid utility bills using an account (out of all adults who paid utility bills)	0.2	85	48	31
Received wages into an account (out of all adults who received wages)	17	68	33	45
Received payments for agricultural products into an account (out of all adults who received ag. payments)	1	46	14	
Used a mobile phone or the Internet to access an institutional account in the past year (out of all adults who had such an account, age 15+)	1	57	13	24

Source: Bessir M., 2018, based on the 2017 Global Findex database

8) **Should we blame low mobile phone subscription for low mobile money penetration?** Low mobile phone subscription is widely blamed for the low mobile money account penetration in Ethiopia, but this may be misplaced. In 2017 Ethiopia had 34.7 million mobile subscribers (GSMA, 2017) but only 0.3 per cent of adults had a mobile money account that year, according to Findex. About 13 million people with a mobile phone are completely unbanked. This illustrates that mobile phone adoption alone is not sufficient to drive mobile financial services. It is possible that an explanation might be found in the "analogue complements" to digital financial services, such as regulation, skills and institutions, and this needs to be analysed further.

9) **One-fifth of Ethiopians would have to sell their assets to meet a need for emergency funds**: Asked if they could come up with an amount equal to 1/20 of gross national income (GNI) per capita in local currency within the next month, more than half of adults replied "yes". However, most of these respondents said they would turn to family or friends, divert wage income or sell their assets; only 18 per cent of those who reported being able to come up with emergency funds said they planned to rely on their savings. Some 21 per cent of adults reported that they would have to sell assets to raise the emergency funds. This would imply that many adults do not have an alternative emergency scheme to fall back on based on insurance, savings or short-term credit.

4 Ethiopia's readiness and stakeholders for digital financial inclusion

4.1 Ethiopia's readiness assessment: achievements and gaps for DFI

The assessment findings on Ethiopia's readiness for DFI are organized and presented in line with the methodological framework. The infrastructure readiness, enabling systems, and governance framework are presented first, followed by the people's readiness for DFS adoption, which is a demand side determinant. The policy and regulatory environment is also reviewed, accompanied by a section on the achievements so far and existing gaps in DFI.

4.1.1 Infrastructure readiness: connectivity, power and financial infrastructure

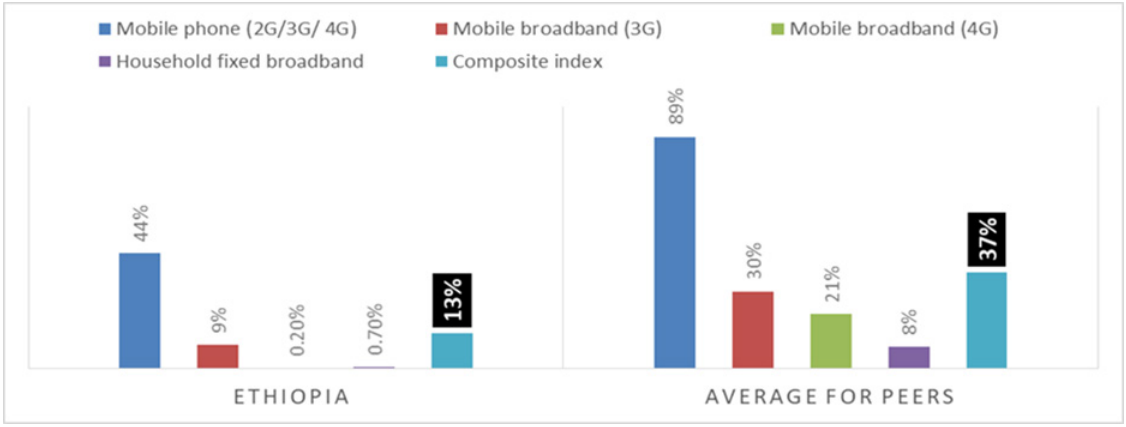
4.1.1.1 Connectivity

Connectivity is a foundational element of the digital transformation, and hence DFI. Digital products and services are dependent on seamless and equitable access to mobile Internet for their operation. Internet coverage has grown at an annual rate of 45 per cent. Ethiopia has also seen significant growth in cellular subscriptions, with the proportion reaching 60 per cent in 2017 (with 41 per cent active subscription). However, mobile adoption remains low. A similar pattern can be observed for broadband access, where active mobile broadband subscriptions stand at 7.1 per cent, compared with an average 24.8 per cent in the region (Government of Ethiopia, 2020).

Currently, Ethio telecom, the sole operator, owns 7 213 mobile towers and 22 000 km of optical fibre cable. Teledensity has reached 47 per cent, with 95 per cent coverage in terms of population and 85.4 per cent in terms of geography (The Reporter, 2020).

The mobile Internet penetration rate for Ethiopia can also be considered low. As shown in Figure 16, the composite index for the mobile penetration indicators is computed to be 13 per cent for Ethiopia versus an average of 39 per cent for the peer countries.

Figure 16: Penetration rates, per 100 inhabitants, for selected countries Q1, 2019



Source: Based on World Bank, 2019b.

Internet use or access in Ethiopia was at 15 per cent at the end of 2016. By comparison, Internet usage at that time stood at 26 per cent in Kenya and 28 per cent in Sudan. The country is similarly lagging behind Egypt, Kenya and Sudan in mobile phone usage and ownership.

Ethiopia's current status of connectivity has been analysed using a composite connectivity index comprising infrastructure, affordability and consumer protection. In the year 2018, Ethiopia scored 35.8 among the emerging regions, an improvement of 8.9 points over the score in 2014 (GSMA, 2019).

The digital transformation strategy duly recognizes the pivotal role of connectivity, as the lack of connectivity is a strong barrier for the introduction and adoption of digital products and services.

The large gaps in network coverage, affordability and quality are identified as key challenges. The policy recommendations to address critical gaps in connectivity include drawing up a comprehensive telecommunication roadmap and robust regulations that can ensure accelerated progress towards the national objectives; upgrading WoredaNet by conducting detailed supply and demand-side planning to improve institutional connectivity; and setting up and operationalizing a universal service fund to expand infrastructure/connectivity (Government of Ethiopia, 2020).

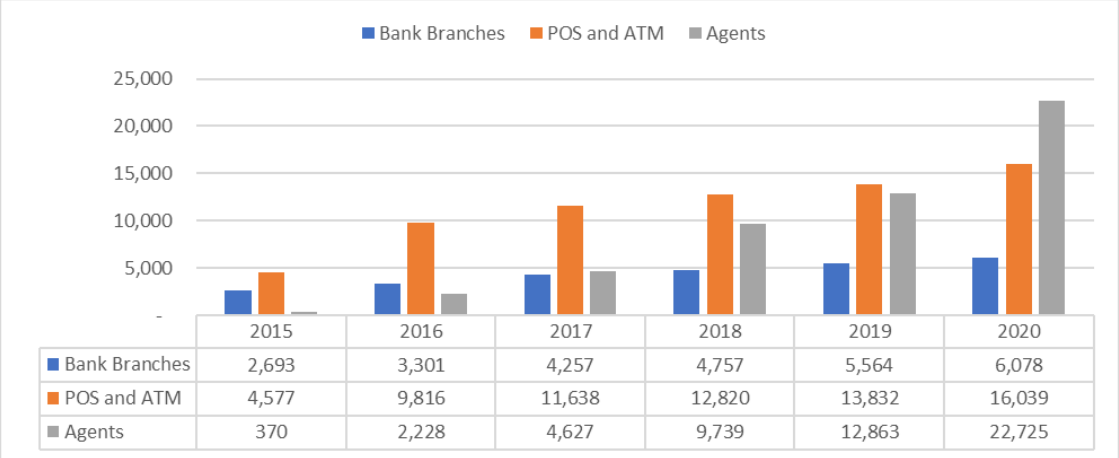
4.1.1.2 Power and financial infrastructure

Electrical power is a basic infrastructure requirement for DFI. Household access to electricity is 44 per cent, which is at par with SSA (44.5 per cent), with 50 per cent connecting off-grid and major differences between urban (96 per cent) and rural areas (31 per cent). Key challenges for Ethiopia include the unreliability of the power supply and the financial unsustainability of electricity prices, which are highly subsidized.

Current initiatives to resolve these challenges include the proclamation of a public-private partnership (PPP), the reform of power generation procurement, restructuring and corporatization of the Ethiopian Electric Utility, introduction of a new electrification strategy (the National Electrification Plan, NEP), and expansion of the transmission network. Recommendations to address critical gaps in power provision include investing in an upgrade of last mile connection, diversifying energy sources and off-grid solutions, establishing a targeted subsidies scheme, and facilitating follow-up and maintenance through measurement and monitoring systems.

The physical infrastructure of finance is also essential for DFS. Ethiopia, as stated previously, has witnessed rapid growth in the number of bank branches as well as POS and ATM terminals. Consequently, the branch-to-adult ratio has increased from an average of 2.1 to 10.6 per 100 000. The number of POS and ATM terminals has exceeded 16 000 (9 780 POS terminals and 6 200 ATMs). Likewise, the number of agents for DFS service has dramatically increased, from 370 in 2015 to 22 725 in 2020, as shown in Figure 17.

Figure 17: Trends in financial infrastructure: branches, ATM/POS terminals, and agents (2015 to 2020)



	2015	2016	2017	2018	2019	2020
Bank Branches	2,693	3,301	4,257	4,757	5,564	6,078
POS and ATM	4,577	9,816	11,638	12,820	13,832	16,039
Agents	370	2,228	4,627	9,739	12,863	22,725

Source: Based on NBE data, 2019-2020.

4.1.2 Enabling systems and e-governance for DFI

Enabling systems are also a salient determinant for successful DFS. These are outlined below.

- **Digital ID**, the absence of which has already been mentioned as an important barrier to DFS adoption. In Ethiopia, the standard remains a physical ID card. One of the key impediments to the introduction of a digital ID is the lack of coordination and communication among the authorities. Current initiatives to introduce a national digital ID programme to take the place of the Kebele ID system are led by the Ministry of Peace (MoP). This Ministry is setting the strategy by engaging with different stakeholders, including MInT.
- **Digital payment systems**: Notwithstanding the importance of DFS for advancing Ethiopia's financial inclusion, obstacles remain. These include low Internet and mobile penetration, high data costs, low access to formal financial services, lack of awareness of existing DFS and a fintech industry that remains in its infancy due to regulatory constraints. The lack of interoperability among banks and financial services, including electronic wallets, significantly hampers growth and acts as a barrier to entry for innovations in mobile money and financial solutions. Current initiatives therefore include reforms in the regulatory environment.
- NBE has amended the Banking Services Proclamation to include DFS providers and recently released two draft directives, one for payment instrument issuers and one for agents. In addition, MInT has finalized the draft of a comprehensive all-in-one e-Transaction Proclamation. The policy recommendations to address critical gaps in digital payments are: ensure financial inclusion by promoting existing financial services and evaluating the adoption of innovative solutions; increase usage by promoting benefits; encourage innovation in the banking system; and enhance government coordination.
- Additionally, the National Digital Payment Strategy highlights different pillars that include infrastructure, adoption and innovation with the aim of supporting digital retail payment solutions and interoperability between financial and non-financial institutions.
- **Cybersecurity**: The Ethiopian Information Network Security Agency (INSA) counted 256 major cyberattacks within a six-month-period in 2017. This indicates that, as Ethiopia moves towards digitalizing services, more investment will be required to enhance cybersecurity capabilities. Key difficulties include the absence of a national cybersecurity assessment to identify vulnerability, the lack of domestic cybersecurity experts and the lack of awareness among users. Recommendations to address critical gaps in cybersecurity include: conduct a coordinated and centralized assessment of Ethiopia's cybersecurity;

develop a framework and roadmap for national awareness campaigns; and enable the adoption of cloud solutions.

E-governance is also integral to managing digital interactions among government, private sector and citizens. Ethiopia is currently progressing in e-governance despite the presence of major barriers in terms of human capital and infrastructure. Current initiatives are concerned with digitizing government operations and services and developing better service delivery channels. Recommendations to address critical gaps in e-governance include designing services with stronger coordination across government and leveraging digital technology to reduce regulatory complexity and costs.

4.1.3 People's readiness – Financial Inclusion and the gender divide

People's readiness is another important demand-side factor that determines access, availability and sustainability of DFS. Specifically, financial capability, access to and use of digital technologies, and awareness are essential. For instance, female-managed businesses in Ethiopia face additional restrictions on access to finance (Tekeste and Hossein, 2020).

Moreover, basic demographic characteristics and the socio-cultural set-up play key roles in shaping access to and control of resources, which leads to the various DFS divides by gender, age, location, income level, etc. These are outlined below.

The statistics on women in Ethiopia indicate broad disadvantages (DHS, 2016):

- **Education**: The percentage of women with no education decreased from 66 per cent in 2005 and 51 per cent in 2011 to 48 per cent in 2016. Among men, the percentage declined from 43 per cent in 2005 to 28 per cent in 2016.
- **Literacy**: Four in ten (42 per cent) women and 69 per cent of men aged 15-49 are literate.
- **Employment**: One in three (33 per cent) women and 88 per cent of men were employed in the seven days preceding the survey. One-half of all women and 8 per cent of men had not been employed in the prior 12 months.
- **Exposure to mass media**: Nearly three in four (74 per cent) women and 62 per cent of men have no access to radio, television, or newspapers on a weekly basis.
- **Internet usage**: Overall, only about 5 per cent of the households used the Internet in the year 2016. Some 5 per cent of women and 13 per cent of men have used the Internet at least once.
- **Health insurance**: Health insurance coverage is extremely low; 95 per cent of women and 94 per cent of men are not covered by any type of health insurance.

Data on the ownership and use of bank accounts and mobile phones (EDHS, 2016) uncovered the wider disparities. Of the women aged between 15 and 49, 15 per cent use an account in a bank or other financial institution, compared with 25 per cent for men. Among women, 27 per cent owned mobile phones at the time of the survey; the figure for men was 55 per cent. Among those with mobile phones, only 5 per cent of women and 9 per cent of men use their phone for financial transactions. The results can be further disaggregated by selected background characteristics.

- Large differences in the use of financial accounts and ownership of mobile phones are observed between urban and rural residents. For example, 44 per cent of urban women use a bank account, compared with only 7 per cent of rural women, while 71 per cent of urban women own a mobile phone, compared with 15 per cent of rural women.
- Among women and men alike, the better-educated are more likely to use a bank account or own a mobile phone. For example, virtually all women and men with more than

secondary education own a mobile phone (98 per cent each), compared with 9 per cent of women and 32 per cent of men with no formal education.

- Use of a bank account and ownership of a mobile phone increase in the higher wealth quintiles. Among women, the percentage using a bank account ranges from 3 per cent in the lowest quintile to 40 per cent in the highest. Only 7 per cent of women in the lowest quintile own a mobile phone, compared with 67 per cent in the highest. Similar patterns are observed for men.

The gender divide in digital technologies is also observed to vary with geography. On average, 16 per cent of households in rural areas possessed ICT devices, compared with 42 per cent in urban areas. Specifically, mobile ownership in rural areas was at an average of 47 per cent against 88 per cent in urban areas. The Digital Strategy emphasizes the need for literacy targets to be expanded to include digital literacy, with a particular focus on Ethiopia's rural population.

Key challenges are gaps within the framework that stifle growth and the development of digital skills, keep female literacy rates low and maintain large regional disparities. Recommendations to address critical gaps in human skills are that: the government should support and cultivate the ed-tech sector; primary and secondary education should prioritize basic literacy and digital skills; universities should prepare graduates better for the realities of the domestic labour market; and government should provide targeted digital skills training for relevant government employees.

4.1.4 Policy, regulation and institutional set-up for DFI

At the international level, Ethiopia has ratified or adopted comprehensive development frameworks that consistently promote DFI.

> ***DFS in the African policy arena:*** *The Digital Transformation Strategy for Africa (2020-2030) acknowledges the link between financial inclusion and development and recognizes that financial inclusion can play a great role in attaining many of the SDGs. Accordingly, digital transformation is a driving force for inclusive and sustainable growth as well as for innovations such as mobile money platforms. Indeed, the digital transformation strategy clearly stipulates that the DFS sector should be tapped into further. DFS not only provides users with the flexibility to do financial transactions and banking online and on the go, it is also a means to settle trade payments, digitalize government transactions through central banks, and move from traditional paper-based banking to digitalized and automated systems that are more efficient, easier to track and monitor, and quicker to access.*

The role and untapped potential of DFS is recognized in the African Union's Digital Transformation Strategy, geared towards the achievement of Agenda 2063 and the globally shared development framework – the 2030 SDGs (African Union, 2019).

Ethiopia's commitment to DFI was also backed up by the Universal Financial Access (UFA) 2020 global initiative led by the World Bank Group (WBG) for which Ethiopia was among the 25 priority countries considered. The initiative aimed to increase country level opportunities for people to be able to have access to transaction accounts to store money and send and receive

payments[7]. Digital financial inclusion has increasingly been at the core of Ethiopia's legal and policy agenda.

4.1.4.1 The Digital Transformation Strategy (2020-2025) and related policies

Digital Ethiopia 2025 is a national strategy that was endorsed in 2020 as the country's comprehensive framework to achieve inclusive prosperity from 2020 to 2025. The strategy is closely aligned with the most prominent and critical homegrown policies, viz. the 2019 Homegrown Economic Reform Agenda and the Ten-Year Development Plan (2020-2030), as well as with international commitments such as the Sustainable Development Goals and the African Union's Continental Digital Transformation Strategy, as stated before (Government of Ethiopia, 2020).

> ***Financial inclusion*** *is the main thrust of Ethiopia's Home-Grown Economic Reform and the Ten-Year Comprehensive Development Framework. Access to finance is the first and most important constraint identified by 40 per cent of Ethiopian firms in the WB enterprise survey, and the third priority problem for doing business in Ethiopia. In response to this, improving access to finance is among the specific priority reform measures as well as within the broader macroeconomic reforms that encompass the financial sector reforms. Likewise, digital transformation and financial inclusion are among the main thrusts of Ethiopia's Ten-Year Development Plan (2020-2030), which serves as the country's comprehensive development framework for the decade.*

Enhancing Ethiopia's digital readiness is the central tenet of the digitalization strategy that directly or indirectly leads to the advancement of DFI**.** Digital Ethiopia incorporates policy recommendations to address the critical gaps identified under the four thematic areas: strengthening existing infrastructure; developing enabling systems; facilitating digital interactions between government, private sector and citizens; and strengthening the wider ecosystem, in particular access to capital investment, human capital and the regulatory environment.

These are briefly summarized in the following as factors that directly or indirectly lead to the advancement of DFI. With consideration of the different challenges and ongoing initiatives, the strategy envisages to address critical gaps in the following four areas.

1) **Infrastructure strengthening; connectivity** is the principal focus of the strategy, which recognizes the limitations of existing network coverage, affordability and quality of both mobile and Internet connections. Improving **the electric power infrastructure is also a component strategy**.
2) **Enabling system development**; national ID, payment systems, and cybersecurity, essential for DFI, are the major intervention areas of Digital Ethiopia.
3) **Digital interactions** among government, private sector and citizens are a key component of the strategy. Most importantly, **e-governance and e-commerce** are given due attention.
4) **Strengthening the broader ecosystem**; the focus area specifically comprises access to capital investment, human capital and the regulatory environment. The strategy aims to improve finance (incentives for the private sector), enhance people's awareness (basic and digital literacy), and augment policy and regulation as the enabling environment features.

[7] https://www.worldbank.org/en/topic/financialinclusion/brief/achieving-universal-financial-access-by-2020

The strategy selected four prioritized pathways as the drivers along their digital transformation journey. These are agriculture, manufacturing, tourism, and IT-enabled services. The strategy also identified a list of stakeholders, including MInT as the key stakeholder in coordinating the strategy implementation.

Furthermore, in response to the COVID-19 pandemic, the Government of Ethiopia set up an institutional arrangement that promotes DFS and women's economic empowerment. A national taskforce, led by MInT, has emerged and started operations to facilitate intersectoral coordination towards enhancing digital transactions in the midst of COVID-19. Following the recent reform measures, the Government has reiterated its commitment and taken COVID-19-sensitive measures for DFS that boost women's economic opportunities in Ethiopia and Africa. (See also Table 3.7 in Annex 3.)

4.1.4.2 The 2020 Cooperative Sector Development Strategy (Ten-Year Roadmap)

The 2020 Cooperative Sector Development Strategy (Ten-Year Roadmap) is also among the supportive policies of Ethiopia, especially in terms of the meaningful engagement of SaCCOs in the DFI. The strategy recognizes the instrumental role cooperative societies play in the ongoing growth and transformation drive of Ethiopia. Among the main thrusts of the plan is strengthening SaCCOs, with a focus on enhancing the participation of women and youth as members and in leadership positions. The plan is to increase the savings mobilization capacity of the SaCCOs from 5 per cent to 25 per cent, to raise the credit service provision capacity from ETB 20.4 billion to 84 billion, and to support the establishment of a cooperative bank and insurance with a view to promoting and creating inclusive financial services (FCA, 2019).

4.1.4.3 The National Financial Inclusion Strategy (NFIS) of Ethiopia (2016-2020)

Ethiopia's NFIS, perhaps the most relevant of all domestic polices, was launched by the Government as part of its five-year plan for 2016-2020. The NFIS is underpinned by an analysis of the underlying causes of financial exclusion that identifies barriers on the demand side (adults and micro, small and medium enterprises) and obstacles on the supply side (regulated financial institutions).

These are grouped into four areas: undeveloped infrastructure (financial and other); inadequate supply of products, services, and access points; inadequate financial consumer protection; and lack of financial capability and awareness. Accordingly, the strategy aims to create a cogent, unique framework for advancing, accelerating and effectively monitoring efforts to advance financial inclusion in Ethiopia.

The following four main strategies are embedded in the NFIS:

- Strategy 1: Strengthen infrastructure (financial and other)
- Strategy 2: Ensure the supply of an adequate range of suitable products, services and access points
- Strategy 3: Build a strong financial consumer protection framework
- Strategy 4: Improve financial capability

The NFIS, in order to implement these strategies, further clearly defined the headline targets within the overarching framework for a time-bound action plan for the 2016-2020 period. The headline indicator for the strategy was to increase the percentage of adults with a transaction account from 22 per cent in 2014 to 60 per cent in 2020. In addition to this demand-side

indicator, the strategy also established a supply-side lead indicator: to increase the number of transaction accounts, as reported by banks and MFIs, from 68 to 90 million by the end of 2020. Moreover, the key indicator for tracking DFS was that by 2020, 40 per cent of adults (+18 years) would be using an electronic device, up from the baseline of 6 per cent, based on the estimated level at the time.

The NFIS also devised a comprehensive monitoring and evaluation system, and brought in key stakeholders in suitable roles so as to ensure strong commitment and stakeholder accountability.

In terms of the institutional arrangement, a national coordination and implementation structure was set out as a means to ensure effective implementation of the strategy. It recognized the need for high-level coordination among public and private sector representatives. A multilevel structure comprised of relevant authorities and actors was created to promote the effective use of technical skills and competences, and to coordinate the efforts of stakeholders aimed at implementing the NFIS action plan. This structure comprises:

- National Council for Financial Inclusion (**NCFI**)
- National Bank of Ethiopia (**NBE**)
- The Financial Inclusion Secretariat (**FIS**)
- National Financial Inclusion Steering Committee (**NFISC**)
- Coordinators.

4.1.5 Summary of achievements and gaps

Digital financial inclusion has increasingly been a core element in Ethiopia's path towards accelerated economic growth, greater prosperity and social development over the past decade. Concrete reform measures have been put in place that are foundational to the advancement of DFS.

The government agencies concerned are facilitating speedy promulgation of proclamations for e-governance, e-commerce, consumer protection and digital identity. In support of these, IMF (2019) also assessed ongoing developments. Retail payments such as government-to-person (G2P) and person-to-government (P2G) are also expected to go digital. In addition, the government is studying the possibility of setting up risk-sharing schemes such as SME and agricultural finance guarantee funds.

Some of the achievements so far and existing gaps are listed in the following (non-exhaustive) list:

Achievements

- The liberalization of Ethio telecom, which will enable increased market penetration, enhance the use of digital financial services, and improve the efficiency of service delivery and customer experience contributing to overall economic growth.
- The introduction and roll-out of Telebirr, a mobile money solution by Ethio Telecom that enables customers to make online payments through an electronic account on their mobile devices.
- The e-Transaction Proclamation that promotes the use of digital payments, and innovative solutions for digital financial services and digital financial inclusion.
- The National Digital Payment Strategy that aims to support digital retail payment solutions and interoperability between financial and non-financial institutions.

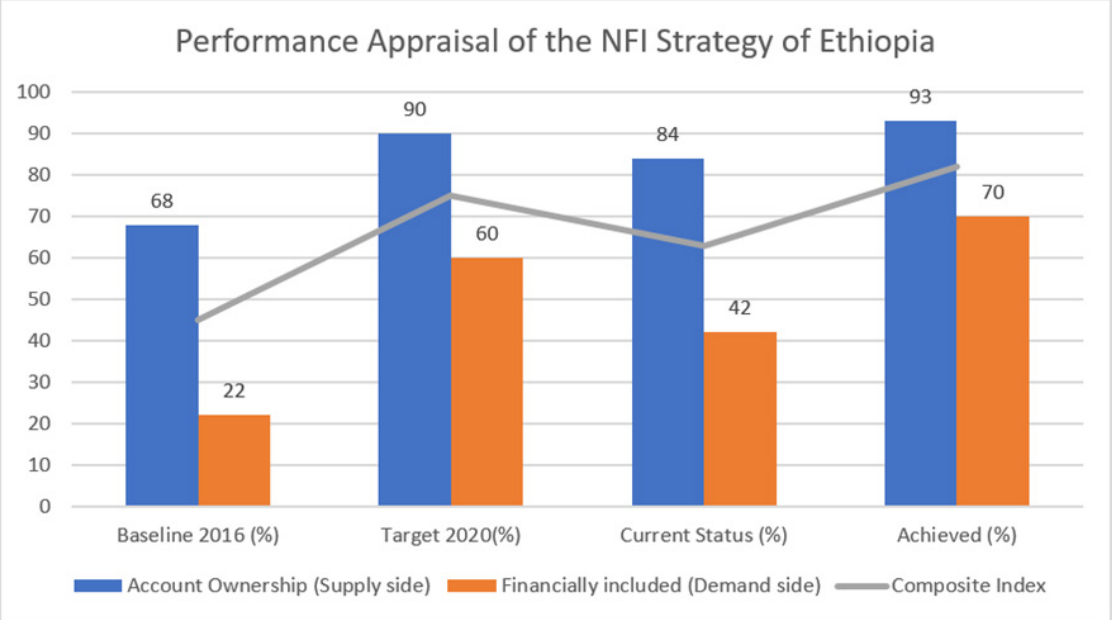
- The leading role of NBE in the formulation and implementation of the NFIS and its key role as a regulator for DFI.
- MInT is legally established with a directorate for Digital Transformation, a regulator for the technology aspect of fintech.
- A legal framework for mobile/agency banking that permits fintech involvement (the digital payment proclamations); includes revised directives for oversight/licensing.
- A proclamation for the competitive provision of communication services by liberalizing the Telecom.
- The National Financial Inclusion Secretariat is established and operational.
- The National Task Force led by MInT is key to promoting DFI, while taking on board the impact of COVID-19.
- Upcoming proclamations for DFS on e-governance, consumer protection and cybersecurity.
- Meaningful engagement of development partners has been fundamental in advancing the digital financial inclusion of women as a key to economic empowerment.

Gaps

- Delays in promulgation of the proclamations and directives for DFI.
- The financial sector remains reserved for domestic investors.
- Value proposition; the ceiling for mobile transactions is still low and varies with inflation.
- There is a need for increased institutional collaboration, monitoring and evaluation mechanisms.

Performance in the implementation of the NFIS showed noticeable progress, especially in terms of DFS. Overall, as per the headline indicators, the aggregate achievement is rated at about 82 per cent. This is an average of the accomplishments for the indicators corresponding to the supply side, i.e. 93 per cent achieved on account ownership, and projections for the demand size indicator of 42 per cent financially included, hence a 70 per cent achievement against the target of 60 per cent.

Figure 18: Performance appraisal of the NFI strategy of Ethiopia



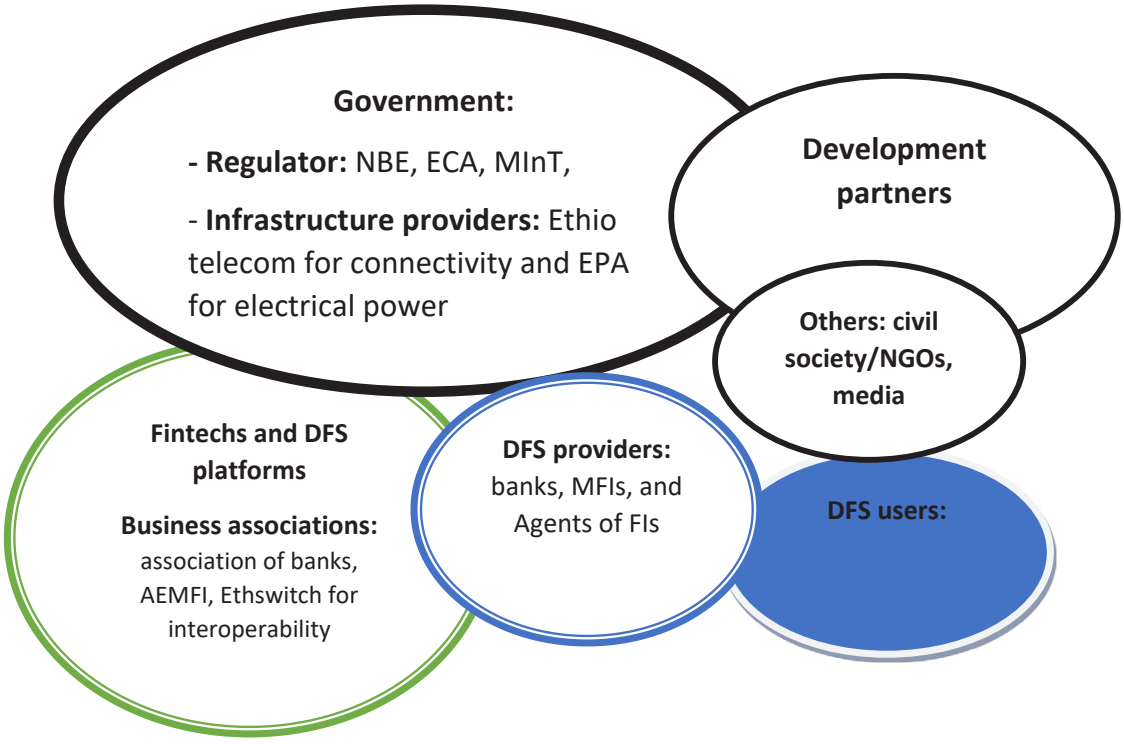
Source: Based on the NFIS and NBE database

The physical availability of financial institutions has witnessed a two-and-half-fold improvement in the past five years, from a total of 9 233 branches and digital payment channels in 2015 to 22 725 in 2020. However, the review brought to light performance deficiencies for some DFS targets in the NFIS, where target achievement was only 34 per cent. Thus, achievement of the target of increasing access points per 100 000 adults (supply side) was only about 18 per cent when gauged against the NFIS target for the year. Similarly, achievement of the demand-side target to increase the percentage of adults using DFS to 40 per cent by 2020 is only 38 per cent, as only about 15 per cent of adults are estimated to use the service currently.

4.2 Stakeholder analysis for DFI in Ethiopia

The stakeholders' mapping exercise made it possible to identify a broad spectrum of actors that in one way or another impact on or are impacted by the DFI initiative in Ethiopia. The results of the analysis outlined below only include the primary stakeholders for advancing DFI. Thus, those actors who are principally or directly involved, and have a vested interest to benefit from and make actual and/or potential contributions, are presented in Figure 19.

Figure 19: Venn diagram of key actors for DFI in Ethiopia



Source: Based on document review

The Government and its development partners, mostly at the macro level, are the dominant actors in the DFS landscape of Ethiopia. The biggest circle for the government in the Venn diagram is used to describe the multiple roles or functions it plays at all levels. At the macro level, the government is the sole regulator of DFI and agencies such as the central bank (NBE), the communication authority (ECA), and MInT, who are the lead actors for policy, regulation and coordination of DFS.

MoP is the lead agency for the national digital ID. Among the major stakeholders specified in the Digital Transformation strategy are the ministries or agencies for finance, trade and industry, revenue, transport, electric power, postal service, and information network security.

The government-owned enterprises have a monopoly on infrastructure provision. Ethio telecom is responsible for connectivity, while EPA is in charge of electric power generation and distribution. At the micro level, the government also acts as a service provider. Out of the 17 commercial banks operational in Ethiopia, CBE owns about 37 per cent of the market share. Its CBE-Birr, introduced in 2017, has also been a prominent DFS provider, with a monopoly on various payments by the government. In this way, the Government, which indirectly uses DFS for payment transfers (P2G, G2P & P4W), is also a stakeholder. Agencies for utilities such as water, electricity, airtime, housing, and priority sector agencies like the MoA, MoE, MoT, and MoH are important.

The development partners of the Government, including multilateral, bilateral and other stakeholders, such as civil society and media, are also actors at the macro level.

Development partners: UN agencies are key actors for capacity development support at the system, institution, and individual levels. The African Union and bilateral agencies such as the WBG also play key roles in furthering the DFI initiative of Ethiopia.

Other stakeholders: Civil society organizations such as the Alliance for Financial Inclusion (AFI) along with other local and international NGOs can play key roles in advocacy for DFI as a right, resource mobilization, and direct capacity building support, targeting women and the unbanked population in particular. Moreover, in collaboration with the media, this category of stakeholders can engage in raising awareness, improving digital literacy, and fighting gender inequality.

Enablers/system providers: IT companies such as BelCash, MOSS ICT, and Moneta along with local fintechs, their associations and IT parks are enablers for DFS providers. Other key actors are DFS platforms (Telebirr, M-Birr, Amole, CBE Birr, Hello-Cash, and E-Birr), credit bureaux, and business development advisory companies. Stakeholders under "Business Associations for DFI" include umbrella organizations such as the Bankers' Association, the Association of Ethiopian Microfinance Institutions (AEMFI), the Chamber of Commerce and sectoral associations. EthSwitch is a key actor for facilitating interoperability among DFS providers.

DFS providers and service users comprise the key micro-level stakeholders of DFI

DFS providers: The supply-side actors include 18 commercial banks and 38 MFIs with a total of 6 078 and 2 007 branches respectively, including both existing DFS providers and potential future providers. A total of 22 725 agents are the main actors for mobile money service. In addition, 15 insurance companies and 22 620 SaCCOs are potential DFS providers.

DFS service users: About 40 million unbanked adults (some 20 million of them women) are the potential beneficiaries of DFI, in addition to the approximately 26 million clients who currently use some type of DFS service. Government sector agencies that rely on utility payments (water, electricity, telephone, housing bills) or handle safety net transfers and agriculture input sales (MoA/ATA) are the institutional-level users of DFI. Finally, businesses, including B2B and P2P (peer-to-peer in transport, restaurant, online shopping etc.) are among the indirect service users that would meaningfully impact on or benefit from the advancement of DFI in Ethiopia.

5 Problem analysis and implications

5.1 Problem analysis: causes and effects of exclusionary DFS

Various factors contribute to the limited adoption of digital financial services in Ethiopia.

On the one hand, the inadequate supply of suitable and convenient financial services and products is largely due to the limited adoption of digitalization in the finance sector and partly associated with limited adoption of ICT technologies (mobile and Internet) by women and the unbanked communities at large.

The limited adoption of digital technologies, interoperability, and its cross-sectoral application are in turn associated with barriers related to the financial service providers (FSPs). These barriers have to do with the capacity limitations of the FSPs (banks, MFIs and SaCCOs), but also the lack of strategic orientation and limited investment in digital technology, the limited choice in FS providers, and weak integration and linkage in the design and delivery of tailor-made services and products.

A persistent policy and strategy-related barrier concerns the lack of targeted interventions to promote DFI among women and the disadvantaged. Coupled with socio-cultural factors and gender inequality, this is a powerful impediment to DFI for women.

Low-income households are unable to save, and therefore remain unattractive for the FSPs. Widespread gaps in financial literacy and numeracy skills, along with a limited propensity to buy ICT tools and mobiles and use them to their full capacity hinders the adoption of DFS. Moreover, existing DFS providers do not enjoy high levels of trust or confidence among the unbanked, including women; this is especially so in rural areas. Cultural inertia also plays a role in impeding DFS, especially among non-pastoralists where ICT technologies are rarely accessed and used.

This is reflected in the lack of suitable and convenient products, which ultimately compromises the sustainability (operational and financial) of the FSPs. The conventional banking system perpetuates this state of affairs with a geographically skewed distribution of branches/access points, limited outreach, and undiversified service and products.

The exclusionary DFS culture negatively affects economic growth and the drive for digital transformation of the country. It also hinders the move towards quicker achievement of broader development goals (the 2030 SDGs) and Africa's 2063 agenda, including trade and regional integration. Finally, it weighs on the effort to combat COVID-19 and promote innovative technologies, among the current contextual factors.

5.2 Implications for recommendation

Strategies and actions for inclusive finance in Ethiopia should begin with a due recognition of the untapped potential of DFS and how to address the multi-faceted bottlenecks that exist. A systemic approach to DFI is imperative for a holistic and comprehensive response to successful DFI in Ethiopia. In the resource-constrained situation of Ethiopia, it is not realistic to expect that all the barriers to DFS can be dismantled. An integrated approach is required that produces recommendations on alternative strategies and priorities for action.

The following options should be considered for enhancing DFI in Ethiopia.

Strengthen policy, regulations, laws and institutions for DFI: Ethiopia should capitalize on positive recent developments in the policy/regulatory arena, and expand on them so as to build an enabling environment for DFI.

Conduct an in-depth country-level needs assessment, to include capacity building needs of stakeholders and comprehensive assessments of the demand side, to understand better the priorities that can accelerate DFI for all.

Collaborative engagement of all stakeholders is required to cultivate the provision of suitable and convenient products and services and provide capacity building for users, for a responsible uptake of the services and products. In order to improve supply-side efficiency for strategic DFS delivery, it is important to leverage existing DFS providers (banks and MFIs) while facilitating greater engagement of SaCCOs in agency banking services. On the demand side, targeted interventions should be planned and implemented in order to address the digital divide and the financial exclusion that hold back women and youth, among others.

Collaborative regulation is important at this level. Efficient and effective management of existing and new initiatives by a broad spectrum of actors is a key to maximize the opportunities that mobile connectivity can bring to women and other financially excluded populations.

Cross-cutting capacity development should be initiated, involving incentive packages to enhance DFS adoption by the FIs. This should be properly planned and executed in conjunction with direct and targeted intervention to stimulate user demand. To this end, payments by governments, businesses, and other development partners such as NGOs should progressively move away from cash and towards digital transactions.

Infrastructure readiness should be a priority, especially improving connectivity. Accelerate reform of the communication sector and promote competitiveness among providers of mobile/ICT technologies, fintech capacity building etc.

Strengthen consumer protection and the security of the digital infrastructure used for digital payments and e-governance, to foster a collaborative regulatory approach across different sectors.

6 Strategic issues and recommendations for advancing women's digital financial inclusion

Advancing women's digital financial inclusion is a high priority on development agendas worldwide. In line with the problem analysis, the latest report by the World Bank (WBG, 2020b) shows how digital financial services have expanded opportunities for millions of women across the globe. More than 240 million additional women now have an account with a financial institution or mobile money service compared to 2014. Through this increased engagement in the formal economy, women's resilience to financial, economic and health shocks is improving. However, much remains to be done to achieve gender equality in financial services.

Prioritization of women and those in rural populations as well as marginalized communities should be reflected in policy and programmatic responses, including efforts to support women's financial resilience as they are impacted by and recover from COVID-19 and the associated economic challenges as highlighted in Table 13.

Table 13: Matrix of policy options by strategic interventions for advancing women's DFI

Potential intervention areas	Policy options (PO)
1. Strengthen access to DFS and mobile money accounts.	**PO 1.1**: Support the development of official identity systems and documents universally accessible to all women and girls. **PO 1.2**: Facilitate women's universal ownership of mobile phones. **PO 1.3**: Adoption of a digital ID to enable electronic KYC (e-KYC) and completely digitalize the onboarding process to make it easier and faster for people to open an account, especially under COVID-19 pandemic conditions, and make it more affordable for financial service providers to reach out to the unbanked. **PO 1.4**: Implement regulatory reforms to digitalize government payments for social benefit payments.
2. Enable inclusive, interoperable DFS, particularly as regards payments, to strengthen gender equality and help build a trustworthy, robust digital financial system.	**PO 2.1**: Promote efforts for deploying infrastructure and protocols for government digital payments to women that are competitive and interoperable with private sector payment systems. **PO 2.2**: Support mechanisms for enabling government payments to women to be deposited directly into digital accounts that are easily accessible and under the women's control, allowing a range of digital financial transactions, including payments to governments as well as firms. **PO 2.3**: Leverage technology and behavioural insights to strengthen women's digital skills and financial capability. **PO 2.4**: Support comprehensive consumer protection that addresses the needs of women, including requirements to disclose product prices and terms in clear language and appropriate measures to ensure data privacy and security.

Table 13: Matrix of policy options by strategic interventions for advancing women's DFI (continued)

Potential intervention areas	Policy options (PO)
	PO 2.5: Create an open and level-playing field to encourage innovation in DFS and allow both banks and non-banks to provide digital financial services. **PO 2.6**: Adopt best practices for the security of DFS applications. **PO 2.7**: Enhance the security of the digital payments infrastructure to ensure it is robust and trustworthy.

Source: Based on WBG, 2020b

Remarks: *The policy options are all based on data, empirical evidence and experience from many countries. As the report makes clear, these and other options should be contextualized to fit the country's situation.*

The following potential actions are also presented as inputs to advance DFI.

- DFI should be a multi-actor initiative that engages stakeholders at all levels, from both state and non-state domains.
- A capacity development plan for DFS is required on both the demand and the supply side, based on a holistic approach to mapping out existing and expected capacity, assets and needs at the system, institution and individual level.
- Promotion of fintechs should be ramped up in view of their untapped potential and bearing in mind the risks.
- Development partners, including UN agencies, civil society organizations and the media, should be engaged collaboratively in advancing DFI among women and the unbanked in general.
- The right balance must be struck between access and sustainability.
- A platform is necessary for enhancing the partnership and collaborative engagement of stakeholders. In this regard, it is important to delegate responsibilities while building trust that fosters participatory and partnership-oriented engagement of actors for DFI.
- Stakeholders participating in DFI are encouraged to consider a range of solutions to remove barriers that marginalize women and other communities in Ethiopia.

In this regard, potential actions need to be reviewed further for proper adoption, with due consideration of the evolving country context, cultural environment, available infrastructure and resources, among other factors.

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Annexes

Annex 1:

Opportunities and benefits that may facilitate digital financial inclusion in Ethiopia include:

Opportunities	Benefits
The recent regulatory reforms, including: open up agency banking to fintech, promote private sector investment and help create more job opportunities in the financial sector.	The practical experiences of M-Birr have served as input for policy and regulations. The channels/platforms were also instrumental for evaluating the opportunities and bottlenecks with a view to setting up an enabling environment.
Given the limited availability of banks and other FIs outside Addis Ababa, mobile banking agents fill the gap, especially in rural parts of the country, by accepting cash deposits and paying out funds that the user has stored on their mobile phone.	This has attracted further investment by identifying the places where the demand for mobile banking is high.
The country's population of over 110 million people represents an important untapped domestic potential.	User-friendliness; mobile banking is easy and readily available for 24 hours, it is convenient for many mobile users in rural areas as well as in cities. Practically, customers are able to access diversified services, such as buying airtime, paying electricity bills, cash-in and cash-out, purchasing travel tickets, and purchasing goods and services.
Mobile banking is attractive for pastoral communities in regions like Somali.	Initiatives that target the expansion of financial inclusion also use mobile banking as a method of increasing the provision of financial services in rural areas. In this regard, the sector has undergone a fundamental evolution, with changes that challenge the dominant model of branch expansion as the only means of achieving financial inclusion.
Increased access to mobile phones, with the number of mobile users approaching 50 million.	

Annex 2:

DFI readiness assessment in Ethiopia

Factors considered	Key challenges	Current initiatives and recommendations
Digital infrastructure and connectivity	The digital infrastructure is not fully developed and the mobile Internet penetration rate for Ethiopia is still low compared to other African countries	– The Digital Transformation Strategy recognizes the pivotal role of connectivity, the lack of connectivity being a major barrier for the introduction and adoption of digital products and services. – The policy recommendations to address critical gaps in connectivity are: • have a comprehensive telecom roadmap and robust regulations to ensure accelerated progress towards the national objectives; • upgrade WoredaNet by conducting detailed supply and demand-side planning; • improve institutional digital connectivity; and • set up and operationalize a universal service fund to expand infrastructure/ connectivity.
Electrical power availability	Unreliability of the electricity supply and financial unsustainability of highly subsidized electricity prices	– PPP proclamation and reform of power generation procurement – Restructuring and corporatization of the Ethiopian electricity utility, introduction of a new electrification strategy (National Electrification Plan), and expansion of the transmission network. – Recommendations to address critical gaps in electrical power include: • Investment in a last-mile connection upgrade, diversification of energy sources and off-grid solutions • Establishment of a targeted subsidies scheme • Facilitating follow-up and maintenance through measurement and monitoring systems.
Digital ID	Insufficient coordination and communication among authorities	Initiatives to introduce a national digital ID programme, taking the place the Kebele ID system, are being led by MoP. The Ministry is setting up the strategy by engaging with different stakeholders, including MInT.

(continued)

Factors considered	Key challenges	Current initiatives and recommendations
Digital payment systems	Lack of interoperability among banks – Low Internet penetration, high data costs, low mobile penetration – Low access to formal financial services – Lack of awareness of existing DFS and a fintech industry	– NBE amended the Banking Services Proclamation to include DFS providers, and recently released two draft directives, one for payment instrument issuers and one for agents. – The liberalization of Ethio telecom will enable increased market penetration, enhance DFS use, and improve the efficiency of service delivery and customer experience, contributing to overall economic growth. – The launch and roll-out by Ethio telecom in May 2021 of telebirr, an innovative mobile money solution allowing deposit, reception, transfer and utilities payment services as well as international remittances. It aims to bridge the financial inclusion gap and allows secure online payment through an electronic account on a customer's mobile device. – The National Digital Payment Strategy focuses on different pillars that include infrastructure, adoption and innovation, with the aim of supporting digital retail payment solutions and interoperability between financial and non-financial institutions. – The e-Transaction Proclamation promotes the use of digital payments and innovative solutions for DFS and DFI. The initiatives aim to address existing gaps in digital payments by • ensuring financial inclusion by promoting existing financial services • evaluating the adoption of innovative solutions • increasing usage by promoting benefits • encouraging innovation in the banking system • enhancing government coordination.
Cybersecurity	– Ethiopia has not undergone a cybersecurity assessment to identify vulnerabilities – Lack of domestic cybersecurity experts – Lack of awareness among users	It is important to address critical gaps in cybersecurity, by conducting a coordinated and centralized assessment of Ethiopia's cybersecurity, developing a framework and roadmap for national awareness campaigns, and enabling the adoption of cloud solutions.

(continued)

Factors considered	Key challenges	Current initiatives and recommendations
E-governance	– Limited human capital and inadequate infrastructure	Current initiatives include digitalizing government operations and services and developing better service delivery channels. Recommendations to address critical gaps in e-governance include the design of services with stronger coordination across government and leveraging digital technology to reduce regulatory complexity and costs.
People's readiness	– Gaps in the framework, hindering growth and the development of digital skills – Digital illiteracy and regional disparities	The Digital Strategy emphasizes the need for literacy targets to include digital literacy, with a focus on Ethiopia's rural population. Recommendations to address critical gaps in human skills include: • Government support for the ed-tech sector • Primary and secondary education to prioritize basic literacy and digital skills • Universities to better prepare graduates for the domestic labour market • Government to provide targeted digital skills trainings for relevant government employees.
Policy, regulation and institutional set-up for DFI	Policy and regulatory gaps	– The Digital Transformation Strategy (2020-2025) is a national strategy that is aligned with different policies, namely the 2019 Homegrown Economic Reform Agenda, the Ten-Year Development Plan (2020-2030), the Sustainable Development Goals and the African Union's Continental Digital Strategy. – In response to the COVID-19 pandemic, the Government of Ethiopia set up an institutional arrangement that promotes DFS and women's economic empowerment. – A national taskforce emerged and has been operational under the leadership of MInT to facilitate intersectoral coordination towards enhancing digital transactions in the midst of COVID-19. – The 2020 Cooperative Sector Development Strategy (Ten-Year Roadmap) is among the supportive policies of Ethiopia, especially in terms of the meaningful engagement of SaCCOs in the DFI. – The National Financial Inclusion Strategy (NFIS) of Ethiopia aims to create a cogent, unique framework for advancing, accelerating and effectively monitoring efforts to advance financial inclusion in Ethiopia.

Annex 3:

Technical annexes: data and output tables and charts

Table 3.1: Account ownership, adults of 15+ deposit accounts (commercial banks only)

	2016	2017	2018	2019	2020
Deposit accounts	20 334 771	26 652 315	33 516 589	40 048 817	52 460 000
Adults (15+)	20.3	26.7	33.5	40.0	52.5
Account ownership	51 980 000	54 485 436	57 111 634	59 864 415	62 749 880
	39%	49%	59%	67%	84%

Table 3.2: Account ownership, adults of 15+ deposit accounts (commercial banks and MFIs)

	2016	2017	2018	2019	2020
Deposit accounts	32 920 385	43 798 258	51 235 881	60 264 919	74 046 122
Adults (15+)	32.9	43.8	51.2	60.3	74.0
Account ownership	51 980 000	54 485 436	57 111 634	59 864 415	62 749 880
	63%	80%	90%	101%	118%

Table 3.3: Trends in DFS channels by year, and share of Addis Ababa (2013-2020)

Year	Debit card		Mobile wallet		Prepaid card		ALL		Share of AA
	Country	AA	Country	AA	Country	AA	Country	AA	
2013	649 246	384 419			105	105	649 351	384 524	59%
2014	1 464 328	731 112			212	212	1 464 540	731 324	50%
2015	2 329 285	1 050 356			718	718	2 330 003	1 051 074	45%
2016	3 602 347	1 317 473			12 221	12 211	3 614 568	1 329 684	37%
2017	6 382 543	2 238 394			36 616	36 605	6 419 159	2 274 999	35%
2018	6 948 571	2 399 186	831 744	389 220	52 021	52 007	7 832 336	2 840 413	36%
2019	11 235 875	3 620 213	3 599 057	1 878 980	58 119	57 999	14 893 051	5 557 192	37%
2020	16 030 790	5 169 591	7 957 679	3 452 353	101 797	101 232	24 090 266	8 723 176	36%
Average	6 080 373	2 113 843	4 129 493	1 906 851	32 726	32 636	7 661 659	2 861 548	37%
		34.8%		46.2%		99.7%		37.3%	

Table 3.4: Transaction volumes, GDP and adult population

	2016	2017	2018	2019	2020
All DFS (ATM/POS, mobile and Internet) (billions)	42	65	107	139	241
% of GDP	2.71%	3.35%	4.84%	5.14%	7.10%
Mobile and agency banking (billions)	5	13	17	31	71
% of all DFS value	12.87%	20.42%	15.79%	22.28%	29.63%
% of GDP	0.35%	0.68%	0.76%	1.15%	2.10%
GDP (trillions)	1.6	1.9	2.2	2.7	3.4
Adult population (millions)	56	58	59	61	64

Table 3.5: Penetration rates per 100 inhabitants for selected countries Q1/2019

Penetration indicators	Ethiopia	Egypt	Kenya	Nige-ria	Sudan	Average for peers
Mobile phone (2G/3G/4G)	**44%**	94%	100%	87%	73%	**89%**
Mobile broadband (3G)	**9%**	36%	38%	28%	16%	**30%**
Mobile broadband (4G)	**0.20%**	59%	8%	11%	5%	**21%**
Household fixed broadband	**0.70%**	29%	3%	0.60%	0.60%	**8%**
Composite index	**13%**	55%	37%	32%	24%	**37%**

Table 3.6: Ethiopia promoting DFS for women's empowerment and set up a task force amid COVID-19

Ethiopia calls for Africa to promote DFS to boost women's economic opportunities (ENA, 2020)[8]	National Task Force Emerged to Push Digital Transactions (Addis fortune, 2020)[9]
In a panel discussion of G-7 and African countries during the 75th UN General Assembly, Sate Minister of Finance Eyob T. emphasized the importance of focusing on financial inclusion, which he said plays an eminent role in women's and girls' economic empowerment. Although many African States are striving to harness digital technologies in bid to build more inclusive economies, much remains to be done to ensure women benefit from the digital advancements, especially those that live in rural and marginalized communities, he noted. "Improving women's access, use, and control over financial services enable them, especially women, to achieve the same status, power, and opportunities as men resulting in dramatic social changes that propel society forward," he added. The State Minister noted how the COVID-19 pandemic has underscored the importance of digital services encouraging the use of digital payment services. In particular, he explained how for emerging economies, the challenges from the pandemic have brought more opportunities to promote financial inclusion objectives through the use of technology. On the panel Eyob highlighted that though Ethiopia has achieved rapid growth in the financial sector, many households are still excluded from access to the necessary financial services. The panel was concluded with a call for a more concerted global response in supporting the financial as the pandemic has greatly emphasized the need for greater and more inclusive digitalization of financial services. To address the challenges, various economic reforms have taken by the government to promote financial inclusion and serve the under-banked and underserved population, he pointed out. Finally, the state minister called upon for the alliance support in mobilizing resources to support Ethiopia's digitalization of financial services to address concerns of financial inclusion.	Ethiopia set up National Technology Task Force has been tasked with finding ways to increase digital transactions, recognizing that there are infrastructure and regulatory hurdles to overcome, including an internet penetration rate of just 18 per cent. The main agenda of this Task Force is to establish a platform to lessen physical contact, to decrease the number of cash transactions, and provide key information on the virus, according to Ahmedin M. (PhD), the then State Minister for Innovation & Technology and coordinator of the Task Force "We have consulted with government offices, the private tech sector, and the banking sector to work in collaboration to eliminate the bottlenecks of regulations and hasten operations," he said. Since starting operations in February 2020, the new Task Force has focused on eight approaches that use technology to resume daily activities throughout the country. The team includes members from 20 institutions and is led by the MInT. The Task Force, under the wing of the National Ministerial Committee, has emerged to promote digital transactions and supply key information about the Novel Coronavirus (COVID-19). Since starting operations three weeks ago, the new Task Force has focused on eight approaches that use technology to resume daily activities throughout the country. The team includes members from 20 institutions and is led by the Ministry of Innovation & Technology.

[8] ENA, 2020. Africa: Ethiopia Calls for Digital Financial Services Boost in Africa. Accessed in October 2020 https://allafrica.com/stories/202009240659.html

[9] Addis Fortune (Addis Ababa), 17 April 2020

Table 3.7: Tracking the headline indicators

Headline indicators	Description	Baseline 2016	Target 2020	Current status	%
Account ownership (supply side)	Increase the percentage of transaction account for adults (18+) in banks and MFIs from 68% to 90%	68%	90%	84%	93%
Financially included (demand side)	Increase the percentage of adults owning transaction accounts in regulated FIs from 23% to 60%	22%	60%	42%	70%
Composite index	Average of supply and demand side targets	45%	75%	63%	82%

Table 3.8: Access points (total for branches and digital payment channels)

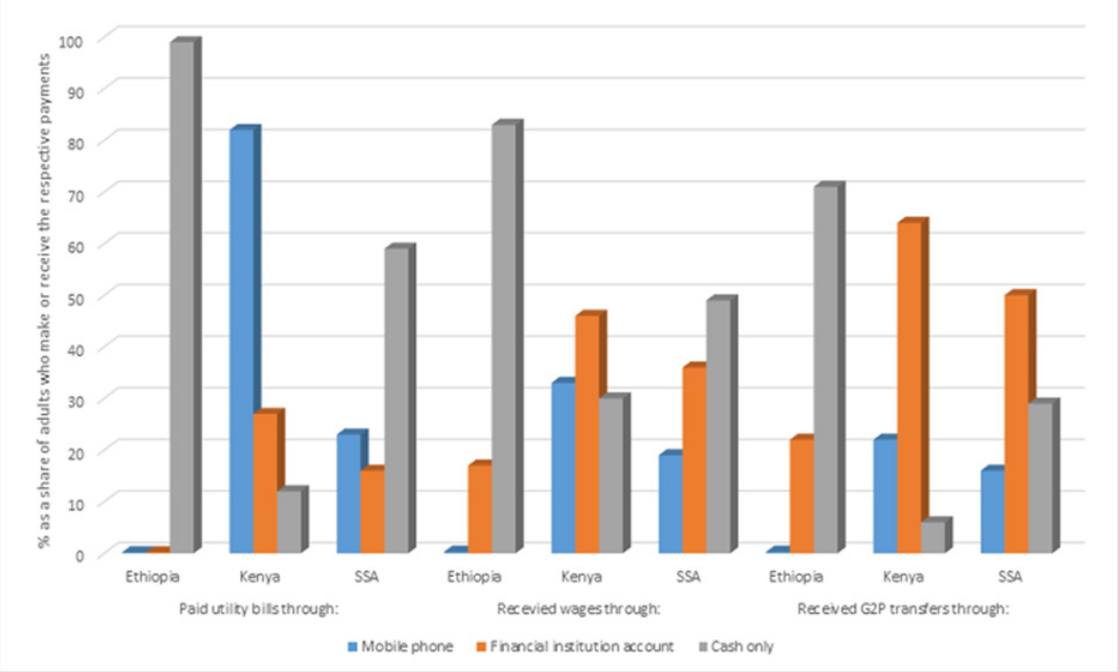
Indicators	per 100 000 adults (15 years or older)			
	2015 (Baseline)	Target for 2020	Actual 2020	% Achieved
Bank branches	4.9	8.8	9.2	105%
MFI branches	2.9	19.6	3.0	16%
POS terminals	6.0	120.4	14.8	12%
ATMs	2.2	25.4	9.5	37%
Agents	0.7	229.4	34.4	15%
Total access points	**17**	**404**	**71**	**18%**
demand side: percentage of adults using DFS or electronic payment	6%	40%	15%	38%
Composite Performance	**Average of supply and demand side targets**			**34%**

Table 3.9: Tracking DFS indicators only

Headline indicators for DFI	Description	Baseline 2016	Target for 2020	Current	% Achieved
Access points per 100 000 adults (SS side)	Increase the number of access points per 100 000 adults (18+) from 35 to 405	34.5	405.1	120.5	30%
% of adults using DFS	Increase the percentage of adults using electronic payment instruments from 6% to 40%	6%	40%	15%	38%
Composite performance	Average of supply and demand side targets				34%

Figure 3.1

Where do people make and receive payments?



Source: Bessir M., 2018, based on the 2017 Global Findex database

DFI glossary

Below are the definitions of key terms, along with alternative usages and remarks in cases of incompatibilities with in-country usage by relevant agencies/laws.

Term	Alternative usage	Meaning as applicable to Ethiopia
digital financial inclusion	mobile financial services	The deployment of cost-saving digital means to reach the financially excluded and underserved populations with a range of formal financial services (FS) that are suited to their needs and are responsibly delivered at a cost affordable to customers and sustainable for providers.
financial inclusion	inclusive finance	The sustainable provision of affordable and convenient financial services that bring the unbanked into the formal economy or empower them to use formal FIs.
digital financial services		Financial products and services, including payments, transfers, savings, credit, insurance, securities, financial planning, and account statements that are delivered via digital/electronic technology such as e-money (initiated either online or on a mobile phone), payment cards, and regular bank accounts.
bank		A company licensed by the National Bank (NBE) to undertake banking business in Ethiopia, or a bank owned by the Government.

(continued)

Term	Alternative usage	Meaning as applicable to Ethiopia
digital payment	e-payment	A transfer of value from one payment account to another using a digital device (such as a mobile phone or computer) and an electronic communications channel (such as mobile wireless data). This includes payments made with electronic bank transfers, mobile money, and payment cards.
financial institutions (FIs)	formal FIs (banks, insurers and MFIs)	A bank or a microfinance institution licensed by the NBE.
agents	registered agent/ agent till	A person engaged in a commercial/business activity contracted by a financial institution to provide the services of the financial institution on its behalf.
agent banking		The conduct of banking business on behalf of a financial institution through an agent using various service delivery channels.
liquidity	agent liquidity	The availability of liquid assets to support an obligation. Banks and non-bank providers need liquidity to meet their obligations. Agents need liquidity to meet cash-out transactions by consumers and small merchants.
DFS ecosystem		A system aimed at enabling financial inclusion and building the digital economy through availability, affordability, convenience and quality financial services. It consists of users (consumers, businesses, government agencies and non-profit groups) who have needs for digital and interoperable financial products and services; providers (banks, other licensed financial institutions, and non-banks) who supply those products and services through digital means; the financial, technical, and other infrastructures that make them possible; and the governmental policies, laws and regulations which allow them to be delivered in an accessible, affordable, and safe manner.
customer		An individual or entity who uses mobile and agent banking services of FIs offered through mobile devices.
cash-in and cash-out service		The deposit and withdrawal of funds, including payments by customers to/from their mobile account, using a variety of options including bank-branch counters, automated teller machines and authorized agent locations.
deposit		Placement of money with financial institutions, repayable on demand, or otherwise accepted by financial institutions from the public.
fund transfer		The transfer of funds between a customer's or agent's mobile or regular account and any other account.
microfinance institution (MFI)		A company licensed by the NBE to carry on microfinancing business.

(continued)

Term	Alternative usage	Meaning as applicable to Ethiopia
fintech		Companies providing software, services, and products for digital financial services: often used in reference to newer technologies.
unbanked population	underbanked or underserved	Those people or segment of a population that do not have a transaction account. Underbanked people may have a transaction account but do not actively use it. Underserved is a broad term referring to people who are the targets of financial inclusion initiatives. It is also sometimes used to refer to a person who has a transaction account but does not have additional DFS services.
mobile account		An account maintained by a customer in a financial institution in which debits and credits are effected by virtue of electronic fund transfer and which is used to conduct mobile banking activities as outlined in the NBE directives
e-vouchers		Vouchers that electronically store value which can be exchanged for goods and services.
mobile banking		Performing banking activities, primarily opening and maintaining mobile/regular accounts and accepting deposits. It also includes performing fund transfer or cash-in and cash-out services using mobile devices as per the NBE directives.
mobile device	device, terminal, acceptance device, POS, mPOS	Means, in this context, mobile phones, smart phones, tablets, personal computers, point-of-sale terminals or any other similar device (as per NBE).
real time		The electronic processing of transactional data instantaneously upon data entry or instantaneous receipt of a transaction command to a financial institution's central system.
pilot period		The period (defined by the NBE) in which mobile and agent banking service is being holistically tested with regards to its conformity to predetermined business and technical requirements in a limited test environment without making any public promotion.
mobile wallet		An account that is primarily accessed using a mobile phone.
mobile money		A service in which the mobile phone is used to access financial services.
financial literacy		Consumers and businesses having essential financial skills, such as preparing a family budget or an understanding of concepts such as the time value of money, the use of a DFS product or service, or the ability to apply for such a service.

(continued)

Term	Alternative usage	Meaning as applicable to Ethiopia
know your customer	KYC, agent and customer due diligence, tiered KYC, zero tier	The process of identifying a new customer at the time of account opening, in compliance with law and regulation. The identification requirements may be lower for low value accounts ("tiered KYC").
risk management	fraud management	The practices that enterprises follow to understand, detect, prevent, and manage various types of risks. Risk management can occur at the level of providers, payments systems and schemes, processors, and at the level merchants or payment beneficiaries.
digital liquidity		A state wherein consumers and businesses are content to leave their funds in digital form, therefore reducing the burden on the cash-in, cash-out process.
financial resilience		Refers to an individual's ability to withstand life events that impact his or her income and/or assets. Examples of such events include unemployment, divorce, disability, or health problems.

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