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Digital financial inclusion

FIGI FINANCIAL INCLUSION GLOBAL INITIATIVE

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Digital finance: Reaching the unbanked

By Houlin Zhao, ITU Secretary-General

"As the decade progresses, digital financial inclusion will be crucial to achieve universal financial access."

Houlin Zhao

ITU Secretary-General

Financial inclusion has been a recurring topic of policy discussions since the late 1990s and early 2000s, when development finance organizations stepped up their support for microcredit – small loans for people lacking a steady source of income.

More recently, the concept evolved to include microfinance more broadly, along with access to basic financial services such as savings.

Financial inclusion today aims to make a wider scope of services, like savings accounts, credit, insurance, payments, remittances, and other financial products, available to everyone. Clients include "unbanked" individuals, as well as micro, small, and medium enterprises. Inclusiveness also means reaching them sustainably and at a reasonable cost.

Digital innovations have emerged as a key element. Mobile applications can give poor and remote populations, largely excluded from traditional bank financing, easy access to a broad range of services. Safer overall than carrying cash, digital services also promote transparency by creating audit trails and reducing fraud.

Financial technology, or fintech, encompasses online banking platforms, mobile payment apps, and other dedicated software – even cryptocurrency.

This edition of the ITU News Magazine highlights some of the opportunities, as well as the challenges, of this new, innovative, fast-growing field of digital transformation. As the decade progresses, digital financial inclusion will be crucial to achieve universal financial access, eliminate poverty, reduce inequalities and ensure a sustainable global future.

Digital financial inclusion

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This edition of ITU News Magazine draws on discussions at the latest Financial Inclusion Global Initiative (FIGI) Symposium:

- Authoritative guidance from ITU and key partner institutions
- Insights on key challenges and opportunities in expanding financial access worldwide

All session recordings are available here.

A culture of collaboration certain to sustain

By Chaesub Lee, Director,
ITU Telecommunication Standardization Bureau

This experience of the pandemic also underlines the importance of the Financial Inclusion Global Initiative.

Chaesub Lee

Director, ITU Telecommunication Standardization Bureau

The COVID-19 pandemic has highlighted the key role of digital infrastructure and the need to keep investing in our global technological future. Everyone, everywhere, must share in the benefits of digital transformation.

Digital channels – now the main point of access to the formal financial system – have given vulnerable people worldwide an economic lifeline amid the pandemic.

But along with being available and accessible, digital financial services must meaningfully address people's needs. Cybersecurity, trust, and access to reliable information are nothing less than matters of public safety.

The importance of FIGI

This experience of the pandemic also underlines the importance of the Financial Inclusion Global Initiative (FIGI) – an open framework for collaboration led by the International Telecommunication Union (ITU), the World Bank Group, and the Committee on Payments and Market Infrastructures (CPMI), with support from the Bill & Melinda Gates Foundation.

Expanding financial inclusion

While financial services have always been a networked industry, we have entered a new frontier in recent years, with mobile phones enabling millions of people around the world to make use of life-changing financial services for the very first time.

Great optimism surrounds the ability of digital channels to expand financial inclusion, and with good reason. Some 1.7 billion adults worldwide do not have a bank account. Among them, however, more than two-thirds have a mobile phone.

FIGI is the successor to the ITU Focus Group on Digital Financial Services active from 2014 to 2016. That was the first initiative to bring together everyone who was working to expand financial inclusion. And it came at exactly the right time.

We saw excellent case studies emerging, as developing countries pioneered the use of digital channels to extend finance to the unbanked. Innovators were finding their feet, assembling the business case for digital financial inclusion and gaining an understanding of new business dynamics. The digital technology and financial service sectors were moving into a new shared space, with resulting convergences in the responsibilities of different regulatory authorities.

Since then, we have come a long way together. We have built a strong understanding of the components of the digital finance ecosystem. We have clarified our respective roles in nurturing the growth of this ecosystem. And we have supported the emergence of a global community where complementary strengths allow us all to advance together.

ITU is dedicated to the pursuit of the Sustainable Development Goals (SDGs) adopted by the United Nations for 2030.

Digital financial services can make a defining contribution to the achievement of the SDGs.

ITU standards – improving digital finance

Standardization has been central to ITU's work since the organization's inception in 1865.

We work at the cutting-edge of innovation. Technology is always evolving, and ITU's work and membership evolves in line. But our basic value proposition remains unchanged: building a global community, building trust, and enabling technological advances on a global scale.

Successful standards development calls for inclusive dialogue. By bringing different industry sectors together, ITU helps to define new directions for innovation and create the partnerships required to propel this innovation.

ITU standards for digital finance serve to improve the quality of services, as well as to safeguard security and build trust. By hosting the new FIGI Security Lab for Digital Financial Services, we help regulators and the industry to build on firm technical foundations.

"Digital financial services can make a defining contribution to the achievement of the SDGs."

"ITU standards for digital finance serve to improve the quality of services."

FIGI collaboration

Collaboration through FIGI demonstrates exactly the sort of cohesive action the world will need to fulfil the SDGs.

The initiative has supported national policy reforms to stimulate financial inclusion, working with China, Egypt and Mexico to provide valuable case studies for other countries around the world.

Through FIGI's three working groups, we have produced a viable basis for digital ID systems to grant citizens access to formal systems of all kinds. We have studied how to incentivize electronic payments as the norm for very low-value transactions. We have also looked at how to boost users' confidence that their money and digital identities are safe.

After earlier gatherings in Bangalore (2017) and Cairo (2019), this year's FIGI Symposium welcomed over 1700 participants from 148 countries in an entirely online format, to discuss topics ranging from fintech for inclusion and gender equity to cybersecurity, digital ID and consumer protection. We also heard different experiences with reaching underserved and vulnerable populations during the pandemic. We approached these discussions from every possible perspective, thanks to the diversity of the FIGI community.

I would like to express my deepest gratitude to all FIGI contributors. We can all be very proud of what we have achieved together.

Although this third edition brings the initiative to completion, we have created a culture of collaboration that will sustain discussions for many years to come. The findings of FIGI's working groups will remain, and we look forward to breaking new ground with you in our Security Lab.

Digital technologies are the unifying force at the centre of our interconnected world, even as COVID-19 raises new questions about how to live together harmoniously, both in times of crisis and times of prosperity.

I look forward to our continued work together to build a better digital future for all.

> *"The initiative has supported national policy reforms to stimulate financial inclusion."*

FIGI 2021 highlights

The Financial Inclusion Global Initiative (FIGI) Symposium provides a forum for sharing experiences and views on the challenges to be addressed for scaling up digital financial services and fostering financial inclusion globally.

The 2021 edition of the FIGI Symposium took place online from 18 May to 24 June.

Learn more about the event here.

Learn more about the ITU Telecommunication Standardization Sector.

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Has digital finance softened the impact of COVID-19?

Growing use of digital financial services has turned crisis into opportunity.

With the COVID-19 pandemic restricting the movement of people and goods, modes of transaction have shifted dramatically.

Growing use of digital financial services has turned crisis into opportunity, enabling previously unbanked people and small firms to join the financial system. Regulations have evolved to keep up with technology, but specific policies are needed to make sure no one gets left behind.

"While digital financial inclusion was a development priority before the COVID-19 pandemic, it's really become indispensable now – both for short-term relief in terms of putting money in the hands of those who need it, but also as a central element of broad-based sustainable recovery efforts," said Mahesh Uttamchandani, Practice Manager for Finance, Competitiveness and Innovation Global Practice at the World Bank Group.

COVID-19 has had a profound impact on people's payment habits, with 60 per cent of financial authorities reporting an increase in digital transactions.

Simultaneously, the number of unique customer accounts receiving government-to-person (G2P) payments more than quadrupled at the beginning of 2020 as the global pandemic took hold.

Close to 70 per cent of financial regulators around the world identify financial technology, or fintech, as a high priority, aligning measures against COVID-19 with efforts to strengthen financial inclusion.

Digital cash transfers

Already a priority before COVID-19, digital financial inclusion has become more urgent as a policy goal, Uttamchandani said at this year's Financial Inclusion Global Initiative (FIGI) Symposium.

The World Bank Group is working on around 170 COVID-related projects across 110 countries, including new or expanded COVID-19 cash transfer projects in over 55 countries, he added.

Key goals include digitizing cash transfers and payments, establishing faster payment systems, enabling digital identification and electronic "Know Your Customer" (KYC) technologies, and protecting consumers from heightened risks.

Quick response

Countries and markets that were already investing in digital financial services were better placed to respond to the COVID-19 crisis, said Gregory Chen, Policy Lead at Consultative Group to Assist the Poor (CGAP).

Togo, for example, quickly rolled out its Novissi social assistance programme using machine learning and mobile money to deliver contactless emergency cash transfers. Pre-existing digital infrastructure made this possible for the West African country, Chen said.

> *"While digital financial inclusion was a development priority before the COVID-19 pandemic, it's really become indispensable now."*
>
> Mahesh Uttamchandani
>
> Practice Manager, Finance, Competitiveness and Innovation Global Practice, World Bank Group

Another key factor was regulators' pragmatic response to the pandemic.

"Very early on, a lot of regulators realized that the banking system remained vital for economic activity," said Chen, adding that, by deeming it an essential service, "they figured out ways to keep the banking system and payment systems going."

Chen offered an example of this pragmatic action from regulators in the Philippines, where regulators enabled a cash transfer programme managed by one public-sector bank to be opened up to multiple providers of payment services, including mobile money operators.

> *Very early on, a lot of regulators realized that the banking system remained vital for economic activity.*
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> Gregory Chen
>
> Policy Lead, Consultative Group to Assist the Poor

KYC technologies

World Bank Group financial inclusion projects have helped to simplify due diligence and KYC provisions in markets as diverse as the Democratic Republic of the Congo, Morocco and Nepal, as well as to implement fast-payment systems in Georgia, Madagascar and Indonesia, Uttamchandani said.

The World Bank Group's G2Px government-to-person payment initiative has also provided technical assistance for digitizing social benefit transfers in 35 countries.

Instruments for inclusion

In developed markets, accelerated digitization amid the pandemic has spawned new payment, loan and insurance products. European markets have seen a surge in contactless transactions, said Magda Bianco, Managing Director of the Bank of Italy, the country's central bank.

Instruments provided by intermediaries have also made credit scoring easier.

"This allows small companies, which typically do not have a credit history, to get into the market to get loans," Bianco explained.

Digital tools are also helping individuals enter the financial system for the first time, she added. "In some countries, new digital saving accounts have been introduced with no or very low fees."

> *In some countries, new digital saving accounts have been introduced with no or very low fees.*
>
> Magda Bianco
>
> Managing Director, Bank of Italy

Deepening digital divide

Access to digital services remains extremely uneven. Experts suggest that digital exclusion may partly correlate with income losses in the pandemic, with a disproportionate impact seen on low- and medium-skilled workers, the self-employed, and women.

GSMA – the GSM Association representing mobile network operators – says women are 7 per cent less likely than men to own a mobile phone and 15 per cent less likely to use mobile Internet.

"Women make up 39 per cent of global employment but 54 per cent of overall job losses," Uttamchandani observed.

Gender disaggregated data could help to inform targeted policies and initiatives for financial inclusion, he added.

Cybersecurity risks

Digital uptake has, in parallel, increased people's vulnerability to identity fraud, online scams and other cybersecurity threats. Digital microcredit applications have also seen rising fraud in recent months. This is especially risky for new and unskilled users.

"Understanding risks is really important for vulnerable groups disproportionately hit by the pandemic, such as women, youth, elderly people and migrants," Bianco said.

"Understanding risks are really important for vulnerable groups disproportionately hit by the pandemic, such as women, youth, the elderly people and migrants."

Magda Bianco

Managing Director, Bank of Italy

Promoting digital and financial literacy

Efforts to improve digital financial inclusion must include measures to protect consumers while providing the widest possible access. Digital financial education is equally vital to make the system accessible to individuals, vulnerable groups, and micro and small enterprises, Bianco said.

Despite the pandemic, governments and institutions need to persist in collating updated information on financial inclusion, she added.

Comprehensive surveys have been difficult to perform during the pandemic. However, the G20's Global Partnership for Financial Inclusion (GPFI) platform – launched in 2010 during the G20 Summit in Seoul, Republic of Korea – is now compiling case studies and analysing best practices from various countries.

Not leaving anyone out

Unless industry keeps expanding and improving its digital financial service offerings, it "may unintentionally help to victimize some of the most marginal groups," Uttamchandani said.

Rapid growth in the use of digital financial services, when combined with low financial awareness, can lead to problems such as over-indebtedness. To avert such problems, service offerings must be tailored to each local market, he commented.

Although access is improving, in every country there are people unreachable by digital finance. "We still need to be able to respond to those populations and recognize both the power and the limits of digital finance," Chen cautioned. "In doing so, we will have a much stronger response to the COVID pandemic and an opportunity to accelerate some of the positive parts of digital finance."

Note: This article is based on a panel discussion during the 2021 Financial Inclusion Global Initiative (FIGI) Symposium.

Play the session recording.

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Increasing women's leadership in financial technology

Experts often cite the benefits of financial technology (fintech) and digital finance for women. At the same time, few women are represented in decision-making roles in this fast-growing industry.

While they make up half of the financial services workforce in many countries, women fill only about 20 per cent of the leadership roles. Their representation in emerging markets is lower. Even so, they do better in finance than in the other part of the equation, the technology sector.

A closer look at the figures

The overall tech workforce was 28.8 per cent female in 2020, and despite growth in women's representation on boards and in C-suites at tech companies in the past ten years, there's still a long way to go. Out of nearly 1300 technology companies across the world, women hold on average 16.6 per cent of board seats.

While 35 per cent of higher education graduates in science, technology, engineering and mathematics (STEM) programmes globally are female, many of them, according to Catalyst, end up leaving STEM careers.

The fast-growing fintech industry doesn't appear to fare better in terms of women's leadership.

The financial industry is making rapid progress in boosting the number of women in senior leadership roles, but fintech lags more traditional finance in terms of gender balance. "Despite starting with a blank slate, fintech has emerged as an outlier struggling with gender balance at the board level," according to international management consultancy Oliver Wyman.

Despite starting with a blank slate, fintech has emerged as an outlier struggling with gender balance at the board level.

Source: Oliver Wyman

Missed opportunities

Placing women in leadership positions tends to drive innovation, increase productivity, and boost profitability, says a study by Deloitte. Yet among fintech founders, women are less likely to receive investor funding than their male counterparts.

"More diverse teams create better results," affirms Margaret Miller, Lead Financial Sector Economist at the World Bank Group and co-moderator of a session at the Financial Inclusion Global Initiative (FIGI) Symposium. "It's business sense to be looking at how we can incorporate women and women's voices more in leadership."

"It's business sense to be looking at how we can incorporate women and women's voices more in leadership."

Margaret Miller

Lead Financial Sector Economist, World Bank Group

The stubborn gender gap in fintech leadership stems from more than the lack of diversity in financial services and the scarcity of women across the wider tech sector. Differing cultural norms also come into play, along with each country's current economic conditions.

In Pakistan, for example, women are employed largely in the informal sector, says Roshaneh Zafar, Founder and Managing Director of the Kashf Foundation, a non-banking micro finance company. This reflects a pattern seen in many developing countries, with around 95 per cent of women's work in Asia and 89 per cent in Sub-Saharan Africa being done informally, according to a report from the World Bank Group and partners.

Zafar pointed to educational barriers and questioned whether women were being educated to become managers. In her view, perceptions about women and leadership must change, which also means cultural stereotypes need to be broken down.

"The lack of networking is something that prevents women from getting not only the investments they require but also the amounts of investment," she says. "Women don't lack the expertise or the ability. It's really the perception that creates the glass ceiling, both within institutions and within the investor space."

Championing women as leaders

The Central Bank of Egypt (CBE) has started dedicating annual awards to outstanding women in the banking sector, with winners receiving learning opportunities at globally prestigious universities, including Harvard.

May Abulnaga, First Sub-Governor, sees a crucial role for regulators in promoting women, starting from the top down. "Today, as a regulator, we have been able to achieve a number of milestones towards building an inclusive financial sector."

The CBE has also undertaken a joint programme with Egypt's National Council for Women to promote female financial empowerment.

Laura Fernandez Lord, Head of Women's Economic Empowerment at BBVA Microfinance Foundation (a subsidiary of Spain's multinational financial services firm BBVA), adds: "There is only one way to move the needle to bridge the gender financial gap, and that is to lead by example".

Possible approaches include promoting women champions for organizational change, bringing men into the discussion, training top managers on gender diversity, and investing in career counselling, career planning, mentoring and coaching for both men and women. But organizations and companies seeking to improve their gender balance may also need tools for tackling unintended biases, rules on hiring 50 per cent women employees, and mandatory availability of day-care facilities.

Fintech firms in the Middle East and North Africa (MENA) region are piloting the business case for gender-intelligent services. The Arab Women's Enterprise Fund (AWEF) has actively helped to promote solutions from mobile wallets to merchant payment integration. Its Eight Lessons from the Field report urges fintechs to take a deliberate approach to meeting the needs of women.

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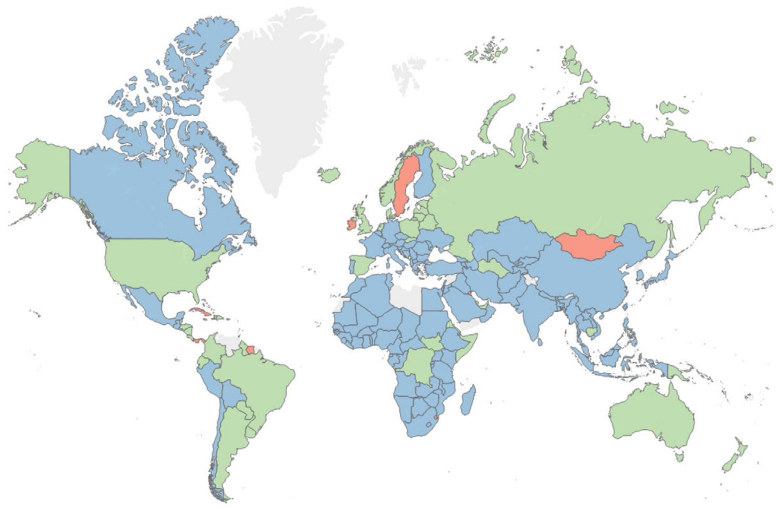
> First Sub-Governor, Central Bank of Egypt

Proportion of Internet users, by gender



*Note: * ITU estimate. Penetration rates in this map refer to the number of women/men that use the Internet, as a percentage of the respective total female/male population. The ratio is considered equal when the difference between the male and female Internet penetration rate is less than 2 percentage points.*

Source: Measuring Digital Development, Facts and figures, 2019, ITU.

Including women in fintech – a holistic approach

A study by the International Development Research Centre (IDRC) recommends a holistic approach, both to expand financial services for women and increase the number of women in fintech. The supply of financial services is not by itself a panacea. Governments, donors, and financial institutions must intervene where needed to boost financial literacy, improve product design, and address specific constraints for women.

Otherwise, rapid growth in digital banking and the creation of a cashless society could serve to deepen and reinforce the existing digital gender divide.

Even before the current pandemic, an estimated 52 per cent of women tended to remain totally offline, compared with 42 per cent of men worldwide, according to ITU's 2019 Measuring Digital Development report.

In our post-pandemic world, the ability to connect to usable affordable digital services will surely be the new baseline for full social and economic inclusion, especially for women.

Note: This article is based on a panel discussion during the 2021 Financial Inclusion Global Initiative (FIGI) Symposium.

Play the session recording.

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Harnessing and balancing innovation: Payments in the fintech era

Providing everyone with a transaction account to send and receive money electronically is widely considered the first step towards financial inclusion.

Providing everyone with a transaction account to send and receive money electronically is widely considered the first step towards financial inclusion. For the unbanked, such accounts are seen as the gateway to savings, credit, insurance and a host of other financial activities and services.

Ongoing advances in financial technology (fintech) have introduced new ways to expand access to financial services and the range of services on offer, both for experienced customers and for unbanked people gaining access to transaction accounts for the first time.

Alongside the traditional offerings, some banks have moved to support "open banking" in coordination with third-party online service providers. Innovations in fields like big data analytics, digital identity and biometrics have ushered in new ways to assess creditworthiness and onboard new customers.

With transaction accounts now offered not just by banks, but also increasingly via mobile money providers and other non-bank platforms, a wide range of players can be involved in enabling payments.

For financial regulators, this raises a range of questions, with the imperative to spur fintech innovation being balanced against the responsibility to manage risks.

Guiding principles

Guiding principles for Payment Aspects of Financial Inclusion (PAFI), released in 2016 and updated in 2020, rest on public and private-sector commitments to provide everyone with access to a transaction account, a suitable supporting legal and regulatory framework, and the necessary financial and digital infrastructure.

Fintech's rapid rise to prominence in recent years has led to further review of PAFI principles, again led by the World Bank Group and the Committee on Payments and Market Infrastructures (CPMI) of the Bank for International Settlements (BIS). This time, the institutions focused on detailing how the PAFI principles apply to the latest fintech innovations.

The latest report notes fintech's potential to broaden financial inclusion through initiatives embedded in wider country-level reforms.

Inclusive payment systems depend on close coordination between regulatory authorities and industry players, both to harmonize oversight and establish resilient infrastructure for electronic payments. The right balance is needed between increasing efficiency and ensuring safety, as well as between enhancing the customer experience and protecting personal data.

The movement towards increasingly digital financial life, industry experts caution, may deepen exclusion for some.

Payments in the fintech era

Read the new PAFI guiding principles in the fintech era here.

Striking the balance

The opportunities	The challenges
Increasing efficiency	Ensuring safety
Enhancing customer experience	Protecting the consumer and data privacy
Achieving ubiquity	Avoiding digital exclusion
Lowering market entry barriers	Addressing concentration risks

Source: Bank for International Settlements and World Bank Group (2020): Payment aspects of financial inclusion in the fintech era.

Tracking financial inclusion

To help national authorities apply PAFI guidance, the project provides guidance for diagnostic studies to track transaction account access and use. The toolkit allows comparisons against international benchmarks or within each jurisdiction over time as countries strive for more inclusive payment systems.

Morocco's inclusion strategy

The PAFI toolkit forms part of a country-level self-assessment for Morocco's financial sector, says Hakima El Alami, Director of Payment Systems and Instruments Oversight and Financial Inclusion Directorate at Bank Al-Maghrib, the country's central bank.

Morocco is making fintech solutions part of its national Financial Inclusion Strategy – which aims to give all citizens and businesses fair access to formal financial products and services, she said during the recent Financial Inclusion Global Initiative (FIGI) Symposium.

Albania builds trust

Market access for new entrants also requires careful consideration, so that entities of all sizes enjoy equal opportunities for competition.

"From our perspective as a regulator, we need the market to have as many alternatives as possible, and this comes into force only with tools like a framework, infrastructure, and giving access in a secure and mitigated way," said Ledia Bregu, Director of Payments in the Bank of Albania's Accounting and Finance Department.

Bregu cited financial literacy as a key challenge, along with building customer confidence. "When we speak about innovation and fintech, we need to build trust, so the new or unbanked part of the population has the same understanding and the same trust to use innovative tools to become more financially included."

Financial inclusion can drive investment and economic development – important considerations for Albania and other relatively small economies in the Western Balkans, she adds.

"At the end of the day we see it as a tool for economic growth," says Bregu.

> *"When we speak about innovation and fintech, we need to build trust, so the new or unbanked part of the population has the same understanding and the same trust to use innovative tools to become more financially included."*
>
> Ledia Bregu
>
> Director of Payments, Accounting and Finance Department, Bank of Albania

Mexico seeks network effects

Exponential tech growth means not only new services, but also new types of firms providing services, says Miguel Manuel Díaz, Director of Payment Systems and Infrastructure at Banxico. This, he believes, has ramped up the pressure on central banks and other regulators.

According to Díaz, five key balances need to be maintained by authorities working to accommodate new types of industry players and services:

1. Innovation versus risk mitigation;
2. Economies of scale versus competition;
3. Efficiency versus system security;
4. Achieving diversity versus efficient system standardization; and
5. Privacy versus security requirements.

Díaz sees two key tools to expand access to payment services while mitigating associated risks:

First, a central enabling infrastructure available to everyone. This supports competition among payment services and introduces network effects that help services reach as many people as possible.

Second, in-depth analysis to ensure the consistency of regulations with new market realities. For example, regulators may consider shifting from overseeing different types of institutions towards overseeing the different functions involved in providing a service.

South Africa recognizes limits of current regulation

While financial inclusion is a high priority today, this was not always the case in South Africa, says Pearl Malumane, Senior Analyst in the Policy and Regulation Division at the South African Reserve Bank.

"Over the years, the focus has always been on financial stability, but other regulators and also the South African Reserve Bank have come to realize the importance of financial inclusion," she says.

"As a result, we have seen the growth of fintechs in South Africa, but we are aware that there are limits in our current regulatory framework. It is very restrictive in terms of what type of payment activities fintechs, or non-banks, are allowed to do."

But the industry and its regulators need to persist in finding the right way forward, Malumane says.

"Where fintech is enabled, it will enhance not only financial inclusion but also competition and innovation in the national payment system and throughout the country," she says.

"Where fintech is enabled, it will enhance not only financial inclusion but also competition and innovation in the national payment system and throughout the country."

Pearl Malumane

Senior Analyst, Policy and Regulation Division, South African Reserve Bank

Note: This article is based on a panel discussion during the 2021 Financial Inclusion Global Initiative (FIGI) Symposium.

Play the session recording.

Anete Lusina via Pexels

Making fintech safer for consumers

The benefits brought by companies providing software, services, and products for digital financial services are accompanied by new, often unfamiliar risks.

Financial technology, or fintech, has brought financial security within reach for previously underserved people and communities, especially in developing countries.

But the benefits brought by companies providing software, services, and products for digital financial services are accompanied by new, often unfamiliar risks.

While many fintech firms have experienced rapid growth during the COVID-19 pandemic, consumers and regulators alike need to know both the upsides and the downsides of new business models emerging in digital finance.

Mobile-friendly information

Among these fast-growing new digital financial services, digital microcredits enable quick approval and access for small, short-term loans via mobile phone.

However, their pricing can appear vague, while the mobile format can impede readability for some microcredit users.

"When you translate summarized disclosure statements and key facts to a small screen, it becomes even harder to ensure that the consumer is receiving the information they need to understand risks and choose an appropriate product," observed Jennifer Chien, Senior Financial Sector Specialist at the World Bank Group, during a session of the Financial Inclusion Global Initiative (FIGI) Symposium.

Another challenge relates to timing, she explained. "You may receive information about the pricing for a credit product only after you have finalized a transaction, which makes it too late to use that information effectively."

Making algorithms accountable

Fintech products are sometimes marketed unscrupulously, such as with certain practices emerging in unsolicited offers of microcredit sent to consumers' phones. In unbanked markets, such practices can result in unnecessary loans and subsequent repayment struggles.

"Some are marketed in a way that encourages the consumer to take out the maximum loan possible," said Chien. "The remote nature of the digital channel and rapid transaction speeds increase consumer vulnerability to aggressive marketing practices."

At every level, fintech's benefits and drawbacks seem mixed. For example, while automated credit scoring can expand access to financial services, poor algorithm design and non-representative data can produce biased results that are "systematically worse for certain groups and perpetuate social inequalities," warned Chien.

Creating algorithmic accountability through regulatory and technical safeguards and controls is a work in progress for many countries and researchers.The Hong Kong Monetary Authority, for instance, has told digital microcredit providers to ensure that existing rules on fair treatment and anti-discrimination apply to the use of algorithms.

> *When you translate summarized disclosure statements and key facts to a small screen, it becomes even harder to ensure that the consumer is receiving the information they need to understand risks.*
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> Jennifer Chien
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> Senior Financial Sector Specialist,
> World Bank Group

Protection from lending risks

Risks of unfair lending with high annualized rates also persist in digital microcredit products. Loans are sometimes marketed aggressively without assessing the consumer's need or ability to repay. So-called "lend to learn" models extend access to finance for consumers without a formal credit history to learn their creditworthiness. But risk-blind models can result in loans being taken out by consumers who can't afford them.

Consumer warning labels, or equivalent notifications, may have to be attached to certain fintech products and services, Chien said.

Testing in Kenya, for example, indicated improved consumer comprehension after brief summaries of terms and conditions were shown on mobile phones earlier in the transaction process. In Paraguay, consumers are offered a final option to accept or reject terms before concluding a digital transaction contract. In such cases, the dynamic interactive nature of mobile channels aids the consumer.

Evolving risks, evolving regulation

Fintech also enables access to credit via peer-to-peer lending platforms. But most such operators remain unregulated, depriving consumers of protection, said Gian Boeddu, another Senior Financial Sector Specialist at the World Bank Group. The UK and Mexico have tried to address this by developing new definitions of activities subject to financial regulation.

In the digital context, low barriers to entry for accessing credit and reliance on technology expose consumers to risks. As a safeguard, policies that apply to traditional financial service providers are now being extended to providers of new digital financial services and related third parties with additional requirements for digital literacy and consumer competence.

Investment-based crowdfunding, which allows small companies to issue debt or equity securities to the public, shows how fintech innovation can prompt regulators to rethink certain rules.

This form of crowdfunding cannot develop within regulatory frameworks for capital markets, opined Ivor Istuk, a third Senior Financial Sector Specialist at the World Bank Group. "Established rules for offering securities and providing investment intermediary services tend to be too costly for small businesses and start-ups. Companies that would find this market lucrative would also need to register themselves, increasing operational costs."

Concerns around fraud and platform failure also apply to investment-based crowdfunding. Risks are exacerbated by inexperienced investors, risky issuers, opaque information, and illiquid and complex securities, explained Istuk.

To address gaps in fintech regulation, experts highlight the value of a step-by-step approach based on the development of an in-depth understanding of the fast-evolving fintech market and experiences of consumers and industry players.

> *"Established rules for offering securities and providing investment intermediary services tend to be too costly for small businesses and start-ups."*
>
> Ivor Istuk
>
> Senior Financial Sector Specialist,
> World Bank Group

Note: This article is based on a panel discussion during the 2021 Financial Inclusion Global Initiative (FIGI) Symposium.

Play the session recording.

Financial inclusion: Working group reports

Financial Inclusion Global Initiative (FIGI) working groups develop knowledge, technical tools, and policy recommendations. Reports focus on three key areas:

Security, infrastructure and trust

Digital ID

Electronic payment acceptance

Download the reports from here.

Join ITU's online communities on your favourite channel

Stephen Zenner/SOPA Images/LightRocket via Getty Images

Digital ID: Improving financial access across Latin America

While most people possess some form of ID, some 3.4 billion people are still unable to make use of it online.

Globally, over a billion people are unable to prove their identity, barring their access to crucial services like health care and education, as well as to job opportunities in the formal economy.

The gap relates not just to identification — but also authentication.

While most people possess some form of ID, some 3.4 billion people are still unable to make use of it online, due to an inability to verify or authenticate their credentials, the World Bank Group estimates.

These key financial exclusion factors have attracted the attention of financial and digital experts in Latin America — a large region where emerging economies tread a fine line between rapidly advancing infrastructure and endemic poverty.

Regulatory calibration

In Mexico, the central bank is working with government agencies to make sure all citizens have some form of ID, whether digital or physical. While these initiatives are progressing fast, "we cannot guarantee a physical ID to all Mexicans," says Antonio Casada, Vice President of Regulatory Policy at the National Securities and Banking Commission.

This realization, however, paved the way for digital ID solutions. In 2017, the Mexican government issued a regulation enabling banks to perform biometric authentication. Other banks now want to extend to facial recognition and other, more sophisticated proofs of life.

Another challenge for Mexico is dealing with the identification challenges of north-bound migrants from across Latin America.

"Different banks took different approaches, making it difficult for migrants to receive funds from international aid organizations during their time in Mexico," explains Casada. "We had to amend our regulations to allow banks to use national passports issued by different countries."

Regulatory calibration is the way forward, he added, pointing out how modifications to accept foreign passports in the country has allowed Mexican citizens to do digital onboarding to use financial services abroad, too.

Seeking synergies

In Brazil, government statistics show about 85–90 per cent of the population possessing an identity document, says central bank official Adriano Sekita. This still leaves millions in the country without ID of any kind – and thus lacking access to any financial services or social assistance.

Still, Sekita notes an uptake in Brazil's offering of digital financial services lately.

"The number of digital banks and fintechs (financial technology companies) authorized by the central bank has increased overall," he observes. This makes e-KYC ("know your customer") and other digital onboarding services increasingly essential at local banks and financial service establishments.

"Different banks took different approaches, making it difficult for migrants to receive funds from international aid organizations during their time in Mexico."

Antonio Casada

Vice President of Regulatory Policy, National Securities and Banking Commission, Mexico

"The number of digital banks and fintechs authorized by the central bank has increased overall."

Adriano Sekita

Supervisor, Central Bank of Brazil

The latest regulations enable new types of institutions to engage fully the in financial sector. Stiffer competition and more diverse financial products translate into greater financial inclusion, Sekita says.

Stronger links are needed between regulators and the public and private sectors, while the central bank must further improve its governance framework, he adds. "We have not yet fully engaged in partnerships to build new solutions in a collaborative way, and have not benefitted yet from potential synergies."

Private sector insights

Jorge Arbesu-Cardona, Senior VP of Cyber and Intelligence Solutions at Mastercard Latin America, takes a broader view, raising the question of how to standardize a global, reusable digital ID. Standardized data inputs are just like the information fields found in a physical passport, Arbesu-Cardona suggests.

Smartphone data could form another part of the answer — assuming users will agree to share and validate their information through biometric rather than physical authentication.

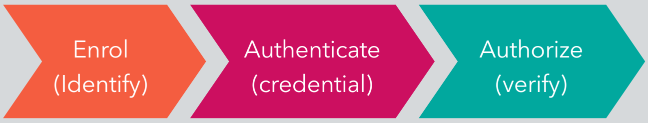
But how can financial providers keep personal data safe? Companies experienced in encryption are pivotal in making the exchange of data secure. But being entrusted with customers' data is not entirely new. Major credit card brands perform billions of such transactions daily, Arbesu-Cardona notes.

The government of Panama, for instance, has partnered with Mastercard to align technology acquisition with key digital priorities, from disbursement of social programmes to anti-money-laundering (AML) and financial crime intelligence. Digital ID relates to all these components for a country of nearly 4.5 million people.

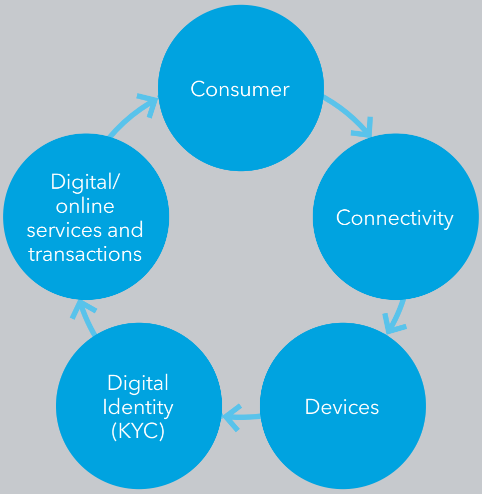
Despite this relatively small population, Panama forms a major hub for international trade, travel and migration. Just like in Mexico, digital ID will be pivotal to ensure financial inclusion for incoming migrants, Arbesu-Cardona says.

Smartphone data could form another part of the answer.

Idenfification process



Circle of requirements for online transactions



Source: Digital identity in the ICT ecosystem, ITU

Balancing integrity and inclusion

Ease of access must always be weighed carefully against complex procedural requirements to protect the banking and financial system as a whole.

"Balancing the needs of integrity and inclusion is a key question," says Fredes Montes, Senior Financial Specialist at the World Bank Group. While these two considerations are not mutually exclusive, one can come at the cost of the other.

> *Balancing the needs of integrity and inclusion is a key question.*
>
> Fredes Montes
>
> Senior Financial Specialist, World Bank Group

The digital ID toolkit found in the G20 Digital Identity Onboarding report, coordinated by the World Bank Group, should help not only to design inclusive national policies, but also to implement them in practical ways, with sufficient consumer protection and financial risk mitigation, says Montes.

In Casada's view, the toolkit will help authorities across Latin America identify key policy aspects necessary to scale up digital ID use, becoming a "valuable guideline to strike the right balance."

Whichever way countries decide to use the toolkit, adds Arbesu-Cardona adds, "the bridge between digital [uptake] and financial inclusion will be some sort of digital identification."

Note: This article is based on a panel discussion during the 2021 Financial Inclusion Global Initiative (FIGI) Symposium.

Play the session recording.

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Knowing your customer electronically: Guidance on digital ID acceptance

KYC verification tools are also moving online to keep pace.

Know your customer (KYC) regulations are designed to ensure that providers of financial services know their customers' identities, the risks attached to providing services to different customers, and that customers are using services for legitimate purposes.

KYC regulations play a key part in combatting money laundering and the financing of criminal activity.

But with more and more users taking up financial services online, KYC verification tools are also moving online to keep pace.

The Financial Action Task Force (FATF), the global money laundering and terrorist financing watchdog, has developed technology-neutral guidance to help governments, financial institutions, virtual asset service providers and other regulated entities determine whether a digital identifier is sufficient for KYC or due diligence purposes. Digital IDs, like any form of identification, must confirm your customers are who they say they are.

Dependable digital verification

According to FATF, reliable digital IDs can make individual customer verification easier, cheaper and more secure. They can also help providers meet transaction monitoring requirements, and largely avoid risks of human error.

"We highlight the benefits of digital ID in terms of reducing costs, increasing convenience to the consumer, but also to the private sector, whilst not compromising on security," says Shana Krishnan, Policy Analyst at the FATF Secretariat.

With systems evolving rapidly, FATF advises governments, financial institutions and other stakeholders to understand the assurance level possible with each ID solution and then assess the reliability of any given technology and governance combination to monitor transactions and detect illicit financing.

The risk-based approach

FATF cautions against a one-size-fits-all approach to KYC, recommending a risk-based approach tailoring KYC measures to the risks associated with different customers. "A risk-based approach impacts the intensity and the extent to which customer and transaction information is required and the mechanisms we use to ensure that these [FATF] standards are met," says Krishnan.

The best systems can simultaneously strengthen customer due diligence (CDD) and broaden financial inclusion, according to FATF.

Risk-based approaches are intended to ensure that low-income users are not excluded from accessing financial services – an overly rigid approach to CDD and electronic KYC verification could effectively exclude many would-be banking and finance customers, points out Fredes Montes, Senior Financial Specialist at the World Bank Group (which has FATF observer status).

"We highlight the benefits of digital ID in terms of reducing costs, increasing convenience to the consumer, but also to the private sector, whilst not compromising on security."

Shana Krishnan

Policy Analyst, FATF Secretariat

Everywhere, the rapid growth of digital financial transactions requires a better understanding of how individuals can be identified and verified. Different countries are taking different approaches to national identity infrastructure and electronic KYC regulation.

Learn more from FATF.

eKYC regulation in Bangladesh

Bangladesh has adopted basic biometric fingerprint and face recognition, hosts financial services on local servers, and encourages two-factor and multi-factor authentication and e-signature use.

"The digital KYC regulation guidelines in Bangladesh recommend a risk-based and threshold approach," explains Masud Rana, Joint Director of the Bangladesh Financial Intelligence Unit.

The government recently introduced Porichoy, which enables financial organizations, online businesses, financial technology (fintech) companies and government entities to digitally onboard their customers or partners via an instant application programming interface.

While the national identity database is accessible only to financial institutions and government agencies, Porichoy is open to all government agencies, banks, financial institutions and fintech companies, explains Rana.

With relatively limited products and services, the country needs relatively low electronic KYC regulation. But flexibility is essential to ensure financial inclusion.

"If a person does not have an ID card or digital ID, they can obtain a certificate from the public service and can open a low-risk account," Rana says.

If a person does not have an ID card or digital ID, they can obtain a certificate from the public service and can open a low-risk account.

Masud Rana

Joint Director, Bangladesh Financial Intelligence Unit

eKYC regulation in Jordan

Jordan's government has started to build a unified digital identity solution to give all citizens reliable, verifiable ID for multiple services, not only in the financial sector, explains Mohammed Al-Duwaik, Head of Digital Financial Services at the Central Bank of Jordan.

"Any government-approved identity is going to be stronger and more reliant for financial institutions than a non-government approved one," said Al-Duwaik.

While Jordan's regulations also encourage a risk-based approach, "each financial institution, given their differences, needs to understand their own products and clients," says Al-Duwaik.

The Central Bank of Jordan allows service providers to come up with solutions for risks and then come to the regulator as needed for additional guidance.

Each financial institution must make sure it knows its clients and that they have answered the relevant questions and provided suitable documentation.

Any government-approved identity is going to be stronger and more reliant for financial institutions than a non-government approved one.

Mohammed Al-Duwaik

Head of Digital Financial Services,
Central Bank of Jordan

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Play the session recording.

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Policy challenges and approaches to innovative fintech

Innovations in fintech have the potential to make financial services more secure, convenient, and affordable.

From settling up with friends after a group holiday to buying groceries online, digital payments and open banking are changing how payments are made.

Innovations in fintech – or financial technology – have the potential to make financial services more secure, convenient, and affordable.

Now that COVID-19 has accelerated the shift to digital payments, authorities overseeing financial services and digital technologies must come together to set up proactive, strategic, inclusive policy frameworks for rapidly evolving services.

Beyond banks

Payments used to be bundled into the services provided by banks. Today, standalone payment products are offered by newcomer fintech providers and not just banks, noted Dorothée Delort, Senior Financial Infrastructure Specialist at the World Bank Group, during a Financial Inclusion Global Initiative (FIGI) Symposium panel session.

"Thanks to innovations like mobile wallets, super apps combined with fast payment, APIs (application programming interfaces) and other technologies, consumers find it more convenient and less costly to make and receive digital payments while enjoying a smoother user experience," she said.

Prepaid accounts and mobile wallets have also changed how payment services are linked. "E-money was revolutionary and led to the creation of a new payment instrument, the e-money transaction, which could better meet the needs of certain customer segments."

Even more importantly, e-money opened the market of payment services to non-banks and different business models, Delort added.

Fast payments have emerged as a boon for merchants, allowing immediate settlement for products sold via e-commerce and social networks, without the need to integrate expensive payment gateways.

Another innovation, QR (quick response) code technology, "leverages the mobile phone both as a payment-initiation device and a transaction-accepting device," said Delort.

But for QR schemes to scale, it is important that digital financial service providers lay a foundation for interoperability, with Delort noting that shortcomings in interoperability are impeding the scalability of most QR schemes.

"Thanks to innovations like mobile wallets... consumers find it more convenient and less costly to make and receive digital payments..."

Dorothée Delort

Senior Financial Infrastructure Specialist, World Bank Group

Challenges for central banks

Payments can also be a source of data, which banks and fintechs alike can use to differentiate themselves against competitors and provide related products and services.

But they are not the only ones – leading global tech firms have entered the payments sector, too. While their arrival increases competition and expands the ecosystem, said Delort, she also noted the importance of considering risks of renewed concentration of market power and the emergence of oligopolies.

Shifts like these also pose challenging questions to central banks as the main overseer, regulator, supervisor, and catalyst for changes in payment systems, she added. For example, careful consideration is needed about digital currencies and their potential impact on the financial sector.

Central banks are stepping up by modifying their oversight and supervision procedures to accommodate fast payments.

Amid heightened innovation and competition, banks are also building cyber resilience and working to ensure consumer and data protection.

Delort highlighted the need for increased coordination and maintaining proportionate, risk-based regulatory frameworks that foster innovation. "Industry-level infrastructure is also critical for innovation and continued efficiency gains," she said.

"Industry-level infrastructure is also critical for innovation and continued efficiency gains."

Dorothée Delort

Senior Financial Infrastructure Specialist, World Bank Group

Access to open banking

Open banking enables third parties to use open APIs to develop financial applications and services around financial institutions, with third parties including companies like payment initiators and account information service providers. Data aggregators have also recently emerged as so-called "fourth-party service providers" noted Fredes Montes, Senior Financial Specialist, World Bank Group.

Open APIs have become the common method to support open banking, but they can be costly to deploy and may lack the flexibility to meet some institutions' needs.

Banks aiming to support open banking, Montes said, need to develop an API infrastructure, but this takes time and resources. Fintech – although less subject to regulatory burdens – can pose a compliance risk. Setting up consumer consent mechanisms is another tricky area to navigate.

Access to open banking must be organized, structured, and secure with clear overall governance guidelines, she said, adding that regulations and standards can help harmonize data collected from different entities.

Yet this raises new questions about oversight and coordination, establishing clear rights to access for third-party providers, and accreditation for fourth-party providers, Montes noted. "How are authorities going to manage all these data flows in terms of sharing, storage and security?"

Montes highlighted data privacy as another crucial factor. Multiple authorizations could increase concerns about hidden bias and the potential risk of exclusion for underserved groups and individuals.

> *"How are authorities going to manage all these data flows in terms of sharing, storage and security?"*
>
> Fredes Montes
>
> Senior Financial Specialist, World Bank Group

Big data, machine learning, consumer protection and privacy

Read the FIGI Symposium Security, Infrastructure and Trust Working Group report.

Download here.

Note: This article is based on a panel discussion during the 2021 Financial Inclusion Global Initiative (FIGI) Symposium.

Play the session recording.

Effective regulation for digital transformation

By Doreen Bogdan-Martin, Director,
ITU Telecommunication Development Bureau

In times of digital transformation, more than ever, regulation has to be practical, proportionate and fit-for-purpose.

Doreen Bogdan-Martin

Director,
ITU Telecommunication Development Bureau

What are the results of more than a year of working and learning from home?

For some of my friends, it's been improved cooking skills thanks to online tutorials, gaining new proficiency with digital technologies or simply spending more time with immediate family. For me, it's been a little bit of the above together with a desktop full of online webinar backgrounds from the many great programmes and initiatives hosted by the International Telecommunication Union (ITU) and partners.

One thing is for sure: none of this would have been possible without the swift and effective work of global information and communication technology (ICT) regulators. When the pandemic broke out last year, I worked with many of them directly through ITU's #REG4COVID platform to ensure global resiliency and keep networks operational despite the sudden surge in demand.

But robust regulation matters not just in times of crisis. In times of digital transformation, more than ever, regulation has to be practical, proportionate and fit-for-purpose. This year's edition of the Global Symposium for Regulators, GSR-21, promoted a crucial long-term theme: "Regulation for digital transformation – Accelerating inclusive connectivity, access and use".

Mercy Wanjau, Acting Director-General of the Communications Authority of Kenya, was our chairperson for GSR-21 and associated consultation on Best Practice Guidelines for ICT regulators.

In leading these crucial discussions, she brought unique insights on the role of regulators in ensuring inclusive digital transformation. According to ITU's "G5 Benchmark", Kenya's collaborative, harmonized, forward-looking regulatory frameworks sets it on the path towards fifth generation (G5) regulation.

Collaborative leadership

Discussions at GSR-21 highlighted the need for collaborative leadership and approaches to ensure trust in a digital space; connectivity and regulatory enablers for digital transformation; financing to achieve affordable connectivity, meaningful access, and use; safe digital inclusion; and partnerships for digital transformation.

Ms Wanjau also helmed a new format, adapted to the times. This year's GSR consisted of a series of interconnected virtual events, intended to facilitate discussions of regulatory perspectives, challenges and innovative solutions first at the regional level, prior to the main global sessions in June. This new format aimed to boost inclusion and increase the participation of the global regulatory community in the critical discussions that have made GSR such an important platform since 2000.

"This new format aimed to boost inclusion and increase the participation of the global regulatory community in the critical discussions that have made GSR such an important platform since 2000."

In addition to her region's key role at GSR-21, Africa is also set to host the next World Telecommunication and Development Conference (WTDC), the decision-making conference for the ITU Telecommunication Development Bureau (BDT) that directs the course of our activities over the next four years. Regulatory discussions are fully integrated into preparations for WTDC, with GSR's traditional Leadership Debate becoming a stop on the Road to Addis, as we have dubbed the run-up to our flagship development conference.

Regulation: Africa in focus

In fact, the regulatory market in Africa is evolving more than in any other region of the world. Today, nearly two thirds of African countries have either a national overarching policy or an ICT master plan – up from just over one third five years ago, according to ITU's latest Digital Trends in Africa report.

With the right regulatory policies in place, Africa can create certainty, build economies of scale, and attract massive infrastructure investment. Such developments would be good news for the over 70 per cent of Africans who are still not using the Internet due to a lack of affordability, skills or reliable access.

"Beyond highlighting common challenges, the symposium provided a unique platform to build and strengthen inter-regional bridges in line with European Union and African Union priorities."

Harmonized regional approaches

The GSR-21 Regional Regulatory Roundtable for Europe and Africa, held virtually on 14 April, hosted around 30 speakers, mainly from regional and national regulatory associations, and attracted over 560 participants. Beyond highlighting common challenges, the symposium provided a unique platform to build and strengthen inter-regional bridges in line with European Union and African Union priorities.

The harmonization of regulatory approaches has served to accelerate digital transformation across Europe. Both EU and non-EU countries have started creating the conditions to attract investment in meaningful connectivity. This means preserving competition while fostering ICT innovation, even in times of COVID-19. Europe has become a source of inspiration for many regulatory authorities, and I would like to encourage stronger efforts to build digital bridges between Africa and Europe, as well as to other regions.

Regional regulatory dialogues continued from April to June (read more in next article), enhanced by a new #REG4COVID report and country case studies and a new study on financing universal access and services.

"The regulatory market in Africa is evolving more than in any other region of the world."

Ongoing engagement

These critical discussions guide us as we seek to build back better following the pandemic. I invite everyone to join us for this important journey. Only by thinking and working together will we find solutions to these difficult and yet common challenges.

The next edition of the ITU News Magazine will feature more about GSR-21.

GSR-21: Tackling global challenges at the regional level

Regional experts met ahead of the 21st Global Symposium for Regulators.

Although we often talk about issues of a global nature, such as the COVID-19 pandemic or the global digital divide, each region faces distinct challenges in tackling them. Information and communication technology (ICT) regulation is no different.

Ahead of the latest Global Symposium for Regulators, GSR-21, regional experts met to discuss specific regulatory and economic challenges and identify key regulatory priorities at the regional level. Those discussions contributed to the GSR Best Practice Guidelines 2021 released in late June.

The month also included dedicated regional regulatory roundtable and regional economic dialogue events for three major world regions.

Here are some key outcomes from the regional level:

Arab States

The Regional Regulatory Roundtable for the Arab States highlighted collaborative regulation for inclusive connectivity – "The G5 regulation" – and noted the main outcomes of a new report, ICT Competition Policy, Regulation and Analysis in a Digital Apps Environment in the Arab and Africa Regions. The report highlights traditional regulatory issues and the impact of digital transformation across the region, providing direction for the regulatory road ahead. It includes a comprehensive checklist of emerging regulatory priorities and several recommendations for regional action.

The Regional Economic Dialogue shed light on economic and financial aspects, along with models for the emerging digital ecosystem. Participants discussed advances in regulatory costing and pricing strategies in the digital era, shared impact stories from least-developed countries (LDCs), and considered key policies, regulations, and economic approaches for digital transformation in the region.

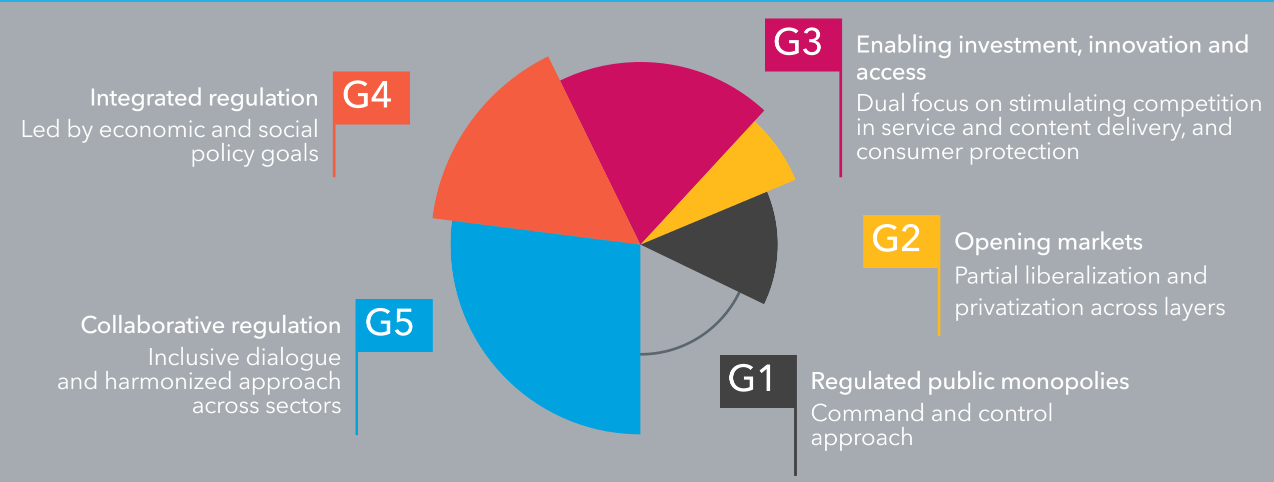
Asia and the Pacific

Regulatory roundtable and economic dialogue sessions for Asia and the Pacific focused on the GSR Best Practice Guidelines; a regulatory uplift for financing digital infrastructure, access and use; fifth-generation collaborative regulation; incentives to foster affordable ICT services by promoting investment in meaningful connectivity; economic and financial approaches in the digital ecosystem; effective partnerships to advance connectivity and achieve the United Nations Sustainable Development Goals (SDGs) for 2030; and policies and regulations for critical technologies of the future.

The Regional Regulatory Roundtable for the Arab States highlighted collaborative regulation for inclusive connectivity.

Regulatory roundtable and economic dialogue sessions for Asia and the Pacific focused on the GSR Best Practice Guidelines.

Five generations of regulation



Source: ITU

At an executive roundtable on 8 June, heads and senior officials of national regulatory agencies and ICT ministries grappled with regional policy and regulatory challenges. At another session, Telecommunication Development Sector Members at the International Telecommunication Union (ITU) spoke candidly with academics about the challenges facing the ICT sector, particularly in relation to connectivity.

Regulatory roundtable and economic dialogue sessions for the CIS region centred on successive generations of ICT regulation.

Commonwealth of Independent States

ICT innovation is outpacing regulation, with the COVID-19 pandemic further accelerating this trend. For countries to bridge this gap, their policy-makers need to understand the global nature of technological progress, participants from the Commonwealth of Independent States (CIS) region agreed. This means continually exchanging best regulatory practices. Still, national policies and regulations remain crucial to establish effective mechanisms.

Regulatory roundtable and economic dialogue sessions for the CIS region centred on successive generations of ICT regulation; gave an overview of digital regulation tools; highlighted applicable economic policies, along with methods to determine the costs of services related to national telecommunication/ICT networks; and outlined key reports and publications on economics and finance in the field of telecommunications and ICTs from the ITU Telecommunication Development Bureau.

CIS countries exchanged best regulatory practices and learned about further discussions coming up in ITU's development sector.

Regions inform global picture

Discussions from ITU's six regions spanning the globe culminated in core GSR-21 sessions held from 21 to 25 June.

Learn more about GSR-21


Roman Lopez via Unsplash

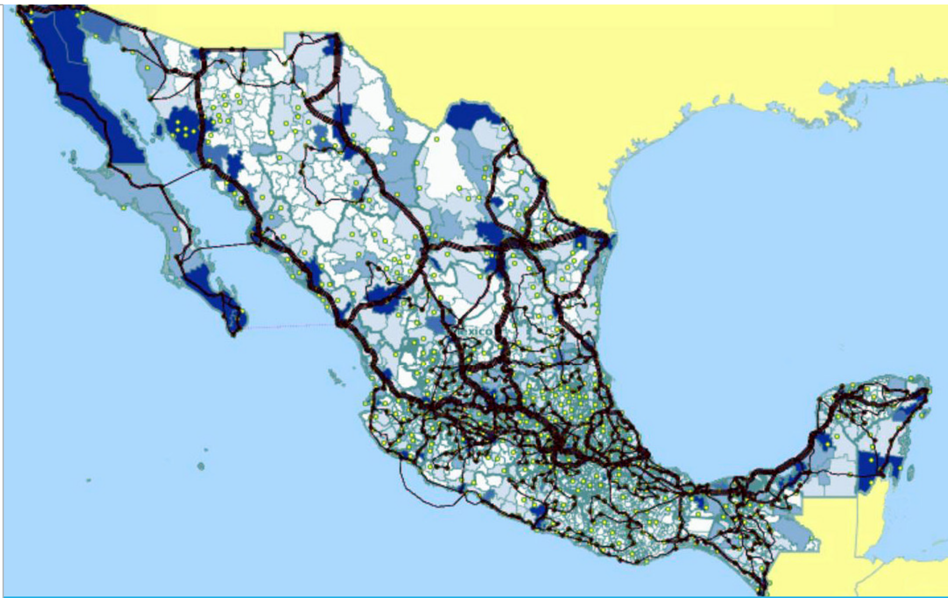
Mapping ICT infrastructure and financial inclusion in Mexico

By Vladimir Daigele, Programme Officer, ICT Infrastructure, ITU

Can you imagine what life would be like without a bank account? This is the daily reality of more than 1 billion "unbanked" adults worldwide.

Access to transaction accounts clears a path to broader financial inclusion, meaning people and businesses can make financial transactions more efficiently and safely. That could look like accessing funds more easily, making payments more securely, building credit, accumulating savings, investing in the future, or coping with economic shocks.

No matter the financial goal, access to a transaction account is a crucial first step that enables participation in the digital economy and is a critical building block for digital development.



The ICT infrastructure and financial inclusion map interface is an interactive web application built entirely using open-source software, tools and web mapping utilities.*

Tracking this and other forms of financial inclusion just got easier in Mexico.

Vladimir Daigele

Programme Officer, ICT Infrastructure, ITU

Tracking this and other forms of financial inclusion just got easier in Mexico. Thanks to a new interactive map* built using open-source tools, it is now possible to visualize the gaps and pinpoint prominent barriers to financial connectivity across the country.

Built upon the ITU Broadband maps, the map interface contains a series of layers that can be used to analyse financial inclusion at the municipal and national scales. It also contains a variety of sources to show how connectivity to financial services varies across the country.

Mapping financial inclusion in Mexico

A step-by-step guide on how to use the map can be found here.

**DISCLAIMER: The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of ITU and the Secretariat of the ITU concerning the legal status of the country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.*

Mapping gaps and opportunities: Cross-sectoral collaboration on the ground

This interactive tool designed to support geospatial analysis of financial inclusion was developed in close collaboration with the Federal Telecommunications Institute (IFT) in Mexico.

According to Juan Carlos Hernandez Wocker, General Coordinator of International Affairs at IFT, the Financial Inclusion Global Initiative (FIGI) enabled several Mexican authorities to work together to collect the information necessary for the map's development, highlighting the importance of cross-sectoral collaboration.

"Thanks to cross-sectoral collaboration, it will be possible to continue working in favour of digital financial inclusion, and thus contribute to the well-being of the entire population, especially vulnerable groups, through the construction, consultation, interpretation and analysis of geo-referenced geographic and statistical information that will help the decision-making process regarding public policies and digital services," said Wocker.

In keeping with its Annual Work Program, IFT will continue working with ITU to "encourage the development and efficient use of infrastructure in the telecommunications and broadcasting sectors," he said.

"Thanks to cross-sectoral collaboration, it will be possible to continue working in favour of digital financial inclusion."

Juan Carlos Hernandez Wocker

General Coordinator of International Affairs, IFT, Mexico

One step closer to universal financial inclusion

Financial inclusion is a critical enabler for poverty reduction and inclusive growth and relies on access to ICT infrastructure.

Universal financial inclusion is the main aspiration of FIGI. Led by ITU, the World Bank Group and the Committee on Payments and Market Infrastructures, and with financial support from the Bill & Melinda Gates Foundation, FIGI is a three-year programme of collective action to advance research in digital finance and accelerate digital financial inclusion.

Part of ITU's mandate as part of FIGI is the delivery of implementation solutions, including deep topical analyses and practical investigations, all working towards the goal of universal financial access.

In addition to Mexico, the initiative is currently funding national implementations in China and Egypt.

More financial inclusion solutions coming from ITU

Stay tuned for future developments from the ITU team working on digital financial inclusion, including a beta GIS application to implement the concept of a Financial Connectivity Index, and a cost estimation tool for network deployment.

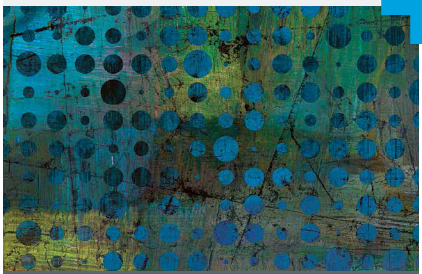
Also on the way are geo-based financial inclusion indicators for supporting ICT infrastructure decisions and creating bigger impact on the ground.

Solutions like the *ICT Infrastructure and Financial Inclusion Map Guide for Mexico* are being developed by the ITU Telecommunication Development Sector (ITU–D) in a way that can be easily used by other ITU members to extend reliable connectivity to all.

Expanding financial inclusion through electronic payments

The COVID-19 crisis has changed how people make their day-to-day transactions. Yet in a dynamic system reliant on secure applications and services, experts are working to balance the safety of electronic payments with the need to include all kinds of users, representing every socio-economic group.

In many developing countries, large segments of society have until now remained largely excluded from the benefits of bank accounts and other financial services. Electronic payments — and attractive opportunities to make use of them — are a key part of the puzzle when it comes to the inclusion of small merchants and consumers in the formal financial system.



Read the Electronic Payment Acceptance Incentives report developed by FIGI's working group on the topic led by the World Bank Group.

Electronic payment intermediaries – such as payment facilitators, bill aggregators and payment gateways – process payments across a wider range of channels than has ever been available before. Think mobile phones and e-commerce websites as the main payment channel for today's small-scale business or customer.

Growth opportunity

Merchants' uptake paves the way for growing numbers of consumers to make payments electronically. According to a 2020 World Bank Group report, payments made by individuals to micro, small and medium-sized retailers are estimated to amount to USD 18.8 trillion worldwide, but only 37 per cent are made electronically. For most countries, this represents an untapped opportunity.

In Mexico, accepting electronic payments overwhelmingly improved the lives and livelihoods of micro and small business owners, according to a study commissioned by Visa. Out of 750 owners surveyed during the COVID-19 pandemic, about three quarters reported increased monthly revenue and customer spending, said Amina Tirana, Visa's Head of Social Impact, Policy and Measurement, at the Financial Inclusion Global Initiative (FIGI) Symposium. "Among businesses that reported growth, average monthly revenue increased by 22 per cent since accepting digital payments."

For those businesses, payment-facilitator intermediaries provided solutions customized to their needs and, for three quarters of them, this was the very first time they had accepted electronic payments. As secure payment platforms keep getting more abundant and easier to use, businesses are increasingly likely to recommend electronic payments to their peers, added Tirana. More than a third of the businesses surveyed saw electronic payments as imperative to their resilience and recovery after COVID-19.

> *"Among businesses that reported growth, average monthly revenue increased by 22 per cent since accepting digital payments."*
>
> Amina Tirana
>
> Head of Social Impact, Policy and Measurement, Visa

Mobile access

Access to cheap mobile phones has nudged more merchants towards electronic payments, even drawing in unbanked small-scale vendors. With over 1.2 billion registered accounts and 300 million monthly active accounts globally, mobile money providers contributed significantly to the COVID-19 response in many markets, according to the State of the Industry Report on Mobile Money 2021, from the GSM Association, an industry association representing the interests of mobile network operators. The value of merchant payments over mobile money grew by 43 per cent last year, compared to 28 per cent the year before.

"The payment-as-a-platform business model for mobile money providers has resulted in a new acceptance ecosystem in the mobile space, relying on a range of intermediaries to ensure frictionless processing across multiple platforms," said Ashley Olson Onyango, Head of Financial Inclusion and AgriTech on the GSM Association's Mobile for Development team. The industry must continually assess the risks posed by electronic payments. These tend to be operational, such as "technology failure or delays, which may give rise to settlement delays and transaction backloads," Onyango noted.

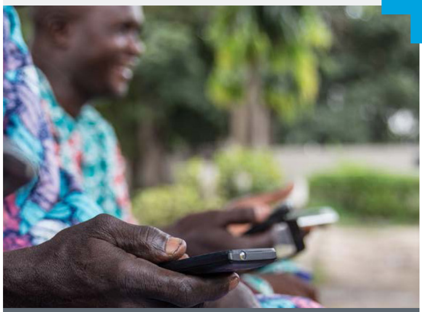
Cybersecurity and fraud prevention are vital to instil widespread trust. Additional due diligence is required to comply with regulations designed to counteract money laundering and terrorism financing. But at the same time, ease of access for customers and merchants is highly important, as is an assurance of secure transaction accounts and right of recourse when things go wrong.

"Merchants want immediate access to their funds, and consumers want immediate refunds during disputes," said Syed Sohail Javaad, Director of the Payment Systems Department at the State Bank of Pakistan.

"Merchants want immediate access to their funds, and consumers want immediate refunds during disputes."

Syed Sohail Javaad

Director, Payment Systems Department, State Bank of Pakistan



GSMA's State of the Industry report explores how the mobile money industry has embraced disruption and built resilience over the past year.

Read more here.

Regulatory questions

Pakistan's forthcoming electronic payment system, Raast, offers person-to-merchant transactions. With the system due for roll-out next year, the central bank is considering how to license and register electronic payment intermediaries. "The timing is very important," Javaad said. "Do we start registering them or licensing them at the initial stage, or do we wait and let their business grow and reach a certain threshold?"

Regulators are working with the payments industry to find an appropriate balance between regulatory controls and opportunities for electronic payment intermediaries to enter the market and innovate. A sustainable approach would encourage investment and innovation, while also accommodating continual redesigns to meet the evolving needs of merchants and customers, said Tirana.

User convenience also calls for interoperability among intermediaries – "but with only the necessary amount of information," she added in reference to the importance of security and privacy.

Ahmed Faragallah, Senior Financial Sector Specialist at the World Bank Group, outlined three main approaches central banks are taking to the regulation of intermediaries. First, regulations can be directly issued to intermediaries. Second, where payment schemes are licensing intermediaries that satisfy certain requirements, regulators can assess the adequacy of these requirements and call for alterations as appropriate. "The third approach is where the regulator applies regulations on the acquirer and then deals with the intermediaries as an outsourced service of the acquirer," he said.

Outsourcing institutions are liable for the actions of providers of outsourced services, noted Faragallah. As such, in the third scenario, the acquirer – banks as well as non-bank actors – conducts thorough due diligence on intermediaries. Javaad suggested the possibility of a hybrid approach, which could incorporate different regulatory components based on each country's needs.

> *"The third approach is where the regulator applies regulations on the acquirer and then deals with the intermediaries as an outsourced service of the acquirer."*
>
> Ahmed Faragallah
>
> Senior Financial Sector Specialist, World Bank Group

Note: This article is based on a panel discussion during the 2021 Financial Inclusion Global Initiative (FIGI) Symposium.

Play the session recording.

The basis for safer digital finance

By Bilel Jamoussi, Chief, Study Groups Department, ITU Telecommunication Standardization Bureau

All these technologies and systems must be reliable, secure and deserving of our trust.

Bilel Jamoussi

Chief, Study Groups Department, ITU Telecommunication Standardization Bureau

The transformations we are seeing in numerous fields – from energy and mobility to health care, agriculture, and financial services – all hinge on digital technologies, along with an array of associated business ecosystems. All these technologies and systems must be reliable, secure and deserving of our trust.

The Financial Inclusion Global Initiative (FIGI) is an open framework for collaboration led by the International Telecommunication Union (ITU), the World Bank Group, and the Committee on Payments and Market Infrastructures (CPMI).

Our partnership brings together the expertise to accelerate digital financial inclusion. With the support of the Bill & Melinda Gates Foundation, we have brought together the full range of stakeholders set to benefit from this expertise.

The World Bank Group and CPMI have helped to build a strong understanding of the policy considerations surrounding digital identity and incentivizing the use of electronic of payments.

ITU's work has focused on security, infrastructure and trust – secure financial applications and services, reliable digital infrastructure, and the resulting consumer trust that our money and digital identities are safe.

Our partnership brings together the expertise to accelerate digital financial inclusion.

No more secrets

Considering the prevalence of data breaches, the need for strong authentication is clear, with discussions in the industry often noting that "there are no secrets anymore."

New ITU standards for a universal authenticator framework (X.1277) and client-to-authenticator protocol (X.1278) are helping overcome the security limitations of the "shared secret" approach, the basis for the widely familiar username-password model of authentication.

Users can now authenticate locally to their device using biometrics, with the device then authenticating the user online with public key cryptography. With the new standards, users are asked to authenticate locally to their device only once, and their biometric data never leaves the device. This model avoids susceptibility to phishing, man-in-the-middle attacks, or other forms of attack targeting user credentials.

FIGI engagement helped to usher these specifications, first developed by the FIDO (Fast Identity Online) Alliance, into the ITU standardization process to stimulate their adoption globally. Authentication options consistent with X.1277 and X.1278 are now supported by most devices and browsers on the market.

"With the new standards, users are asked to authenticate locally to their device only once, and their biometric data never leaves the device."

Fortifying a walled garden

In developing countries, digital financial services are often provided over Signalling System No. 7 (SS7) – a legacy network protocol standardized by ITU in the late 1970s. SS7 enables all network operators to interconnect and looks sure to remain in use for years to come.

But security was not considered in its design. SS7 was designed as a walled garden. Entry to the SS7 network was intended to be highly regulated, with only trusted network operators being granted access. Unfortunately malicious actors have since found various ways to get hold of the keys, especially since some of the initial design and deployment assumptions were no longer valid with the introduction of deregulation, voice over IP, and mobile networks.

FIGI has worked to raise awareness about SS7's security vulnerabilities and associated mitigation techniques. As the need to mitigate these vulnerabilities increases, network operators can look to ITU's new Q.3057 standard outlining signalling requirements and architecture for interconnection between trustable network entities. This is another standard rooted in FIGI discussions.

"As the need to mitigate these vulnerabilities increases, network operators can look to ITU's new Q.3057 standard."

Reliable, widely available connectivity

Trust in digital financial services is also acutely affected by the reliability and availability of connectivity. Network downtime and transaction failures resulting from dropped connections can erode the trust of consumers and merchants in digital financial services.

Investment in digital infrastructure must continue, with the industry adopting meaningful, widely accepted benchmarks for service quality. ITU standards specify the route towards reliable, interoperable network infrastructure, and they provide a wide range of tools to assess the performance and quality of the services running over this infrastructure.

FIGI highlighted the demand for service quality indicators specific to digital financial services. With the expertise on hand at ITU, we have delivered new standards describing key quality considerations for digital financial services (ITU G.1033) and a methodology to assess the quality of user experience (ITU P.1052).

Security across the value chain

Every industry player involved in providing digital financial services has to be concerned about security risks. Security is only as strong as its weakest link, and innovation in digital finance continues to extend the length and increase the complexity of the underlying value chain.

Secure digital finance calls for coordinated defences that are attuned to evolving security threats. A key FIGI report outlines the security assurance framework needed to achieve this for each actor in the digital finance value chain.

The best practices suggested by the framework could form the basis for a safer business ecosystem. They reflect the needs of everyone involved, from customers to network operators and digital finance providers, right through to third-party providers interfacing with the financial system.

"FIGI highlighted the demand for service quality indicators specific to digital financial services."

The DFS Security Assurance Framework

This report provides an overview of the security threats and vulnerabilities facing DFS providers.

Download here.

Join us in building trust

ITU's new Security Lab for Digital Financial Services (see next article) offers tests addressing the security of mobile payment applications running over legacy as well as cutting-edge network infrastructure. It is certain to provide valuable support to regulators and industry players, both in bringing greater consistency to personal data protection and in ensuring the integrity and confidentiality of our transactions.

Other FIGI reports address topics from the security dimensions of blockchain to the privacy implications of the growing use of machine learning to automate credit decisions based on alternative data, such as your airtime purchases and mobile money transactions.

Digital technologies promise to become the key unifying force for banking systems worldwide. But advances in technology must be matched with sound policy and interoperable technical standards. Only then can the digital transformation in finance make life better for everyone around the world.

"Advances in technology must be matched with sound policy and interoperable technical standards."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ITU hosts new security lab for digital financial services

A new security lab set up at the International Telecommunication Union (ITU) under the Financial Inclusion Global Initiative (FIGI) will support regulators and innovators in ensuring the security and resilience of financial applications and enabling infrastructure.

FIGI supports national policy reforms to stimulate financial inclusion and leads research to build trust in digital financial services (DFS).

The DFS Security Lab is a product of FIGI's Working Group on "Security, Infrastructure and Trust".

The lab provides a structured approach to security audits of DFS applications. This structured approach targets greater consistency in the implementation of controls to protect personal data and the integrity and confidentiality of financial transactions.

DFS Security Lab

The lab provides resources for conducting security audits and tests for digital financial services applications.

Learn more here.

Four main objectives

The lab will support government and industry in assessing compliance with established best practices in DFS security, establishing a security baseline for DFS applications, and adopting interoperable authentication technologies. It will also organize clinics for security professionals to exchange knowledge and stay up to date with the evolution of security risks and associated mitigation techniques.

The lab will provide:

- Guidance to regulators in assessing the security of DFS infrastructure and conducting security audits of DFS applications.
- Mechanisms for threat-intelligence sharing.
- Guidance on implementing international standards for DFS security.
- Assessments of cybersecurity preparedness across DFS value chains.

DFS security from 2G to 5G

The tests offered by the lab address the security of DFS applications running over legacy as well as cutting-edge network infrastructure.

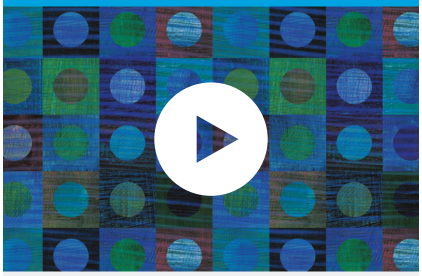
Tests for DFS apps based on unstructured supplementary service data (USSD) and SIM toolkit (STK) include: Simulating man-in-the-middle attacks on STK; testing susceptibility to binary over-the-air attacks; testing remote USSD execution attacks, and SIM clone testing.

Tests for Android DFS apps are based on the Top 10 mobile risks from the Open Web Application Security Project (OWASP), addressing the following attack points:

- Improper platform usage.
- Insecure data storage.
- Insecure communication.
- Insecure authentication.
- Insufficient cryptography.
- Code tampering.

FIGI video interviews

Listen to participants at the online 2021 FIGI Symposium.



For more information on the lab's services, contact dfssecuritylab@itu.int.

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