# Digital financial inclusion — an engine for "leaving no one behind"

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### **Abstract**

Although none of the goals of the United Nations Agenda 2030 is dedicated to finance, can the use of financial instruments play a role in achieving some of the Sustainable Development Goals? Can financial instruments contribute to the reduction of hunger and poverty, to ensuring healthy lives, gender equality, decent jobs and the growth of micro, small and medium-sized enterprises (MSMEs), reducing inequalities, enhancing an effective fight against corruption and increasing the mobilization of additional financial resources? This article highlights how financial inclusion, meaning the access to financial services, allows the weakest to contribute to the achievement of the SDGs and to improve their life conditions. From the evidence of the UNSGSA (2018) report on integrating SDG progress through digital financial inclusion, it becomes clear that digital finance is a key that can help in boosting financial inclusion.

Keywords: Agenda 2030, Sustainable Development Goals, financial inclusion, poverty, gender parity, fintech

## 1 INTRODUCTION

On September 27<sup>th</sup> 2015, the United Nations (UN) unanimously approved the 2030 Agenda which includes the 17 Sustainable Development Goals (SDGs), with 169 targets, which constitute a sort of road map and an action plan for implementing the Agenda and over 240 indicators to measure performance and progress.

The decision of the UN Assembly starts from the awareness of the unsustainability of the current development model and from the need for a change of pace that integrates environmental, economic and social dimensions. The SDGs cover every aspect of human life and are linked to two implicit corollaries: none should be left behind, neither country nor individual, and no SDG should be pursued at the expense of any of the others, to emphasize once again the existing integration within the Agenda.

None of the SDGs is explicitly dedicated to the role of finance and financial inclusion, meaning the access to and usage of financial services. However, when entering into the details of the single targets, it becomes evident that finance and financial inclusion play a strong role in achieving all SDGs. Indeed, it could be said that that finance and financial instruments and services, including such items as borrowings, loans, deposits; receivables and payables; subsidies and pensions; and the payment systems themselves are among the key enablers for implementing the Agenda.

The thesis of this article is that digital technologies could considerably reduce the financial exclusion that prevents many people from making contributions to the SDGs. In particular, through fintech, it would be easier to pursue financial inclusion, helping millions of people to emerge from poverty while respecting one of the two corollaries of the Agenda: no one is to be left behind.

After this introduction, the second section of the article analyzes how Agenda 2030 considers finance and financial services and whether they are functional and have an impact on the achievement of certain SDGs. The third provides a list of guidelines adopted by the Financial Inclusion Experts Group (FIEG) and by the Global Partnership for Financial Inclusion (GPFI) for tackling financial exclusion, meaning the impossibility of accessing financial services that today affects about 30% of the world population (World Bank, 2017a). The fourth section presents the benefits and positive impacts associated with the access to and usage of fintech, the digital technologies applied to finance in terms of accelerating financial inclusion; it also highlights some actions that would have to be put in place in order to capture the beneficial effects of digital finance inclusion. The last section provides a list of positive examples in pursuing some SDGs by exploiting the potential of digital finance.

# 2 FINANCE AND THE AGENDA 2030

It is important to analyze which SDGs are most linked to finance and those on which financial instruments have the greatest impact. The following table highlights the links among SDGs, their targets and finance. In addition, the table includes SDG 17, based on the partnership of governments, civil society, the private sector, UN and non-governmental organizations (NGOs) for the implementation of the other sixteen SDGs also thanks to the mobilization of financial resources.

SDG	Target	Focus
1. No poverty	1.4	The importance for everyone to have access to financial services, including to microfinance.
2. Zero hunger	2.3	It links the doubling of agricultural productivity and income of small-scale food producers, among many other factors, to access to financial services.
3. Good health and well-being	3.8	Medical insurance can mitigate the risks related to health.
5. Gender equality	5.A	It focuses on the urgent need to launch reforms to grant women equal rights including to access to financial services.
	8.3	It ties the access to financial services to the promotion of development-oriented policies, the creation of decent work and the growth of MSMEs.
8. Decent work and economic growth	8.10	Strengthening the capacity of financial institutions to promote access to banking, insurance and financial services for all. In this regard, there are three reference indicators: the number of branches of commercial banks per 100,000 adults, the number of ATMs per 100,000 adults and the percentage of adults with a current account or a mobile payment system.
9. Industry, innovation and infrastructure	9.3	The access of small industries and other enterprises, particularly in developing countries, to financial services, including credit at affordable prices should be improved as a matter of urgency. It considers the share of small businesses that have access to loans or lines of credit.

SDG	Target	Focus
10. Reduced inequalities	10.5	Reaffirming the need of improving the regulation and control over global financial markets and institutions. Financial soundness is the indicator used (United Nations, DESA).
16. Peace, justice and	16.4	Reducing illicit financial flows by 2030.
strong institutions	16.5	Reducing corruption and bribery.
17. Partnerships for the goals	17.1	Domestic resource mobilization, including through international support to developing countries, to improve domestic capacity for tax and other revenue collection.
	17.3	Mobilizing additional financial resources for developing countries from multiple sources.

It is clear that finance plays a fundamental role in achieving at least nine out of seventeen SDGs. In particular, it has a greater impact on those linked to living conditions (poverty, hunger and health), economic development and the correct functioning of society (transparency and international aid).

## 3 TACKLING FINANCIAL EXCLUSION

This section will provide a definition of financial exclusion and present activities carried out by FIEG and the GPFI to accelerate financial inclusion. It will in particular describe the FIAP 2017, which links financial inclusion to the Agenda 2030 and underscores the potential offered by digital financial innovation.

The discussion around the role of financial inclusion began in the late 1990s, well before the adoption of the Agenda 2030, when some organizations, including the UN Capital Development Fund (UNCDF), realized that microfinance was no more sufficient to effectively tackle poverty and it was necessary to provide a wider range of financial services including savings and insurance. The European Commission (2008) has defined financial exclusion as a situation in which a person encounters difficulties in accessing or using services and financial products in common use, functional to the satisfaction of its own needs and that allow it to lead a life that is normal in the social environment of reference.

In this sense, it is quite evident that the issue is not exclusively linked to financial aspects. It is also frequently added to and combined with other forms of lack of access to essential components of life, such as work, health, education and a comfortable home. They are all extremely relevant factors when it comes to dealing with issues related to sustainable development.

The Financial Inclusion Experts Group (FIEG), the group of finance ministers and governors of central banks of the G20 countries presented a document entitled "Principles for Innovative Financial Inclusion" in 2010 (at the G20 summit in Toronto in May), which includes a series of guidelines to promote financial inclusion and reduce poverty. The document is based on nine principles. The first is

linked to the presence of a strong "Leadership" capable of directing its policies towards a greater inclusion that comprises finance as one of the key aspects, but which also aims at financial education and implementation of various policies on financial regulation, payment security, and consumer protection. "Diversity" plays an important role because it is based on the idea that greater financial inclusion is linked to the use of different tools and channels that allow and stimulate entry into the financial system. It refers to microfinance, the role played by companies in the information communication technology (ICT) sector and traditional banks: the task for the governments is to create favorable regulatory frameworks. The idea of "Innovation" is linked to technological, institutional and infrastructure development, advantageous in that it eliminates physical obstacles related to distances and reduces the associated costs. It is necessary to invest in "Protection" to protect consumers against frauds and abuses and in particular, human and technical protection. "Protection" also implies the implementation of an adequate infrastructure, the adoption of some regulations that increase prices and services transparency and the appointment of an institutional figure capable of enforcing consumer protection. Through an "Empowerment" mechanism, potential customers should be guaranteed a knowledge bases and an understanding of financial goods and services so that they can fully exploit the potential of these instruments according to their needs. The "Cooperation" principle includes the ideas of deals to be struck among the various government bodies (e.g. ministries, central bank) and the creation of partnerships between the private sector and other stakeholders. There should be a government agency on the remit of which is to address financial inclusion and that is available to initiate a dialogue leading to decision-making processes involving all the relevant stakeholders. The "Knowledge" principle refers to the need to find and evaluate the data resulting from inclusion policies in order to be able to assess the correctness of the policies adopted and possibly to propose the necessary adjustments to maximize effectiveness. The "Proportionality" principle implies the search for balance in the creation of a new regulatory framework able to protect the existing financial system from risks; the goal is to be not so rigid as to prevent new operators from entering the market. The "Framework" is a synthesis of all the previous principles and aims at the realization of a regulatory framework capable of complying with international regulations on money laundering and transactions traceability.

The principles adopted in Toronto paved the way for establishing, at the G20 summit in Seoul (December 2010), the Global Partnership for Financial Inclusion (GPFI)<sup>1</sup> with the aim of implementing the financial inclusion action plan and of recognizing financial inclusion as one of the main pillars of the global development agenda. The GPFI drafted three Financial Inclusion Action Plans (FIAP), in

<sup>&</sup>lt;sup>1</sup> The GPFI includes G20 countries, interested non-G20 countries and other stakeholders, like the Alliance for Financial Inclusion (AFI), the Consultative Group to Assist the Poor (CGAP), the International Finance Corporation (IFC), the World Bank Group, the SME Finance Forum, the Organization for Economic Co-operation and Development (OECD), the Better Than Cash Alliance and the International Fund for Agricultural Development (IFAD).

2010, 2014 and 2017. The last FIAP, of 2017, was the first to be drafted after the adoption of the Agenda in 2015. It recognizes the role of financial inclusion in reaching numerous SDGs and it strongly links financial inclusion to sustainable development. It also underscores the importance of digital innovation in the financial industry and considers the growth of fintech as a great opportunity to accelerate financial inclusion.

In order to assess the state of financial inclusion, the GPFI has developed a set of indicators, approved for the first time by the G20 in 2012 and then revised in 2013 and 2016. The indicators are divided into various macro-areas based on usage (of financial services), for adults and enterprises, on access in terms of physical points of service, on quality in terms of financial literacy and capabilities, market conduct and consumer protection and barriers to use. In particular, the 2016 version considers the growing role of digital payments including the share of digital and mobile payments among adults (age 15+) and the amount of cashless transactions. The indicators delivered positive results considering that in 2017, 52% of adults worldwide made or received a digital payment, an increase of 10% from 2014 (World Bank, 2017a).

In order to provide some guidelines to implement national action plans directed at exploiting the potential of digital technologies, the GPFI released also the "G20 High-Level Principles for Digital Financial Inclusion". They are directed at promoting a digital approach to financial inclusion; at balancing innovation and the associated new risks; at providing a legal and regulatory framework for digital financial inclusion; at expanding the infrastructure; at creating effective practices to protect consumers; at strengthening digital and financial literacy; at facilitating customer identification for digital financial services and at tracking the progress.

Aware of the importance of fintech, the UN Secretary-General presented the Strategy for Financing the 2030 Agenda for Sustainable Development (2018 – 2021). The document underscores the importance of "Exploiting the potential of financial innovations, new technologies and digitalization to provide equitable access to finance", as access to finance would be one of the pre-requisites of sustainable development. In addition, the UN Secretary-General created a task force on Digital Financing of the SDG² focused on proposing a set of recommendations directed at exploiting the potential of the digital revolution in finance to advance the SDGs. The interim report (Task Force on Digital Financing of the SDGs, 2019) highlights the important role that fintech could play in the attainment of the SDGs in three ways. It increases the quality and user-friendliness of relevant financial information, it reduces financial intermediation that does not add consumer value and finally it provides citizens with platforms for collective action (e.g. crowdfunding and through consumer, employee, or shareholder actions).

<sup>&</sup>lt;sup>2</sup> It is a multi-sector, public/private consortium of global leaders convened by the United Nations Secretary-General in November 2018.

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# 4 SOME ACTIONS TO CAPTURE THE BENEFICIAL EFFECTS OF DIGITAL FINANCIAL INCLUSION

This section will provide some data on the impact of financial exclusion worldwide, highlighting the benefits associated with digital finance. It will focus on the actions that decision-makers and service providers have to implement in order to increase financial inclusion

The Global Findex Database 2017 (World Bank, 2017a) provides data on financial exclusion and helps its impacts worldwide to be understood. Around 69% of adults worldwide have an account opened with a credit institution or a mobile service provider (94% in high-income and 63% in low-income economies), a figure that has definitely increased if compared to the 62% in 2014 and the 51% in 2011. This means that between 2014 and 2017 about 515 mn adults worldwide opened an account. There is still a strong inequality between men and women, the gender gap seeming to remain constant over the years: while 72% of men have an account, only 65% of women do.

To date, approximately 1.7 bn adults remain outside the banking system, mainly in seven developing countries: Bangladesh, China, India, Indonesia, Mexico, Nigeria and Pakistan. Globally, 56% of all the unbanked are women and moreover the figure is particularly relevant in countries like China and India where only few adults do not hold an account. It is interesting to note how adults excluded from the financial system justify their status: the first reason is their belief they have too little money to open an account. Among the other reasons, they mention the costs of holding an account, as well as the distance to a physical bank, the fact that a member of their own family already has one and their lack of trust in the banks (World Bank, 2017a).

Financial inclusion seems to be an essential condition of development because it would have some beneficial effects related to the use of digital financial services like mobile money services, payment cards and other financial technology applications. In particular, financial inclusion, linked to the use of mobile money services systems, seems to be able to reduce extreme poverty, especially in low-income countries, to improve gender equality and to help families in having a more effective management of financial risks. It might also reduce the costs related to the reception of cash, allow the accumulation of savings and a more efficient management of the family budget. It might finally allow even a reduction of corruption and an increase in transparency, thanks to the implementation of traceable systems, especially when it comes to payments from the government (World Bank, 2017a). Hence, it is evident that all the beneficial effects of digital financial services have a positive impact on the SDGs and their targets.

Digital payments seem to be a key factor in ensuring greater financial inclusion, as they can increase efficiency by improving the speed of payments, reducing the costs associated with making and receiving a payment. They might also enhance

security, allowing the reduction of criminal activities and corruption, through the transparency guaranteed by digital transactions. Furthermore, evidence shows that they make the opening of a bank account "mandatory", as 13% of the previously unbanked opened their first account to receive a digital payment from the government or from the private sector for their agricultural products or to receive remittances from abroad (World Bank, 2017a).

Mobile devices and the Internet, are currently prerequisites for financial inclusion, having a fundamental role to play, even if they do not yet seem to be fully exploited, since about 1.1 bn people or two thirds of adults excluded from the financial system do have a mobile phone (World Bank, 2017a).

First, it is fundamental to develop an *infrastructural network* able to guarantee the necessary technological support and, among others, an adequate financial infrastructure that secures the provision of financial services where they are needed and where a bank does not does not consider it economic to open a branch. Second, to have the necessary change of pace it is important to implement an effective *consumers' protection* system, a set of regulations especially conceived for the weakest, accompanied by investment in financial education programs. In addition, it is necessary to build a relationship of greater trust in the banking and financial industry, which has been undermined by policies that have in the past allowed hyperinflation, bank failures, frauds and nationalizations.

Third, as noted by the United Nations Secretary-General's Special Advocate for Inclusive Financial Development (UNSGSA, 2018b), the greatest effort should focus on the categories that are most difficult to reach, such as women, farmers and small businesses. Women have traditionally found it more difficult to be included in the financial system, but, leaving aside motivations of a religious, social, legal or cultural nature, on which it is more complex to intervene, there is room for improvement in order to facilitate financial inclusion. In particular, financial service regulators and suppliers should put in place products and services more closely tailored to the needs of a potential female clientele. To do that they should acquire a deeper knowledge of women as customers, taking advantage of the potential offered from data analysis for having a better understanding of the behavior of their target. Farmers are a special category of customers because they operate in a sector where it is very difficult to make forecasts about the generation of income, as it is strongly subject to climatic conditions. However, at the same time they need financial support in order to be able to operate with confidence. One of the most promising approaches is related to the use of the value chain that allows support at every stage of production and low-cost financing to be obtained. Finally, small businesses, despite being one of the main drivers of the economy of developing countries, find it very difficult to obtain the credit necessary for growth. The analysis of customer data can provide a solution as it permits the verification of financial soundness and therefore facilitates and speeds up access to finance

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Nevertheless, it is necessary to avoid certain risks that can compromise the positive results linked to the use of fintech, like increasing the digital divide between the rich and the poor, between men and women, between those who live in urban and those in rural areas. The poorest, being often the weakest, are more at risk in terms of access, usage and fraud. A great commitment is required above all from the regulators, political decision-makers and financial service providers because they put in place all the actions capable of reducing these risks, for example by exploiting the potential offered by the sandboxes that allow the testing of new products in cooperation with the regulators.

In sum, the decision makers should focus on building a technical infrastructure to guarantee the technological support and a set of rules to protect consumers, while service provides should try to acquire a deeper knowledge of their potential customers in order to involve them in the financial systems. It emerges that is fundamental to deliver the benefits of financial inclusion to the most excluded – e.g. the poorest, women and the less educated – and thus to helping them reach the SDGs.

# 5 THE ROLE OF DIGITAL FINANCIAL INCLUSION IN MEETING THE SDGs: SOME POSITIVE EXAMPLES

The purpose of this section is to give an overview of the positive results worldwide in reaching the SDGs thanks to a growth in the use of digital financial instruments.

The aim of the UNSGSA (2018a) was to present some positive results achieved with respect to single SDGs, thanks to the impact of digital finance. It is evident that digital finance is a key factor in accelerating financial inclusion and boosting the achievement of the SDGs especially when it comes to the SDGs highlighted in the following part of this section.

SDG 1 – No poverty – the use of digital financial systems by low-income families has allowed a considerable increase in their quality of life, while providing better economic opportunities. In Kenya about one million people (2% of the population) came out of the extreme poverty of 1.90 dollars a day between 2008 and 2014 thanks to a system of mobile money, a service that allows users to store monetary value on a mobile phone and send money to other users via text messages. This system has presented a threefold advantage because it has increased the capacity and propensity to save money, has involved greater financial resilience of individuals and has had a positive impact on occupational choices, especially for women, who have in part abandoned work in agriculture to devote themselves to the commercial sector (Suri and William, 2016). In Tanzania, thanks to a project of the Agriculture and Climate Risk Enterprise (ACRE), farmers with access to digital financial services have accessed micro-insurance contracts, which have allowed them to sustain bigger investments earning 16% more than their uninsured peers (World Bank, 2017c).

SDG 2 – Zero hunger – starting from the assumption that it is estimated that there are 800 mn undernourished people in the world (FAO, IFAD, UNICEF, WFP and WHO, 2017), digital finance could allow farmers an easier access to the funds needed for their activities. In addition, the poorest can receive the social benefits they need to survive, in a safer, more reliable, less expensive and faster way than the delivery of in-kind food. In Uganda, the use of digital payment systems by an important coffee company has cut the costs by 27% mainly abolishing physical transfers of money, considering that digital transfers are 45% cheaper than cash transfers, freeing up more resources for investments (CGAP, 2017).

SDG 3 – Good health and well-being – focuses on the fact that health costs force 100 mn people into extreme poverty every year (WHO and World Bank, 2017). Digital finance thanks to digital savings and insurance products can help in dealing with unexpected expenses. The launch of a mobile health wallet in Kenya made easier health payments, savings and access to credit, facilitating 150,000 patient visits to medical facilities (Ilako, 2018).

SDG 5 – Gender equality – digital finance could give women full control over their finances, enabling them to start their own business. Meanwhile the providers of financial services could have a better understanding of women's needs and a better creditworthiness assessment when it comes to starting a business. In the Dominican Republic, in order to assess the ability to repay a loan, the applicants were differentiated on the basis of sex and by verification of bill payment history. The result of the analysis of the data by gender made it possible to increase by one third the share of creditworthy women (DCO, 2017). Furthermore, a South African study has shown that the financial inclusion obtained through digital transfers by the government has increased the decision-making power of women in the household and consequently increased by 92% the probability that they will enter in the labor market (Van Biljon, Von Fintel and Pasha, 2018).

SDG 6 – Clean water and sanitation – 2.1 bn people do not have regular access to drinking water and digital finance systems have had positive effects to support the needs of low-income families, meanwhile supporting the sustainable development of utilities. In Ghana, the introduction of smart meters and digital payments by Safe Water Network, an international NGO, has helped to double its revenues per liter, making the population more responsible with regard to waste management and has enhanced the possibility of expanding the supply of drinking water in other areas (Waldron, Hwang and Yeboah, 2018). In Bangladesh, the World Bank has cooperated with the Government in the National Sanitation Campaign with the aim of guaranteeing sanitation to the population. Thanks to the use of microfinance systems, made possible by the use of mobile money, to repay loans, more than 16,000 toilets were installed, with the aim of reaching the threshold of 170,000 (World Bank, 2017b).

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SDG 8 – Decent work and economic growth – According to United Nations (2016), it is necessary to create 470 mn jobs by 2030 for new entrants in the labor market (United Nations, 2016). The GDP of all emerging economies could increase by 6% by 2025 thanks to benefits offered by digital finance, which might also allow the creation of 95 million jobs (Manyika et al., 2016). Much could be done by digitizing salaries in order to improve workers' savings, by making payments for MSMEs exclusively digital the in order to get data that can help assess their creditworthiness, to reduce the cost of handling cash and finally to support t growth. For example, in Bangladesh, digitizing the wages of workers at a company in the garment sector has saved 85% of the cost of transactions within two years (Breza, Kanz and Klapper, 2017).

SDG 9 – Industry, innovation and infrastructure – digital finance can be helpful because of the financing of the MSMEs and of digitizing of payments of the supply-chain affecting the efficiency and the revenues (Chaintreau et al., 2018). Furthermore, digitizing salary payments ensures traceability, prevents fraud and secures compliance with labor legislation (Vodafone, 2015). In India, Gap Inc. digitized salaries of its workers, securing that they were paid in due time, leading to a reduction in worker attrition by 15–20% (Manyika et al., 2016).

SDG 10 – Reduced inequalities – through digital finance aims at providing low-income households with new opportunities, increasing their salaries and improving their financial resilience. One of the central issues concerns foreign remittances. The use of digital tools for remittances can cut the costs of remittances up to 3.5% and so release more than 30 million from poverty (Kunze, 2017). According to some data of the World Economic Forum, if the costs of remittances were reduced by 5%, the emerging economies could benefit by 20 bn dollars each year (Ratha, 2015) and digital finance could play an important role in terms of transparency and traceability. Governments of the most developed countries should considerably reduce the taxes on foreign remittances in order to maximize the benefits for developing countries and encourage the use of legal and transparent channels.

SDG 16 – Peace, justice and strong institutions – this has an important relation with digital finance. It is about transparency and the fight against fraud and corruption but it involves also the high costs incurred by governments in handling cash. Digital transactions will substantially reduce the impact of fraud, corruption and leakage (Wald, 2018) and are a reliable way to reduce the government transfers' costs and secure that they are delivered to the intended recipients in the proper time. Mexico's choice of digitizing the payment of salaries, pensions and social transfers helped to save 1.3bn dollars (Babatz, 2015).

SDG 17 – Partnership for the Goals – has a strong relation with digital finance, as it might increase tax collection (Maherali, 2017), with positive effects on the budgets and it might also help the mobilization of both public and private resources and investments using new channels like crowdfunding.

# **6 CONCLUSION**

Ensuring access to financial services, their control and the mobilization of financial resources are key enablers of the Agenda 2030. They might contribute to the achievement of some of the SDGs such as hunger and poverty reduction, good health, gender equality, getting decent work and developing MSMEs, reduction of inequalities, enhancing the effectiveness of the fight against corruption and increasing the mobilization of additional financial resources.

This article emphasizes how financial exclusion, often combined with other forms of deprivation of other fundamental elements of human life such as work, education, health, prevents the full contribution of those excluded, who represent a large part of the world population, to the achievement of the SDGs. A digital approach to financial inclusion based on digital finance has delivered good results in recent years. In particular, the activity of the FIEG and the GPFI have produced proposals, action plans and indicators that can accelerate financial inclusion. In addition, the UNSGSA (2018a) delivers a message of hope for the future giving evidence that the situation has greatly improved in recent years.

Nevertheless, decision-makers have to implement measures to speed up digital financial inclusion like creating effective consumers' protection systems, reducing physical and technological barriers, increasing the financial knowledge of the less educated and have to develop reliable and secure technical infrastructures. Operators have to learn more about potential users like women, farmers and small entrepreneurs in order to propose products and services based on their real needs.

# Disclosure statement

No potential conflict of interest was reported by the author.

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