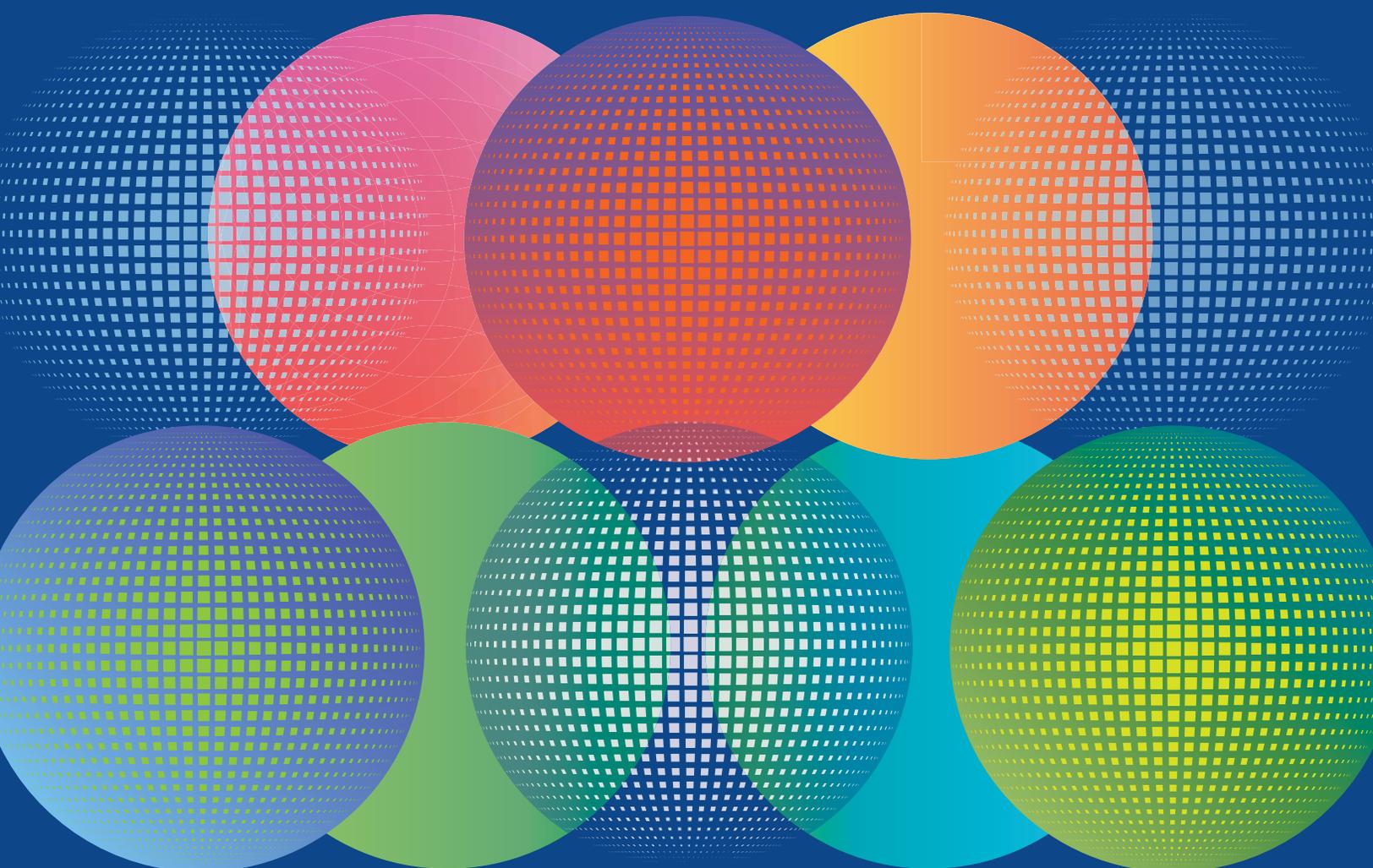
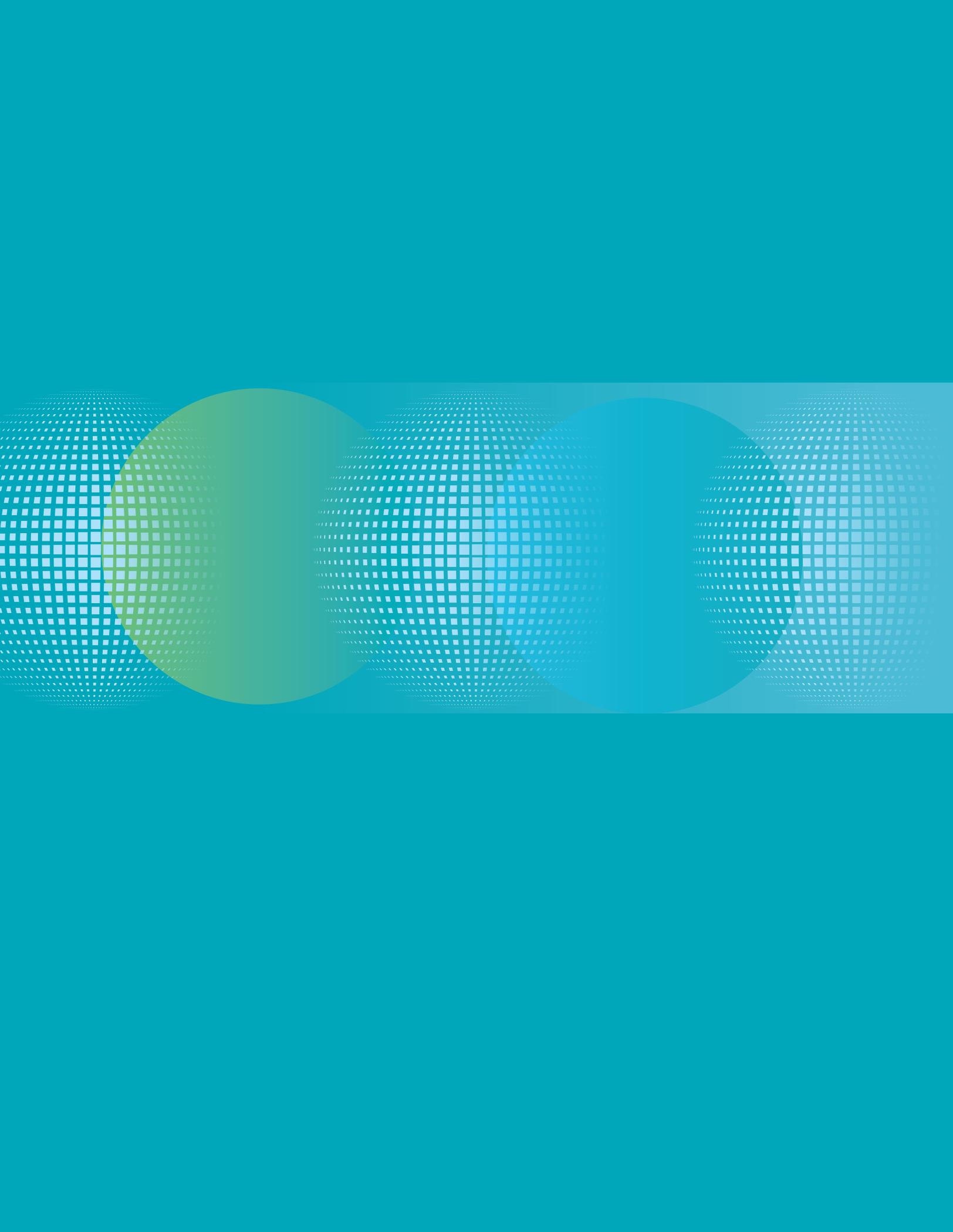


# Implementation Guide for the G20 High-Level Principles for Digital Financial Inclusion

(PRINCIPLES 1–6)

SEPTEMBER 2022



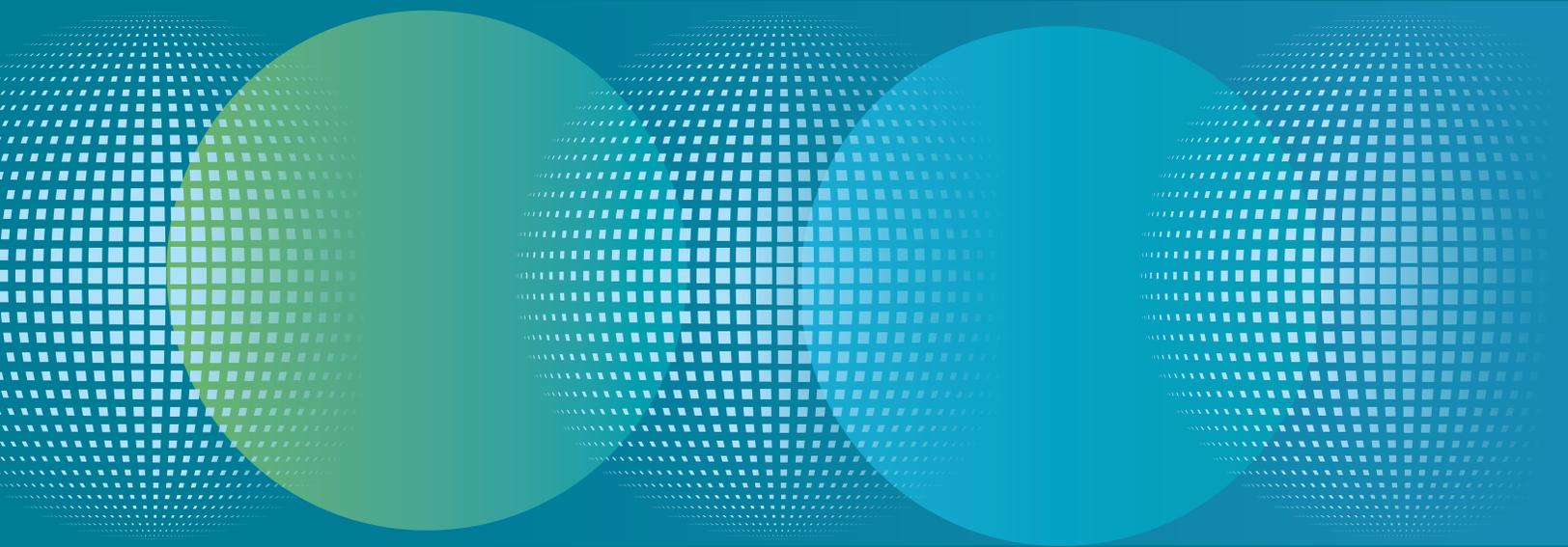


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SEPTEMBER 2022



A decorative graphic consisting of three overlapping circles in shades of green and blue, set against a background of a fine grid pattern. The circles are positioned horizontally across the upper half of the page.

This Implementation Guide for the G20 High Level Principles for Digital Financial Inclusion (Principles 1-6) has been jointly prepared by the staff of the Better Than Cash Alliance, Consultative Group to Assist the Poor, Organisation for Economic Co-operation and Development and The World Bank for the G20 Global Partnership for Financial Inclusion.

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## Acronyms and Abbreviations

AFI	Alliance for Financial Inclusion
AI	artificial intelligence
AML/CFT	anti-money-laundering/countering the financing of terrorism
API	application programming interface
B2G	business to government
BIS	Bank for International Settlements
BTCA	Better Than Cash Alliance
CBDC	central bank digital currency
CDD	customer due diligence
CFI	Center for Financial Inclusion
CGAP	Consultative Group to Assist the Poor
CGD	Center for Global Development
CPMI	Committee on Payments and Market Infrastructures
DFS	digital financial services
DLT	distributed ledger technology
EMDE	emerging market and developing economy
FATF	Financial Action Task Force
FinCoNet	International Financial Consumer Protection Organisation
FSB	Financial Stability Board
FSI	Financial Stability Institute
G2P	government to person
GPFI	Global Partnership for Financial Inclusion
HLP	High-Level Principle
IADI	International Association of Deposit Insurers
IAIS	International Association of Insurance Supervisors
ICCR	International Committee on Credit Reporting
ICT	information and communications technology
IFC	International Finance Corporation
IMF	International Monetary Fund
INFE	International Network on Financial Education
IOSCO	International Organization of Securities Commissions
ITU	International Telecommunication Union
ITU-T	ITU Telecommunication Standardization Sector
KYC	know your customer
ML	machine learning
MSME	micro, small, and medium-sized enterprise
NFIS	national financial inclusion strategy
OECD	Organisation for Economic Co-operation and Development
P2G	person to government
P2P	peer to peer
POS	point of sale
PSP	payment service provider
SME	small and medium-sized enterprise
UNCDF	United Nations Capital Development Fund
UNSGSA	United Nations Secretary-General's Special Advocate for Inclusive Finance for Development



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## Executive Summary

Digital financial inclusion is a key priority topic for the Global Partnership for Financial Inclusion (GPFI), based on its potential to expand financial access and inclusion globally. This sustained focus has generated key guidance, such as the [High-Level Principles \(HLPs\) for Digital Financial Inclusion](#) in 2016, the G20/GPFI report [Digital Financial Inclusion: Emerging Policy Approaches](#) in 2017, and the [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#) in 2020. Each of these GPFI deliverables has been aimed at driving the adoption of trustworthy digital financial services (DFS) and products to achieve financial inclusion goals, as well as the related G20 goals of inclusive growth and increasing women's economic participation.

This implementation guide for the [High-Level Principles \(HLPs\) for Digital Financial Inclusion](#) builds on the GPFI's work and aims to provide practical guidance on effective implementation of the HLPs. The guide is for policy makers from countries in various stages of development. The guide dedicates individual chapters to HLPs 1–6 and emphasizes practical “how-to” approaches and replicable examples of good practices, as well as highlighting potential risks. Each chapter also features additional resources that policy makers can consult on that topic.

**HLP 1: Promoting a Digital Approach to Financial Inclusion:** Promote DFS as a priority to drive the development of inclusive financial systems, including through coordinated, monitored, and evaluated national strategies and action plans. The following activities are key for implementation of HLP 1:

1. Understand the financial inclusion landscape to develop appropriate, effective, and timely measures to increase digitally enabled financial inclusion. Policy makers should first undertake a detailed assessment of the financial landscape with a focus on determining how DFS have (or have not) played a role in achieving inclusion objectives.

2. Develop a national financial inclusion strategy that reflects the challenges and opportunities detailed in the data collection and diagnostics. Having applied the diagnostic frameworks to highlight the gaps in inclusion and identified the DFS levers to address those gaps, these insights should then be channeled into the development of a strategy. The development and implementation of a national financial inclusion strategy should ensure the participation of the private sector as a key partner and consider the various use cases for stimulating DFS—for example, the digitization of large-volume government payments.

The challenges around implementing HLP 1 include collecting the accurate and comprehensive data needed to ensure that a national financial inclusion strategy is targeted to the conditions on the ground, and coordinating the various and necessary stakeholders from the public and private sector, as well as from outside the financial sector.

**HLP 2: The Importance of Balancing Innovation and Risk to Achieve Digital Financial Inclusion:** Balance promoting innovation to achieve digital financial inclusion with identifying, assessing, monitoring, and managing new risks. The following activities are key for effective implementation of HLP 2:

1. Identifying the risks in a jurisdiction is a critical first step. Risks particularly relevant to DFS include consumer, stability, and integrity risks. The regulatory and supervisory framework around DFS should be established to mitigate these risks without unduly constraining innovation in the market. Applying the principle of proportionality for effective and balanced risk mitigation is essential to supporting innovation and achieving the benefits of greater inclusion.
2. Develop the tools needed to support innovation: Once the risk assessment is complete, policy makers should explore how further to support innovation while remaining vigilant about new risks that may arise from the same.

The challenge around implementing HLP 2 is getting the balance right between protecting the stability, integrity, and users of a financial system while creating an inclusive innovation-driven sector.

### **HLP 3: Provide an Enabling and Proportionate Legal and Regulatory Framework for Digital Financial Inclusion:**

Provide an enabling and proportionate legal and regulatory framework for digital financial inclusion, taking into account relevant standards and guidance from the G20 and international standard-setting bodies. The following activities are key for for effective implementation of HLP 3:

1. Ensure that the fundamentals of regulating the DFS landscape are in place, including entry requirements, prudential requirements, market conduct and integrity, financial consumer protection, safeguards for anti-money-laundering and countering the financing of terrorism, and an insolvency regime.
2. Ensure that the basic regulatory enablers for digital financial inclusion are in place.
3. Put in place public policy measures and initiatives that support the development of fintech activities.
4. Consider how the issues around regulatory perimeter, competition, outsourcing, and so on relate directly to fintech. Evaluate the regulatory treatment of the latest technological developments, of third-party providers/outsourcing, and of platform finance. Also, identify interventions that increase the value of data for poor and excluded customers, and mitigate risks. And finally, particularly because of the emerging role of bigtech and the impact it may have on small fin-techs, evaluate the issue of competition.

A key challenge around implementing HLP 3 is that regulators and supervisors need to anticipate and respond to rapidly changing market conditions that may be especially challenging for small, low-income countries. Also, supervisory capacity and resources in the context of the current state of suptech and regtech are limited.

### **HLP 4: Expand the Digital Financial Services Infrastructure Ecosystem:**

Expand the DFS ecosystem—including the financial and the information and communications technology infrastructures—for the safe, reliable, and low-cost provision of DFS to all relevant geographical areas, especially underserved rural areas. The following activities are key for effective implementation of HLP 4:

1. Design key payment infrastructures that consider the use of new and existing technologies, products, and access modes in a balanced way to expand access to and usage of transaction accounts.
2. Ensure that information and communications technology and shared market infrastructures are effective in supporting financial inclusion efforts by providing critical information to financial service providers, including an identification infrastructure, a credit reporting system, and other data-sharing platforms.
3. Design effective transaction account and payment product offerings to meet a broad range of transaction needs of the target population and at low cost.
4. Ensure that access points are readily available to augment the usefulness of transaction accounts.
5. Conduct and coordinate ongoing and effective education and outreach with public- and private-sector stakeholders' efforts to support awareness and financial literacy.
6. Leverage large-volume and recurrent payment streams, including remittances, to increase the number and usage of transaction accounts.

Key challenges around implementing HLP 4 include aligning policy objectives with technology implementations, a lack of domestic interoperability, a lack of harmonized data standards for cross-border payments, the lack of a level playing field in accessing shared infrastructures, investment and operational costs, operational and cyber resilience challenges, a strong cash culture, digital exclusion and a lack of digital literacy and digital financial literacy, and market concentration.

### **HLP 5: Establish Responsible Digital Financial Practices to Protect Consumers:**

Establish a comprehensive approach to consumer and data protection that focuses on issues of specific relevance to DFS. The following activities are key to implementing HLP 5 successfully:

1. Follow key international standards and guidance, most notably the [G20/OECD High-Level Principles on Financial Consumer Protection](#).
2. Update the legal, regulatory, and supervisory framework to address risks from digital innovations and new business models. Some of the key risks include (a) fintech operator fraud or misconduct, (b) platform/technology unreliability or vulnerability, (c)

consumer disclosure and transparency in a digital context, (d) increased risk of product unsuitability, (e) conflicted fintech business models leading to conduct that is not in consumers' interests, and (f) algorithmic decision-making leading to potentially unfair outcomes and/or systemic biases against vulnerable populations.

3. Articulate clear requirements for financial service providers and their intermediaries to ensure the fair and equitable treatment of consumers and effective disclosure and transparency.
4. Introduce and enforce data-governance and privacy rules and protect consumers against fraud and misuse.
5. Have an accessible, affordable, timely, and transparent complaint-handling and redress mechanism that helps build customer trust.

The challenges around implementing HLP 5 include constant technological evolution and rapidly changing market conditions, with new non-bank actors, while ensuring a timely and adequate regulatory and supervisory response given capacity and resource constraints faced by regulators.

**HLP 6: Strengthen Digital and Financial Literacy and Awareness:** Support and evaluate programs that enhance digital and financial literacy based on the unique characteristics, advantages, and risks of DFS and channels. The following activities are key to implementing HLP 6 successfully:

1. Follow key international guidance, most notably the [G20/OECD INFE Policy Guidance on Digitalisation and Financial Literacy](#).
2. Collect evidence and develop a diagnostic to establish the level of awareness of, demand for, and usage of DFS, as well as the level of digital financial literacy.
3. Develop coordinated cross-stakeholder and cross-sectoral strategic approaches to strengthening digital financial literacy.
4. Develop competency frameworks on digital financial literacy.
5. Ensure the effective delivery of programs to enhance digital financial literacy.
6. Facilitate the evaluation of financial-education programs to enhance digital financial literacy.

7. The challenge around implementing HLP 6 is ensuring that digital-literacy programs keep pace with rapid innovation in DFS. Also required is a more empirical approach to evaluating the impact of initiatives aimed at supporting digital financial literacy.

In addition to providing guidance on implementation approaches and best practice, this guide also provides a self-assessment tool that will allow countries to evaluate their progress on each HLP and consider prerequisites and sequencing for given actions. The questions in each HLP-specific checklist are organized as they correspond to the building blocks in the guidance chapters and are ordered according to two levels: the first focuses on minimum standards that should be in place in any jurisdiction where digital financial products and services are being delivered, and the second focuses on additional policy and regulatory levers and tools that can be employed to address newly emerging risks specifically and more effectively.

***HLPs 7 and 8 have not been discussed in separate dedicated chapters considering the existing and ongoing work on these topics and still evolving international good practice. But these HLPs, and the resources relevant to their implementation, also warrant attention.***

**HLP 7: Facilitate Customer Identification for Digital Financial Services:** Facilitate access to digital financial services by developing, or encouraging the development of, customer identity systems, products and services that are accessible, affordable, and verifiable and accommodate multiple needs and risk levels for a risk-based approach to customer due diligence.

Among existing guidance on HLP 7, the GPF1 note on Digital Identity Onboarding published under the Argentinian Presidency in 2018 outlines seven policy measures that governments should consider in order to have an identity effective ID system that meets the goal of including everyone in the financial sector:

1. Ensure an integrated identity framework
2. Consider the appropriateness of the regulatory framework to capture the challenges related to digital ID, and risks to its appropriate implementation; deliberate updates to the regulatory framework
3. Establish a reliable oversight model to include stakeholders beyond the traditionally regulated financial institutions who can introduce risks to digital ID systems

4. Build authentication and service delivery systems that protect user privacy, and provide individuals with the right to access their data and oversight over how their data is shared
5. Establish clear and well-publicized procedures for citizen redress, including defining where the responsibility lies if errors emerge or if the security of a person's identity is compromised
6. Support and empower development of private sector led services to leverage the legal ID infrastructure for building out digital layers. These services should be safe, reliable efficient, and interoperable, and the market should be competitive
7. Public authorities should closely monitor new approaches to ID that are emerging, with a view to share knowledge and establish common legal frameworks at the domestic and international levels

Additionally, the GPFII report on [Advancing Women's Digital Financial Inclusion](#) delivered under the Saudi Presidency, has prioritized universal access to official

identity systems and documents for all women and girls. This is particularly relevant as the lack of ID was cited as the main barrier for bank account access for one in five women globally.

#### **HLP 8: Track Digital Financial Inclusion Progress:**

Track progress on digital financial inclusion through a comprehensive and robust data measurement and evaluation system. This system should leverage new sources of digital data and enable stakeholders to analyze and monitor the supply of—and demand for—digital financial services, as well as assess the impact of key programs and reforms.

The [G20 Financial Inclusion Indicators](#) serve to inform policy makers and to enable monitoring of financial inclusion development, both at national and global levels, when used in conjunction with additional country-specific indicators. The [World Bank's Global Findex Database](#) comprises a comprehensive list of key digital financial inclusion indicators for countries to track progress against and is sex-disaggregated, which makes

#### **Other resources relevant to HLP 7**

- BTCA: [Reaching Financial Equality for Women](#), 2021
- CGAP: [Risk-Based Customer Due Diligence: Regulatory Approaches](#), 2019
- FATF: [COVID-19-Related Money Laundering and Terrorist Financing: Risks and Policy Responses](#), 2019
- FATF: [FATF Guidance: Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion, with a Supplement on Customer Due Diligence](#), 2017
- ID4D/World Bank Group: [Principles on Identification for Sustainable Development: Toward the Digital Age](#), 2021
- ITU: [Digital Financial Inclusion](#), 2021
- ITU: [e-KYC Use Cases in Digital Financial Services](#), 2021
- ITU: [Implementation of Secure Authentication Technologies for Digital Financial Services](#), 2020
- World Bank: [Digital ID Assessment Instrument: Financial Sector Module](#), 2021
- World Bank: [Digital ID to Enhance Financial Inclusion: A Toolkit for Regulatory Authorities](#), 2021

it particularly useful to increase women's digital financial inclusion. Findex data is also used to track progress against SDG8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

The World Bank and CPMI's [Payment Aspects of Financial Inclusion: Application Tools](#) contains the PAFI questionnaire, which is a tool for authorities that are interested in carrying out a self-evaluation exercise in their application of the guiding principles.

### Other resources relevant to HLP 8

- AFI: [National Financial Inclusion Strategy Monitoring and Evaluation Toolkit](#), 2021
- AFI: [Digital Financial Service Indicators](#), 2019
- CPMI: [Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020
- CPMI: [Payment Aspects of Financial Inclusion](#), 2016
- OECD: [OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022](#), 2022
- World Bank: [Global Financial Inclusion and Consumer Protection \(FICP\) Survey](#) (database and reports)
- World Bank: [How to Measure Financial Inclusion](#), 2015

## Background and Context



The Global Partnership for Financial Inclusion (GPFI) is an inclusive platform for all G20 countries, interested non-G20 countries, and relevant stakeholders to carry forward work on financial inclusion. The GPFI's efforts include helping countries put into practice the [2020 G20 Financial Inclusion Action Plan](#), strengthening data for measuring financial inclusion, and developing methodologies for countries wishing to set targets. Digital financial inclusion is a key priority topic under the [2020 G20 Financial Inclusion Action Plan](#).

Digital technologies offer a powerful solution for expanding access to financial services to the estimated 1.4 billion adults globally who are still excluded from the formal financial system. By enabling innovative business models, digital technologies can help connect more people at lower costs—including those living in rural and remote areas—to critical financial services that help people manage their financial lives. Leveraging the opportunities that technology offers to reduce costs, expand scale, and deepen the reach of financial services will be critical to achieving universal financial inclusion. (See boxes A.1 and A.2 for detailed definitions of “financial inclusion” and “digital financial inclusion.”) Digital financial inclusion promotes efficient interconnection among participants in economic activities.

Increased levels of financial inclusion can reduce poverty, enhance resilience, and improve the lives of the poor and underserved segments, women, youth, micro, small, and medium-sized enterprises (MSMEs), and displaced populations. The 2010 [G20 Principles for Innovative Financial Inclusion](#) spurred initial efforts and policy actions to promote financial inclusion. In 2016, the G20 published the [High-Level Principles \(HLPs\) for Digital Financial Inclusion](#) to build on that success by providing a basis for country action plans reflecting country context and national circumstances to leverage the huge potential offered by digital technologies. These eight HLPs are based on the rich experience reflected in standards and guidance from the G20 and international standard-setting bodies.

The G20 HLPs for Digital Financial Inclusion are a catalyst for action for the G20 to drive the adoption of trustworthy digital approaches to achieve financial inclusion goals, as well as the related G20 goals of inclusive growth and increasing women's economic participation. The HLPs recognize the ability of digital approaches to scale the access to financial products and services in a more effective and efficient way, particularly for those who are financially excluded and underserved. COVID-19 has also accelerated the acceptance and adoption of digital products, services, and platforms; for these gains to endure and close financial inclusion gaps, digital financial products and services need to serve customer needs adequately and be secure and trusted. They also need to align with global standards, including standards for anti-money-laundering and countering the financing of terrorism (AML/CFT), and to protect user privacy. Underserved groups—which typically include poor people, women, youth, and people living in remote rural areas require special attention.

One of the priority action areas for the GPFI in 2022 is encouraging effective implementation of the 2016 G20 HLPs for Digital Financial Inclusion in G20 and non-G20 countries, particularly with respect to underserved and vulnerable groups, according to national circumstances. An effective way to implement the HLPs is through applicable national strategies and related country action plans or other country-level actions that consider country context and national circumstances. This implementation guide builds on the work undertaken under previous G20 Presidencies to facilitate these objectives. For instance, the 2017 G20/GPFI report [Digital Financial Inclusion: Emerging Policy Approaches](#) discusses emerging country strategies and policy approaches to increase the use of digital financial services (DFS), with a focus on the roles of policy makers and regulators with respect to HLPs 1–4. The 2020 [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#) further provides sets of featured policy options targeting financial inclusion gaps for youth

(subject to child-protection frameworks where relevant), women, and small and medium-sized enterprises (SMEs) through DFS to reach conditions in which all people can live, work, and thrive, as well as utilize and share benefits of innovations and digitization. This implementation guide draws on examples related to digital financial inclusion of the underserved and vulnerable groups (including the poor, youth, women, migrants, the elderly,

persons with disabilities, and forcibly displaced persons) and MSMEs.

This implementation guide focuses on HLPs 1–6 and dedicates a chapter to each HLP, emphasizing practical “how-to” approaches and replicable examples of good practices. HLPs 1–6 are pertinent for three reasons: The first is the significant supply-side innovations and regu-

### BOX A.1

## A Working Definition of “Financial Inclusion”

The G20/GPFI’s working definition of “financial inclusion” refers to a state in which all working-age adults<sup>1</sup> have effective access to the following financial services provided by formal institutions: savings (defined broadly to include transaction accounts), payments, credit, insurance, and investments. However, formal products and providers might not offer customers better value than informal products and providers in all cases, as may be evident from cases where there is access but limited or no usage by financially excluded and underserved customers.<sup>2</sup>

“Effective access” involves convenient and responsible delivery of services that are responsive to the needs of financially excluded and underserved customers at a cost affordable to the customers, suitable for customer needs, and sustainable for the providers. The demonstration of effective access is usage. The fact that a customer can access services offered by a formal financial service provider (FSP) does not mean she or he is “financially included.” For this, the conditions of “effective access” must be met.

“Financially excluded and underserved” refers to those who do not have access to or are underserved by formal financial services. An estimated 1.4 billion adults worldwide do not have a savings or credit account with a bank or other formal financial institution (Global Findex 2021). This figure, however, is only a rough proxy for the number of persons worldwide who are financially excluded, as it sheds no light on factors such as the quality, affordability, sustainability, cost, or convenience

of the savings and credit accounts to which others have access, and it does not measure access to payment services, insurance, or investments.

“Responsible delivery” involves both responsible market conduct by providers and effective financial consumer protection oversight. The specific characteristics of excluded consumers have significant implications for effective consumer protection regulation and supervision, and therefore relevance for guidance from standard-setting bodies. Relevant characteristics include limited experience with, and sometimes distrust of, formal FSPs, lower levels of education and financial capability, few formal providers to choose from, and often remote locations.

“Formal financial institutions” refers to FSPs that have a recognized legal status and includes entities with widely varying regulatory attributes and subject to differing levels and types of external oversight.

Other commonly used definitions of “financial inclusion” include the following:

- Access to, and use of, formal financial services by households and firms (Sahay et al. 2015).
- Universal access to, and use of, a wide range of reasonably priced financial services (HM Queen Maxima of the Netherlands, United Nations Secretary-General’s Special Advocate for Inclusive Finance for Development)

Sources: G20/GPFI: *Global Standard-Setting Bodies and Financial Inclusion: The Evolving Landscape*, 2016; UNSGSA: <https://www.unsgsa.org/the-unsgsa>; IMF: <https://www.imf.org/external/pubs/ft/sdn/2015/sdn1517.pdf>, 2015.

latory responses that have emerged in the last five years since the HLPs were issued. Second is the urgent need to acknowledge and mitigate the resulting risks faced by lower-income or formerly excluded customers who have been onboarded rapidly and in significant numbers because of the pandemic. This includes the more digitally savvy youth and MSMEs and the disproportionate risks and bias faced by women. Third, HLPs 1–6 are the most relevant to the Indonesian Presidency’s goals of supporting productivity, inclusive growth, and financial-sector resilience and reforms.

HLP 7 (Facilitate Customer Identification for Digital Financial Services) and HLP 8 (Track Digital Financial Inclusion Progress), while equally important to furthering these goals, are not discussed in detail in this document, considering the existing and ongoing work on these topics and still evolving international good practice. Furthermore, the implementation of HLPs 7 and 8 depends heavily on individual country context and national circumstances. The compendium of resources at the end of this document lists further resources relevant to HLPs 7 and 8 for reference and guidance. (See *Executive Summary* for a brief discussion on HLPs 7 and 8.)

This implementation guide has the dual objectives of guidance and assessment:

- **Guidance:** Each HLP-specific chapter reviews (i) common implementation approaches and (ii) good practices and lessons learned. To the degree that existing effective approaches, tools, and reference guides have been established in these areas, these are cataloged for ease of reference.
- **Assessment:** Leveraging the guidance provided in the earlier chapters for the implementation guide, a self-assessment tool has been developed in the appendix to help both G20 and non-G20 members understand where they stand with regard to adoption of HLPs 1–6. These questions are closely aligned with the policy options, innovations, and good practices that are discussed in earlier chapters specific to each HLP. This tool may serve as the basis for the progress reports planned in 2023 on the adoption of HLP by countries considering the rapid progress of digitization.



#### BOX A.2

### Definition of “Digital Financial Inclusion”

The GPFi describes digital financial inclusion broadly as “the use of digital financial services to advance financial inclusion.” Digital finance covers a broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances, and insurance. The concept also includes mobile financial services. Digital financial inclusion involves the deployment of digital means to reach financially excluded and underserved populations—recognizing the particular significance for women—with a range of formal financial services suited to their needs, delivered responsibly at a cost affordable to customers, and sustainable for providers. This includes the deployment of secure and responsible digital-enabled services that extend the reach of formal financial services on a sustainable basis and addressing the potential risks of such technologies, including data-protection and privacy issues, cybersecurity, overindebtedness as well as money-laundering, the financing of terrorist proliferation, fraud, and other illicit finance risks. Financial education and consumer protection complemented with regulation are key factors in protecting and empowering the most vulnerable groups.



## HLP 1: Promote a Digital Approach to Financial Inclusion

**Statement of the HLP:** Promote digital financial services as a priority to drive development of inclusive financial systems, including through coordinated, monitored, and evaluated national strategies and action plans.

### 1.1 Context: Importance of the HLP, Statement of Challenges in Current Market Contexts

Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs—transactions, payments, savings, credit, and insurance—delivered in a responsible and sustainable way. Digital financial inclusion involves the deployment of the cost-saving digital means to reach populations that are currently financially excluded and underserved with a range of formal financial services suited to their needs that are responsibly delivered at a cost affordable to customers and sustainable for providers.

This chapter discusses key guidance on how authorities may promote DFS as a key lever of financial inclusion. Since 2016, when the HLPs were first adopted, fintech-led innovations in technology, business models, applications, processes, and products have resulted in the rise of DFS that are contributing to lower costs and greater speed, transparency, and security, as well as new channels for offering tailored financial services at scale to the poor and financially underserved.<sup>3</sup> In recent years DFS have become an important driver of financial inclusion, especially in emerging markets and developing economies (EMDEs). In fact, in many EMDEs, the recent gains in inclusion have been catalyzed in large part by the growth of DFS. This has been the case particularly for vulnerable populations such as women, youth, rural dwellers, and low-income earners. The [G20 High-Level Policy Guidelines \(HLPGs\) on Digital Financial Inclusion for Youth, Women and SMEs](#) provides more detail on leveraging DFS for the underserved. In particular, HLPG

4 (Support the Adoption of Targeted Policies and Initiatives in National Strategies), which is focused on supporting the adoption of targeted policies and initiatives and policies in national strategies, is highly relevant to this HLP.

On the supply side, digitally enabled business models can significantly lower costs for providers, improve competition and choice in the provision of DFS, and increase convenience and accessibility for consumers, thereby addressing the low uptake and usage of financial products and services. DFS also provide the means for consumers to make necessary financial transactions without physical interaction, something that is particularly beneficial in the COVID-19 era. On the demand side, digitally enabled business models provide tools to address volatility and low incomes for the poor and offer solutions for overcoming the lack of an ID, a lack of trust in formal financial systems, and geographical barriers.

Beyond their impact on individuals, DFS also have a significant benefit to MSMEs, particularly by facilitating access to finance. In addition, some countries have been deliberate in promoting DFS because of their contribution to the [achievement of sustainable development goals](#), most notably those related to reducing inequality, eradicating poverty, and increasing employment and economic empowerment.

### 1.2 A Framework for Implementing HLP 1

Given all the potential benefits that DFS can stimulate for both individuals and MSMEs, it is important to outline how policy makers can successfully promote DFS as a

key lever for achieving financial inclusion. In promoting DFS, it is necessary to ensure the following:

- Economic and technological feasibility: It is impossible to encourage (stimulate) the use of digital technologies to ensure the availability of financial services if digital channels for the provision of financial services are more difficult and more expensive than traditional channels).
- Exclusion of regulatory arbitrage with traditional financial services: The way a certain service is regulated should not be affected by the channel used to provide it.
- Competitive access: When expanding the ecosystem of DFS or encouraging the use of digital technologies, any form of support—as well as access to the digital services market (including information and infrastructure)—should be provided on a competitive, fair, and transparent basis.

Countries can take the following steps to maximize inclusion gains as catalyzed by DFS:

#### (a) Understand the Financial Inclusion Landscape

To develop appropriate, effective, and timely measures to increase digitally enabled financial inclusion, policy makers must first undertake a detailed interrogation of their financial landscape with a focus on determining how DFS have (or have not) played a role in achieving inclusion objectives. The diagnostic should aim to identify specific groups that are underserved by financial services and by DFS—for example, women, rural populations, the elderly, and the poor.<sup>4</sup> The insights resulting from this diagnostic exercise can then be used to develop and implement the policy efforts needed to develop a broader DFS ecosystem. Below are three frameworks that are complementary and can be applied concurrently to reveal those insights.

Framework 1 deploys the [Payment Aspects of Financial Inclusion in the Fintech Era](#)<sup>5</sup> (PAFI) framework, which details how to advance financial inclusion primarily through digital payments. The framework guides policy makers to evaluate their strengths, weaknesses, opportunities, and threats as they relate to the following critical enablers:

- Financial and information and communications technology (ICT) infrastructure
- Legal and regulatory framework
- Public- and private-sector commitment

The framework specifically calls for regulators to understand the opportunities and constraints within the following four drivers of access and usage:

- Transaction account and payment product design
- Readily available access points
- Awareness and financial literacy
- Large-volume recurrent payment streams

A [PAFI application tool report](#) has also been issued to provide detailed guidance to policy makers on using the PAFI framework. The guide contains several tools designed to assist national authorities by (i) supporting country diagnostics, with particular regard to a thorough collection of information to ensure a consistent application of the PAFI guidance; (ii) proposing core indicators for each of the guiding principles to measure and track progress in enhancing access to and usage of transaction accounts;<sup>6</sup> (iii) enabling comparisons with international benchmarks and/or with a jurisdiction's own situation over time; and (iv) facilitating internal follow-up and reporting of actual reform efforts in the area of financial inclusion from a payments perspective.

Framework 2 requires policy makers to identify constraints related to the following policy actions, which might inhibit the safe and efficient development and growth of DFS:

- Enabling financial and digital infrastructure (payment systems, credit infrastructure, and digital connectivity infrastructure)
- Ancillary government support systems (data platforms, digital ID,<sup>7</sup> and financial-management platforms)
- Conducive legal and regulatory frameworks (enabling new players to offer DFS and new approaches by incumbents, promoting competition and a level playing field, safeguarding consumer protection, and fostering demand for DFS and customer confidence in DFS)

Given a country's appraisal of which stage of DFS development they are in—stage 1 being the very early stages and stage 4 being fully digital—policy makers can determine which of the following actions they should take within each of the relevant categories of enablers. For more information, HLP 3 delves more deeply into regulatory enablers, and HLP 4 does so on infrastructure.

**Figure 1.1: Policy Actions and Enablers by Development Stages<sup>8,9,10</sup>**

Policy actions and enablers	STAGE 1: Basic access to transaction accounts	STAGE 2: More intensive usage of transaction accounts for digital payments	STAGE 3: Moving beyond payments to other DFS products (e.g. credit, insurance)	STAGE 4: Widespread adoption and usage of DFS by individuals and SMEs
Enabling financial and digital infrastructures	<ul style="list-style-type: none"> <li>Foster good penetration of mobile phones and connectivity</li> </ul>	<ul style="list-style-type: none"> <li>Foster functioning payment systems and enabling interoperability</li> </ul>	<ul style="list-style-type: none"> <li>Establish credit infrastructure and enhance coverage of credit-relevant data</li> </ul>	<ul style="list-style-type: none"> <li>Support universal broadband connectivity</li> <li>Facilitate high penetration of smartphones</li> </ul>
Ancillary government support systems		<ul style="list-style-type: none"> <li>Enhance financial management system to support intensive shift of G2P payments to digital</li> </ul>	<ul style="list-style-type: none"> <li>Establish and expand coverage of digital ID</li> </ul>	<ul style="list-style-type: none"> <li>Enable automated access to digitized government data platforms</li> </ul>
Conducive legal and regulatory frameworks	<ul style="list-style-type: none"> <li>Allow non-bank issuance of e-money</li> <li>Implement simplified customer due diligence (CDD)</li> <li>Enable development of widespread agent network</li> </ul>	<ul style="list-style-type: none"> <li>Adopt payment systems law</li> <li>Enable non-banks access to payment systems</li> <li>Development and implement competition policy</li> </ul>	<ul style="list-style-type: none"> <li>Establish comprehensive legal measure for data protection and privacy</li> <li>Enable and encourage DFS providers to expose and use APIs</li> </ul>	<ul style="list-style-type: none"> <li>Adopt legal measures to enable open banking</li> </ul>

Framework 3 takes a decision-tree approach to diagnosing constraints to DFS development. While some countries are achieving impressive inclusion gains through DFS, others face significant challenges. A decision tree can be used to diagnose the country-specific root causes of shortfalls and prioritize needed actions. The tree framework divides binding constraints (branches of the tree) into two categories: those affecting digital service providers and banks that are providing financial services (the supply side of the tree), and those affecting the customers of those services (the demand side of the tree), recognizing that some constraints affect both sides.

The following additional exercises can be undertaken to determine which constraints dominate and/or are binding:

- Test to establish if the pricing of financial services reveals price to be a supply-side or a demand-side constraint. (For example, is low uptake of DFS due to high price, or is low price indicative of low demand?)
- Establish whether the relaxation of a constraint produces significant improvements in inclusion (for example, opening up e-money issuance to non-bank financial institutions).
- Remove a constraint to reveal which ones are truly binding (for example, enacting a law to remove a supply constraint only to expose the more binding constraint of low demand stemming from low digital literacy).

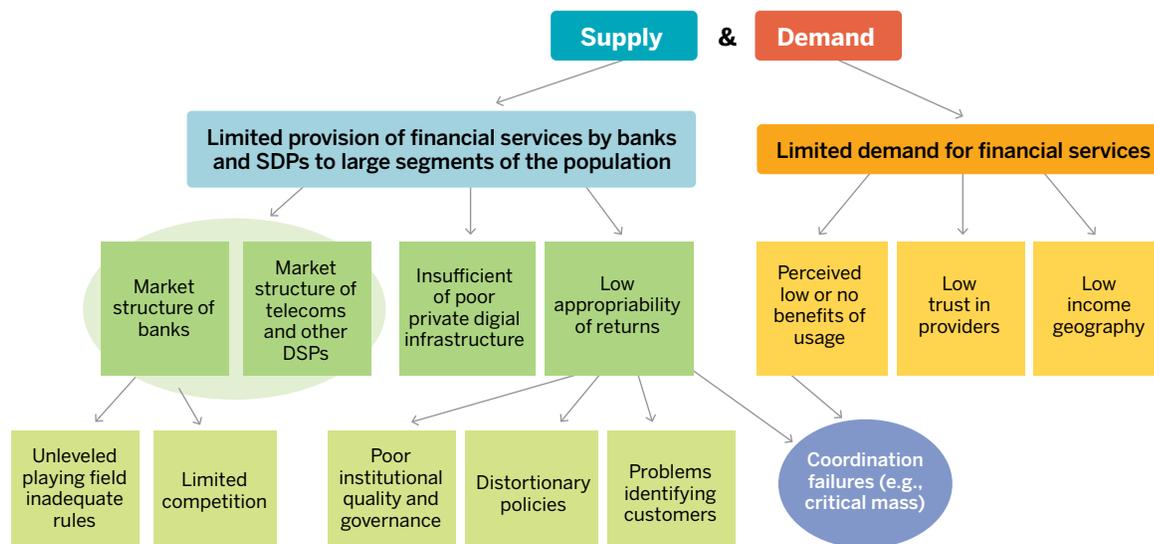
### (b) Develop a National Financial Inclusion Strategy That Reflects the Challenges and Opportunities Detailed in the Data Collection and Diagnostics

After having applied the frameworks in subsection 1.2(a) above to highlight the gaps in inclusion, and having identified the DFS levers to address those gaps, these insights can be channeled into the development of a national financial inclusion strategy (NFIS) that speaks directly to the challenges and opportunities identified. An NFIS provides an effective instrument to chart a clear and coordinated path toward improved financial inclusion. It enables stakeholders jointly to define financial inclusion objectives, identify obstacles and opportunities relevant to the achievement of those objectives, and outline a prioritized set of actions to pursue in a coordinated manner. Box 1.1 highlights the example of Ghana's DFS policy, which was launched alongside its NFIS. Also refer to [G20/GPFI Digital Financial Inclusion: Emerging Policy Approaches](#) for examples of strategies with a digital focus featuring China, Mexico, Pakistan, the Philippines, and Tanzania.

Each country must determine based on its needs assessment which policy areas to pursue in its NFIS. A sample NFIS might focus on the following policy drivers:

- Widespread and accessible delivery channels: agents, branches, ATMs, point-of-sale (POS) terminals, mobile phones

**Figure 1.2: Determinants of Inadequate Financial Inclusion Using Digital Services<sup>11</sup>**



**BOX 1.1**

**Ghana Launches a DFS Policy alongside Its NFIS**

In 2020, Ghana launched a [DFS policy](#) alongside its NFIS. The policy was born out of a need to specify how DFS could be deployed to support the country’s financial inclusion goals. Indeed, DFS has had a monumental impact on inclusion in the country. The percentage of people over 15 years old with an active mobile money account rose from 2 percent in 2012 to 65 percent in 2018. The DFS policy—consisting of 43 actions to be taken by the public or private sector—serves as a blueprint for achieving short- and medium-term progress in Ghana’s cash-lite vision.

- Diverse, innovative, [customer-centric](#) products: DFS, savings, credit, payments, insurance, pensions, and so forth
- Finance for SMEs and agricultural-sector growth: SME finance, agricultural finance, and so on, in light of growing opportunities to formalize small businesses and improve their access to finance through digitization
- [Financial consumer protection and capability](#): disclosure, dispute resolution, business practices, financial education. This is particularly important given the emerging consumer risks related to digital products in view of the vulnerable population that tends to use DFS. (See [chapter 5](#) for a detailed discussion of financial consumer protection.)

Regardless of an NFIS’s areas of focus, the following are key levers that have been shown to propel digitally enabled inclusion. Policy makers should consider them as they develop their strategy.

*(i) The Opportunities to Digitize Large-Volume Payment Streams*

As mentioned above, the PAFI framework identifies digitizing large-volume recurrent payment streams as a catalytic pillar for driving the uptake and usage of transaction accounts.<sup>12</sup> Digitizing government payment flows has significant potential to reduce costs dramatically, increase efficiency and transparency, and help recipients build familiarity with digital payments. Digital wage and social transfer payments can also provide the on-ramp to inclusion and often the first account that recipients have in their own name and under their control. In light of this,

an NFIS should specifically explore how government-to-person (G2P) and person-to-government (P2G) payments can be leveraged to drive inclusion.

The benefits of digitizing government flows notwithstanding, it is not without its challenges. It may require significant up-front investments to build an adequate physical payment infrastructure that is able to process such payments, as well as a financial identification system and a consumer protection and education framework to ensure that recipients have safe, reliable, and affordable access to the digital payment system. The NFIS should therefore leverage public-private partnerships and cross-stakeholder engagement to identify lasting solutions to these

challenges. Box 1.2 highlights an example of G2P payment digitization, and box 1.3 provides an example of P2G digitization. See also G20/GPFI [Digital Financial Inclusion: Emerging Policy Approaches](#) (2017) for examples of G2P digitization in Brazil and Mexico.

*(ii) The Importance of Having a Multistakeholder Engagement and Collaboration Model*

Particularly as it relates to centering DFS in an inclusion strategy, having close collaboration between public- and private-sector actors is critical in each step of designing and implementing the NFIS. In addition to the central bank, which often takes the lead with the strategy, the following stakeholders should be involved: financial-



**BOX 1.2**

**Government-to-Person Payments: The Case of India**

In 2013, the Government of India [digitized the payment](#) of cash subsidies and benefits, directing those payments into bank accounts that were linked to a digital biometric ID card called Aadhaar. By March 2022, more than 440 direct benefit transfer schemes covering farm and non-farm subsidies, social protection payments, scholarships, conditional cash transfers, and other government payments were disbursed to some 450 million beneficiaries, many of whom previously had no bank account. Globally, digitizing G2P payments could increase the number of adults with an account by up to 160 million by bringing into the financial system the 11 percent of government transfer recipients worldwide who receive either government wages or transfers only in cash (as opposed to those who receive it in a combination of cash, in-kind, vouchers, and so forth). Evidence further suggests that digitizing G2P payments might be especially valuable to women, who benefit from the greater confidentiality and control such payments offer and can contribute to their economic empowerment within their households. In India alone, the direct benefit transfer schemes have reached more than 250 million women.



**BOX 1.3**

**Person-to-Government Payments: The Case of Côte d'Ivoire**

In 2015, the Central Bank of West African States issued regulations that encouraged non-banks to issue e-money. Mobile money providers in Côte d'Ivoire then partnered with the government to launch what would become a very successful solution for the payment of school registration fees. As a result of this initiative, 99 percent of the country's 1.5 million secondary school students paid their school fees digitally—94 percent via mobile money transactions and 6 percent via online payments. The initiative has also driven cost and operational efficiencies and generated important transaction values for mobile money providers, all of which have improved the viability of the DFS ecosystem.

*Additional reading:* [The World Bank Research Observer](#), 2017; [GSMA](#), 2015; [Taylor & Francis Online](#), 2019.

sector authorities, the ministry of finance, the ministry of justice, the ICT regulator, industry associations (banks, payments, microfinance institutions, cooperatives, telecoms), fintech companies, and the ministry of social affairs—with consideration to any conflict of interest. As an example, South Africa’s National Treasury, which is in the process of developing an NFIS, held in-person consultations with 15 government agencies and incorporated written feedback from more than 50 other private-sector actors/associations.<sup>13</sup> Particularly as it relates to DFS, the private sector is a key partner that can shed light on how NFIS action items can be supported by supply-side initiatives aimed at low-income populations. The private sector also has a significant role to play in providing inputs to the monitoring and evaluation of NFIS targets. Finally, operationalizing NFIS governance entities—including a high-level NFIS Council, an NFIS Implementation Committee, an NFIS Secretariat, and working groups—is important to ensure effective collaboration and consultation. These entities should have clear mandates and be composed of relevant and effective individuals.

*(iii) Other Key Success Factors in NFIS Development*

The following key success factors for NFIS development and operationalization have been highlighted:

- Early and sustained engagement of relevant stakeholders—including the private sector—to create broad buy-in and align efforts across financial and nonfinancial policy areas
- Investment in data and diagnostics work to ensure that the NFIS is grounded in a robust evidence base

and accurately identifies constraints and opportunities relevant to the achievement of greater financial inclusion

- Identification of high-level champions within key institutions who can integrate relevant NFIS actions into institutional work plans and advance their implementation
- Clear articulation of NFIS objectives and targets to ensure a shared understanding of expected outcomes
- Prioritization of forward-looking NFIS actions that emphasize digital approaches, proportionality, and the needs of financial consumers
- Establishment of inclusive but efficient governance arrangements to facilitate collaboration and consultation throughout the NFIS implementation period
- Mobilization of resources prior to NFIS launch—including those needed for “quick win” actions and Secretariat staff—to build momentum and demonstrate credibility
- Effective communication and branding of the NFIS, including the signaling of early implementation successes
- Flexibility to adapt NFIS elements during implementation to reflect market developments and emerging policy priorities
- Well-resourced and robust system of monitoring and evaluation to track implementation progress, identify bottlenecks, and inform course corrections



**BOX 1.4**

**Mexico Uses Technology to Facilitate and Monitor Digitization**

In 2017, the Central Bank of Mexico began developing a payment scheme called **Cobro Digital (Codi)** to digitize payment transactions securely and at no additional cost. This was part of the bank’s goal of transitioning to a cashless economy. In addition, it also launched a real-time progress-monitoring platform that is used to monitor the transparency and accountability of their NFIS. This tool includes interactive data visualizations launched online and—along with frequent demand- and supply-side surveys—has facilitated evidence-based approaches that have helped Mexico drastically reduce the gender gap in inclusion.

*Additional reading:* Inter-American Development Bank, 2019.

### 1.3 Challenges in Implementing HLP 1

One common challenge associated with implementing a digital-first approach to financial inclusion is coordinating the various stakeholders—from the public and private sector and from outside the financial sector (for example, telecom ministries, ministries of justice, competition authorities, data-governance entities)—all of whom need to be involved for a successful outcome. These stakeholders must all demonstrate a high level of commitment and buy-in, particularly in light of varying objectives, conflicts of interest, and differing priorities. This buy-in is critical because, without it, everything from development to implementation will suffer from inertia.

Another challenge that often presents itself during the diagnostic phase is the inability to collect the accurate and comprehensive data—including on underserved and vulnerable groups—needed to ensure that strategies and action plans are appropriate and do lead directly to improvements in financial inclusion. This is particularly the case in data-poor environments or where budgets

are constrained, making it difficult to justify what is often a heavy cost for data collection at a national scale.

### 1.4 Looking Forward

DFS are increasingly catalytic tools for financial inclusion. Understanding and optimizing the role they play in national inclusion goals starts first and foremost with broad diagnostics to highlight the binding constraints, whether these be from the supply or demand side. The data and insights collected from these assessments will then inform the objectives, policy areas, and action items of an NFIS. Of course, low digital literacy, limited digital financial literacy, the digital gender divide, poor ICT and payment infrastructure, and other challenges slow inclusion through digital means. These challenges should not deter policy makers, however, from centering DFS in inclusion plans, given the positive role DFS have played in achieving inclusion, particularly in EMDEs. *Chapter 2 discusses other initiatives being adopted by authorities to foster innovations by the public and private sector to further digital financial inclusion.*

**ADDITIONAL INSIGHT:** Developing digital approaches to financial inclusion is catalytic for both SMEs and individuals. This is particularly true because in the developing world, SMEs make up 90 percent of the private sector and create more than 50 percent of jobs in their corresponding economies. What's more, in Africa, SMEs provide an estimated 80 percent of jobs across the continent, representing an important driver of economic growth. As such, driving financial inclusion for individuals, the vast majority of whom are working in the informal SME space, directly supports inclusive growth overall.

### Resources Relevant to HLP 1

- World Bank: [FISF Learning Series](#) (videos on NFIS development and operationalization), 2021
- AFI: [National Financial Inclusion Strategy Monitoring and Evaluation Toolkit](#), 2021
- AFI: [Bringing the Informal Sector Onboard](#) (toolkit), 2021
- CPMI, World Bank: [Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020
- CPMI, World Bank: [Payment Aspects of Financial Inclusion: Application Tools](#), 2020
- World Bank: [Digital Financial Services](#), 2020
- G20/GPFI: [High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#), 2020
- CGD: [A Decision Tree for Digital Financial Inclusion Policymaking](#), 2020
- World Bank: [Developing and Operationalizing a National Financial Inclusion Strategy: Toolkit](#), 2018
- UN, BTCA, UNCDF, World Bank: [Igniting SDG Progress through Digital Financial Inclusion](#), 2018
- CGAP: [Customer Centric Guide](#), 2016
- World Bank: [Coordination Strategies for Financial Inclusion Strategies and Reforms](#), 2013



## HLP 2: Balance Innovation and Risk to Achieve Digital Financial Inclusion

**Statement of the HLP:** Balance promoting innovation to achieve digital financial inclusion with identifying, assessing, monitoring, and managing new risks.

### 2.1 Context: Importance of the HLP, Statement of Challenges in Current Market Contexts

Maintaining the stability and integrity of the financial system and fostering the development of a system that is open and inclusive is a balancing act that can be hard to achieve. Innovation in financial services has provided ample opportunity to extend the reach and usability of financial services, making them more accessible than ever before. However, with greater innovation comes new and at times unforeseen risks. The [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#) provides more detail on balancing innovation and risks. HLPG 6 (Consider Developing a Regulatory Framework That Supports Responsible Innovation in Private and Public Sectors) is particularly relevant.

The introduction of new products utilizing new methods for reaching and interacting with clients can bring about new threats. Providing services to newer consumers, who may be less familiar with engaging with financial services and/or innovative products, can leave them vulnerable; the speed of change in how customers engage with financial services can see regulators playing catch-up with the industry. This is particularly true for EMDEs, where one finds a greater proportion of vulnerable groups that are excluded from the formal financial system.

Finding the right balance means creating an environment that adapts agilely to the changing landscape of financial services while also understanding the types of consumers that innovative services are trying to reach. This

translates to having an evidence-based financial inclusion strategy, outlining clear objectives for meeting the needs of the target populations, and coupling this with a proportionate regulatory framework (*see chapter 3, on HLP 3*) that will allow for innovative services to grow and thrive, to serve these groups in a safe and efficient way.

It is important to note that many of the tools and approaches outlined in this chapter will be relevant to, and discussed in, subsequent chapters of this guide. Their reference here is to highlight their importance to achieving an overarching policy environment that protects consumers and financial systems while facilitating access for all. The context for which these tools are discussed in subsequent chapters will be relevant to the specific context of those chapters.

### 2.2 A Framework for Implementing HLP 2

#### (a) Understanding and Managing the Risks in a Jurisdiction

Understanding and managing risks will be essential to establishing an effective framework. In the context of DFS, risks can come in many forms:

- Financial stability risks
- Financial integrity risks
- Risks to consumers

The regulatory and supervisory framework for overseeing the provision of various DFS in a given jurisdiction should be designed to address these challenges while ensuring that the approach taken is implemented in a manner that safely ensures access for excluded groups.

There are a number of international standards, guidance, and resources that authorities should reference when working to produce a balanced policy environment for promoting innovation.

*(i) Implementing a Proportionate Approach to Regulating and Supervising Banks and Non-Banks*

The [Guidance on the Application of the Core Principles for Effective Banking Supervision to the Regulation and Supervision of Institutions Relevant to Financial Inclusion](#) examines the risks presented by banks and other financial institutions in their endeavors to reach unserved and underserved customers and, using the lens of the Basel Core Principles for Banking Supervision, guides prudential supervisors on the application of a proportionate regulatory and supervisory approach. Getting the balance right between promoting innovation and managing risk requires, at a foundational level, the effective application of the underlying principle of proportionality to how financial institutions are regulated and supervised. To do this effectively, regulators can learn from experiences in their own and other jurisdictions, recognizing that an agile approach will also be important.

A critical aspect of this is the application of proportionality to how non-bank financial institutions—including

payment service providers (PSPs), microfinance institutions, and fintechs—are regulated and supervised—particularly because they tend to be the drivers of inclusion-focused financial services. Ensuring a regulatory regime that adequately addresses the risk in their business models will be a key component to allowing for greater innovation in a market. Given that many of these providers are PSPs offering transaction and store-of-value services, there is an important role for payment system overseers to ensure that they conduct their activities in a manner that is safe for consumers and doesn't undermine the stability of the overall financial system. Ultimately, several fundamental questions need to be asked, and the guidance provides a useful overview against each of the Basel Core Principles. Box 2.1 provides an example of how the principle of proportionality has been applied in regulating non-banks in Malaysia.

The guidance also touches on managing illicit financing and consumer protection risks. These are broadly in line with principles/guidance specific to these areas. These are discussed separately below.

Recent research has shown that it is not always easy for EMDEs to weave proportionality into their approach to regulating and supervising financial institutions. The fol-

**ADDITIONAL INSIGHT:** In many markets, the primary providers of financial services for previously unserved and underserved consumers are non-bank financial institutions, including PSPs and postal systems. An effective proportionate approach under HLP 2 requires a comprehensive view, and coherent alignment, of the rules, as they apply to all institutions serving customers, not just banks. This is essential to achieve a regulatory regime that adequately addresses the risk in their business models will be a key component to allowing for greater innovation in a market.

**BOX 2.1**

**Malaysia: Effective Application of Principle of Proportionality and Approach to Regulating Non-Banks**

The Development Financial Institutions Act of 2002 takes into consideration the diverse characteristics and unique roles, functions, and objectives of development finance institutions in Malaysia. While Basel III standards have been implemented for banking institutions in Malaysia, they have not been applied to development finance institutions in Malaysia, so as not to harm their development objectives. The central bank has applied specific prudential requirements to development finance institutions, recognizing their specific role within the financial market related to agent banking, microfinance, microsavings, and SME lending.

lowing studies provide a helpful summary of challenges faced, which are particularly relevant for developing countries.

- Bank for International Settlements (BIS) and World Bank: [Proportionality in Bank Regulation and Supervision—A Joint Global Survey, 2021](#)
- BIS: [Fintech and Payments: Regulating Digital Payment Services and E-money](#) (FSI Insights on Policy Implementation No. 33), 2021

*(ii) Applying a Risk-Based Approach to Managing Risks of Money Laundering and Terrorist Financing*

Undertaking an effective AML/CFT risk assessment allows policy makers to understand the specific risks of money laundering and terrorist financing potentially facing a jurisdiction and to highlight areas of low risk, enabling officials to focus AML/CFT resources on areas of higher risk and to conduct simplified customer due diligence (CDD) where the risk of money laundering and terrorist financing is proven to be lower (for example, to facilitate financial inclusion involving certain low-value transactions and/or account balances). [The Financial Action Task Force \(FATF\)](#) outlines how authorities should conduct a national risk assessment and adopt the risk-based approach to the global standards to implement an effective AML/CFT regime that mitigates risks of money laundering and terrorist financing while facilitating financial inclusion.<sup>14</sup>

The application of an effective risk-based approach (just as with the application of the principle of proportionality when developing financial regulations) is essential to achieving an appropriate balance between promoting innovation and managing the risks of digital financial inclusion and DFS. In many countries, failure to apply the risk-based approach can present unnecessary obstacles to the use of innovative financial services to address financial inclusion barriers.

*Chapter 3 provides a detailed overview of the importance of adopting a risk-based approach when developing an effective AML/CFT framework as part of a broader regulatory framework.*

*(iii) Making Reasonable Adjustments to the Consumer Protection mechanisms to Account for Innovative Financial Services*

Ensuring that consumers are always protected and possess effective mechanisms for redress is a critical aspect for consideration when wanting to drive greater innovation for financial inclusion. The importance of effective consumer protection is recognized in the HLPs, and HLP

5 is dedicated to the issue. *How to implement an effective financial consumer protection regime is discussed in chapter 5.*

**(b) Developing the Tools Needed to Support Innovation:**

Once policy makers have a handle on the risks in their jurisdictions, the next step is to consider how to take a proportionate approach to mitigating them. Policy makers can begin to explore how further to promote innovation in their market, to address specific financial inclusion challenges. It is important to remember that new risks will also emerge with the entrance of new approaches and innovations to delivering financial services. As such, an agile approach is needed, and where required, a reassessment of mitigation processes will be required.

*(i) Creating Effective Knowledge-Sharing Mechanisms with the Private Sector, with Good Representation and Clear Communication Channels*

Establishing tools for ongoing engagement with industry stakeholders is important to ensuring a cohesive strategy for addressing financial inclusion challenges. Such engagement is also important for encouraging the private sector to develop secure and simple user interfaces for their services that make them easy to use and accessible to underserved groups (see box 2.2 for examples) while also minimizing the risk of mistaken transactions and unauthorized or illegal use.

The technical report [Cooperation Frameworks between Authorities, Users and Providers for the Development of the National Payments System](#) offers useful insights into how effective cooperation frameworks can be utilized to advance financial inclusion objectives, by designing financial infrastructures in close cooperation with the private sector. While the context of national payment systems is specific (looking at establishing payment councils), the guidance offers a particularly useful overview of the value of cooperation frameworks and outlines approaches that can be helpful to engaging with the private sector in the context of driving innovative financial services more broadly.

In addition to the formal structures of payment councils, there is also value in maintaining regular engagement with various industry bodies that represent subsectors of the financial sector to understand developments at the industry level and, also importantly, to foster an understanding of the financial inclusion objectives of the country. At a more granular level, arranging informal check-ins and presentations with financial institutions



## BOX 2.2

### User-Centric Design Critical to Addressing Vulnerable and Priority Groups

User-centric product design is critical to improving the ways individuals engage with digital payments in their diverse societal roles. The massive expansion in big-data analytics, artificial intelligence (AI), and machine learning (ML) tools to mine for trends and personalize products is bringing tailored experiences within reach. Equipped with data from digital payment platforms and linked social media, telecoms, and geospatial inputs, providers can cater to an individual user's behavioral and psychological traits. There have been some notable private-sector innovations aimed specifically at underserved users. Some examples include voice-based mobile phone applications for the visually impaired or consumers with limited numeracy/literacy,<sup>15</sup> platform-based models to enable homeless individuals to open basic bank accounts, ultra-short-term car insurance for those who cannot afford longer-term insurance, and using cash to buy from online merchants.<sup>16</sup>

However, digital payments remain designed primarily for the average user, rather than those on the margins. Many providers simply roll out pared-down versions of their "mainstream" products to low-income markets, addressing affordability concerns but investing little to assess the nuances of how low-income users transact with and use the products. Insufficient private-sector oversight has prompted regulators in some markets to push for more proactive design and distribution requirements through policy and product-intervention powers. Examples include the use of natural-language processing to improve recourse by providing conversational, personalized support via chatbots and robo-advisors. However, if not carefully designed, these approaches could potentially lead to privacy, data-security, and discrimination concerns that we are only beginning to understand.

Utilizing such tools to safely share insights into how to improve financial products and services can be a highly effective, positive way for policy makers to influence design to enhance products' usefulness for consumers.

in a jurisdiction will help to ensure that policy makers remain abreast of product developments and enhancements, providing opportunities to respond to such advancements with effective and balanced oversight.

Innovation offices are another useful tool. They provide a structure for engaging with and providing regulatory clarification to FSPs that seek to offer innovative products and services. Innovation offices can be a useful tool for striking the right balance because they can improve understanding of technology-enabled financial innovation and support appropriate regulatory responses. Innovation offices can be given a wide range of names, but they are essentially established to enhance communication on innovation in financial services in a safe way. The Office of the United Nation's Secretary General's Special Advocate for Inclusive Finance for Development has a [useful publication](#) that outlines several examples of how innovation offices have been established. Boxes 2.3 and 2.4 provide useful examples of approaches taken in Japan and Brazil.

#### *(ii) Creating Safe Testing Environments for New Innovations*

There are various policy tools that can be used to test new innovations safely, particularly when an existing regulatory framework may not sufficiently address the potential risks of these new technologies.

Sandboxes are one of these tools. They allow policy makers to create a live testing environment for new financial services and business models with actual customers, subject to certain safeguards and oversight. Sandboxes can be resource intensive and expensive to establish. Their usefulness can vary depending on how well developed a country's fintech sector is.

CGAP's [How to Build a Regulatory Sandbox: A Practical Guide for Policy Makers](#) is intended to help financial regulators work through the process of deciding whether a regulatory sandbox is suitable, given their regulatory regime, and, if so, how to design and implement a successful sandbox. Using decision trees, it helps authorities



### BOX 2.3

## Innovation Offices and Desks

**Japan's** Financial Services Agency has established a FinTech Support Desk to provide consultation services to business operators, along with a FinTech PoC (proof of concept) Hub that supports fintech firms and financial institutions in conducting unprecedented tests, to enhance user convenience and develop services that contribute to addressing social challenges through digital innovation. The FinTech Support Desk was established in December 2015. From then until the end of April 2022, it dealt with 1,665 inquiries in total. The FinTech PoC Hub was established in September 2017. Since then, it has accepted eight projects and was supporting two cases as of April 2022. In addition, Japan's Financial Services Agency holds FIN/SUM, an international conference of financial institutions, start-ups, tech engineers, and academia, to promote innovation through fintech.



### BOX 2.4

## Knowledge Sharing

In 2018, Brazil's central bank initiated several innovation programs, including the Laboratory of Financial and Technological Innovations (Lift). Lift is a virtual collaboration hub aimed at encouraging technological innovations and knowledge exchange between the regulator, academia, market providers, fintech innovators, and other interested stakeholders on the topic of financial inclusion.

to work through whether their specific market environment is suited to establishing a sandbox and, if so, the steps and important considerations for establishing one.

Using country case studies and analysis of operations and outcomes of fintech sandboxes globally, the World Bank report [Global Experiences from Regulatory Sandboxes](#) outlines the benefits, challenges, and lessons learned from the implementation experiences of 73 unique fintech sandboxes in 57 countries. The paper provides useful insights for authorities wanting to establish a new fintech sandbox or to evaluate an existing one. Most of the lessons are drawn from EMDEs, offering useful context for those wanting to explore sandboxes as a potential policy tool for driving greater financial inclusion. See box 2.5 for an overview of the approach taken to developing regulatory sandboxes in Thailand.

Sandboxes are just one tool for testing new business models. Chapter 2.1 of the World Bank's paper [Digital Financial Services](#) provides a useful overview of other policy approaches, such as the use of the "wait and see" and "test and learn" approaches.

### *(iii) Acting as a Catalyst for Innovation and Change*

Not all innovation comes from the private sector. There is a role for public authorities to drive innovative approaches and/or create new systems that ameliorate existing barriers to financial inclusion.

Policy support for enhanced credit reporting systems can play an important role in expanding access to financing for underserved users. Lack of credit data is one of the major obstacles to individuals and MSMEs obtaining financing in developing countries. Despite the insufficient credit data, MSMEs and individuals generate vast amounts of non-credit digitized data daily. MSMEs and individuals are leaving vast digital footprints and data trails on mobile and online payment platforms, social networks, and other non-banking platforms, such as online record keeping and trade transactions. Traditional and nontraditional lenders are now leveraging alternative data, including transactional (payment) data, behavioral data, and social media data, to determine capacity and willingness to repay loans. Alternative data is also being used to provide granularity on customer prefer-

**ADDITIONAL INSIGHT:** Regulators are exploring multiple ways to engage with innovators. One approach is “office hours” that let innovators meet with regulators and ask questions in a safe, off-the-record environment. Another way is to form teams to consult with innovators around licensing and other regulation. A variant is to establish specific product-based teams that are responsible for providing deep domain expertise related to specific product trends.



## BOX 2.5 Use of Sandboxes

In Thailand, three different regulators have launched regulatory sandboxes: the Bank of Thailand, Securities and Exchange Commission, and Office of Insurance Commission. Each sandbox covers a different aspect of the financial system (payments, remote identity verification, and insurance, respectively) and differs in approach, eligibility, and mandate. The Bank of Thailand’s sandbox focuses on new “never-before-seen” innovations and thus far has focused on QR codes and cross-border payments. The Securities and Exchange Commission’s sandbox allows fintechs to test new electronic know-your-customer (KYC) technologies, and the Office of Insurance Commission’s sandbox has enabled insurers, agents, and insurtech firms to test insurtech innovations. The sandboxes also complement Thailand’s fintech hub F13 (launched by the Thai fintech association), working together to develop a fintech ecosystem. F13 provides space for fintech start-ups to test and validate their services with customers. As a result of these multiple initiatives, new regulations and initiatives were introduced for robo-advisory, peer-to-peer (P2P) lending, electronic KYC, and QR payments.

ences and behaviors, which can help in designing new financial products and services. Credit reporting service providers have also begun adopting alternative data for creditworthiness evaluation. The use of alternative data in credit reporting can promote access to credit for borrowers with “no credit files,” while it can also complement traditional data for borrowers with “thin credit files.” At the same time, efforts to introduce collateral registries for movable assets can play an equally important role in expanding credit to MSMEs, given that many do not have fixed assets that can be collateralized to obtain access to low-cost credit facilities. The recognition of movable assets must also come with the digitization of collateral registries that can maintain up-to-date records of liens against such assets in real-time, which by definition can move around and change hands much more easily than can fixed assets.

In some jurisdictions, authorities have extended the sharing of data among financial institutions (open banking) to include nonfinancial institutions such as utility companies, recognizing the potential impact that the portability of nonfinancial data might have on greater access

to financial services for unbanked populations. Access to a broader range of data can provide a detailed picture of customers’ financial lives, so providers can better assess their needs and habits, allowing for a greater provision of financial service. The Bank of Indonesia’s open application programming interface (API) standard provides useful insights into how data sharing can be facilitated; this is discussed in box 2.6. In the paper “Open Banking: How to Design for Financial Inclusion,” CGAP provide a useful overview of 12 open banking regimes, to understand how they can be designed to enable products and business models that benefit financial inclusion.

Interest in developing central bank digital currencies (CBDCs) as a tool for addressing financial inclusion challenges has grown significantly over recent months. The BIS defines a CBDC as “central bank-issued digital money denominated in the national unit of account... [that] represents a liability of the central bank. If the CBDC is intended to be a digital equivalent of cash for use by end users (households and businesses), it is referred to as a ‘general purpose’ or ‘retail’ CBDC.” While interest in CBDCs, particularly among EMDEs,



## BOX 2.6

### Bank Indonesia Open API Standard

The Central Bank of Indonesia, in cooperation with the payment system industry, developed the [National Open API Payment Standard \(SNAP\)](#) as part of its Indonesia Payments System Blueprint 2025 deliverable. SNAP encompasses (i) a technical and security standard, (ii) a standard on data and technical specification, and (iii) guidelines for interconnected and interoperable open API payment governance. The goal of this initiative is to foster innovation, encourage dynamic collaboration, and promote interconnectivity and interoperability within the financial sector.



## BOX 2.7

### The eNaira: The Central Bank of Nigeria's Digital Currency Initiative

On October 25, 2021, the Central Bank of Nigeria (CBN) introduced the eNaira, a digital form of its currency. Key motivations for issuance were to enable households and businesses to make fast, efficient, and reliable payments while benefiting from a resilient, innovative, inclusive, and competitive payment system. The objective clearly focuses on greater access and usage for individuals and businesses to the financial system.

According to the World Bank Findex, only 45 percent of Nigerians have access to an account at an FSP. The lowest levels of inclusion are in the less-developed northern parts of the country, among women and lower-income groups.

Like other (live and planned) CBDCs, the eNaira uses a two-tier architecture, where the Central Bank of Nigeria acts as an issuer, and banks distribute the CBDC to the broader economy. Non-banks, such as e-money issuers, cannot distribute independently but can work with banks to facilitate specific use cases. The eNaira infrastructure uses distributed ledger technology (DLT) and account-based access (based on identification). CBDC accounts are available via the eNaira Speed Wallet app on smartphone devices. Transactions can be initiated using USSD on feature phones. The central bank is currently exploring approaches to facilitating offline functionality, although this is not live yet, and it has implemented simplified due diligence, using national ID and verification tools to facilitate access.

is growing, there remains few examples of live deployments from which to learn. Countries such as the Bahamas, Nigeria, and the Eastern Caribbean Monetary Union have issued digital forms of their currency, but these are still in very early stages of development. (See box 2.7 for an overview of the first CBDC deployment in Africa—Nigeria's eNaira.) A recent publication by the World Bank and BIS— "[Central Bank Digital Currencies: A New Tool in the Financial Inclusion Toolkit?](#)"—explores the potential of CBDCs to address financial inclusion barriers. Through interviews with nine jurisdictions with advance thinking on either CBDCs or financial inclusion, the authors argue that CBDCs are

not a panacea for financial inclusion challenges, but, if CBDCs are issued to address such challenges, specific design features should be implemented.

The guide [Central Bank Digital Currencies: A Payments Perspective](#) by the World Bank offers a perspective to authorities that do want to explore potentially issuing a CBDC to address some of their financial inclusion barriers. The guide offers a comprehensive overview of some of the key questions policy makers need to ask to do this effectively. A joint paper<sup>17</sup> between the BIS and World Bank provides an overview of the importance of designing a CBDC with inclusion in mind, should authorities

want to address pervasive financial inclusion barriers by issuing one. CBDCs can also be tailored to be more user-friendly to the disabled and vulnerable populations. For example, the People's Bank of China has designed voice-based user interfaces for the digital yuan, or e-CNY, for the visually impaired and those with poor digital skills. Meanwhile, the Central Bank of Hungary is piloting retail CBDC services for children, to make sure it is user-friendly and accessible to all.

It is important for public-sector authorities to consider ways to oversee the governance of key public infrastructures—such as digital ID, open banking, credit reporting systems, retail fast payment systems, ICT infrastructure, and CBDCs—irrespective of whether these are operated by the private sector or provided by public authorities. Additionally, where the dominance of one or a handful of

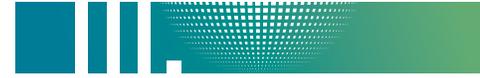
entities creates monopolies, issues of competition and abuse of market power should be important considerations. See *chapter 4* for a detailed discussion of the governance of key public infrastructures.

## 2.3 Looking Forward

Getting the balance right between protecting the stability, integrity, and users of a financial system while creating an inclusive innovation-driven sector is challenging. Policy makers must learn from the experiences of others and apply those to their specific country context and financial inclusion challenges. Implementing an effective and agile regulatory framework is an important aspect to be considered. (*Chapter 3* provides useful insights into how to do this.)

### Resources Relevant to HLP 2

- BIS: [Fintech and Payments: Regulating Digital Payment Services and E-money](#) (FSI Insights on Policy Implementation No. 33), 2021
- World Bank: [Impact of the FATF Recommendations and Their Implementation on Financial Inclusion: Insights from Mutual Evaluations and National Risk Assessments](#), 2021
- World Bank: [Digital Financial Services](#), 2021
- BIS, World Bank: [Proportionality in Bank Regulation and Supervision—A Joint Global Survey](#), 2021
- BIS, World Bank: [Central Bank Digital Currencies: A New Tool in the Financial Inclusion Toolkit?](#), 2022
- CGAP: [The Evolving Nature and Scale of Consumer Risks in Digital Finance](#), 2021
- World Bank: [Central Bank Digital Currencies: A Payments Perspective](#), 2021
- CGAP: [Technical Guide on How to Build a Regulatory Sandbox](#), 2020
- World Bank: [Global Experiences from Regulatory Sandboxes](#), 2020
- UNSGSA: [Early Lessons on Regulatory Innovation to Enable Fintech](#), 2020
- G20/GPFI: [Use of Alternative Data to Enhance Credit Reporting to Enable Access to Digital Financial Services by Individuals and SMEs Operating in the Informal Economy: Guidance Note](#), 2018
- FATF: [Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion, with a Supplement on Customer Due Diligence](#), 2017
- FATF: [Terrorist Financing Risk Assessment Guidance](#), 2019
- FATF: [Mitigating the Unintended Consequences of the FATF Standards](#), 2021
- BCBS: [Guidance on the Application of the Core Principles for Effective Banking Supervision to the Regulation and Supervision of Institutions Relevant to Financial Inclusion](#), 2016
- ITU: [Cooperation Frameworks between Authorities, Users and Providers for the Development of the National Payments System](#), 2016
- FATF: [FATF Guidance: National Money Laundering and Terrorist Financing Risk Assessment](#), 2013
- IFC: [Digital Financial Services and Risk Management](#)



## HLP 3: Provide an Enabling and Proportionate Legal and Regulatory Framework for Digital Financial Inclusion

**Statement of the HLP:** Provide an enabling and proportionate legal and regulatory framework for digital financial inclusion, taking into account relevant G20 and international standard-setting body standards and guidance.

### 3.1 Context

HLP 3 calls for a **legal and regulatory framework** for DFS that is **predictable, risk based, and fair** and that does not impose excessive non-risk-based compliance costs. Such a framework (i) includes a careful assessment of the relevant risks, (ii) provides market participation rules, (iii) establishes a fair and open level playing field for participants, and (iv) ensures efficient supervision. The overall policy environment and regulatory framework should reflect a **proportionate and enabling approach to regulation**, as described in chapter 2.

This chapter identifies the challenges associated with establishing such a regulatory framework and frames the solutions proposed by global standard-setting bodies, international financial institutions, the GPF, and other international entities to meet these challenges. It provides examples of key actions required to develop an enabling and proportionate legal and regulatory framework. It constructs current, and more in-depth, guidance on implementation (priority actions) of HLP 3.

This chapter builds upon the recent key reference documents (from both standard-setting bodies and other international entities) to which policy makers, regulators, and supervisors can turn for deeper coverage and guidance on various topics, structured from the basics to the more cutting-edge –and rapidly evolving– issues. Lastly, it provides country examples of challenges faced and solutions to address them.

On a number of specific themes, this chapter builds on the analysis provided in the 2017 G20 report [Digital Financial Inclusion: Emerging Policy Approaches](#). This GPF report covers—in relation to HLP 3—the expansion of the risk-based approach, including the expansion of risk-based (tiered) CDD (with IDs as a critical facilitator), the development of a functional (activities-based) approach to regulation, and the opportunity of leveraging technology to strengthen regulation and supervision.

Acknowledging that there is no single recipe, this guidance addresses primarily the concerns of EMDEs, where many people are digitally excluded, vulnerable, and underserved. It considers the [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#) to be a key reference point—in particular HLP 5 (Support Regulatory and Legal Reforms That Reduce Unequal Access to Responsible Digital Financial Services, which Results from Social, Economic, and Cultural Inequalities).

Rapidly changing market conditions—with new business models, new players, new products and services, changing customer segments, and the speed of innovation—mean that regulators and supervisors are challenged, in low-income countries in particular but also in medium- and high-income countries, by how to regulate and supervise DFS in ways that enable inclusion while protecting customers and the integrity and stability of the financial system. Regulators in EMDEs—low-income countries in particular—face higher levels of financial exclusion, a particularly rapid evolution of market con-

ditions, and limited supervisory capacity with which to respond to a new regulatory architecture. In short, all regulators and supervisors—across countries of different income levels—are asked to regulate and supervise in relation to a rapidly moving target: innovation.

The essential elements of a regulatory framework for digital financial inclusion build on basic regulatory enablers for DFS and incorporate next-generation regulatory topics, identifying and drawing from internationally recognized reference points, including (i) international standard-setting bodies, (ii) international financial institutions: the World Bank and International Monetary Fund, including the Bali Fintech Agenda,<sup>18</sup> (iii) the G20 and GPMI, and (iv) other international bodies.

## 3.2 A Framework for Implementing HLP 3

### (a) Four Fundamentals of Regulating the DFS Landscape

The basic parameters of a DFS regulatory environment include market participation (entry requirements), prudential requirements, market conduct and integrity, financial consumer protection, AML/CFT safeguards, and an insolvency regime. The regulatory environment will optimally be technology neutral and flexible enough to accommodate new providers and product innovations. Four (related) fundamental attributes of the DFS regulatory framework are explored here.

The first fundamental attribute is the application of a risk-based approach, based in the application of the principle of proportionality. (See also *chapter 2, on HLP 2.*) Under a risk-based approach, regulation and supervision should be scaled in line with the DFS provider's business model and related risk profile. Otherwise, regulatory requirements and supervision/examination could impose excessive compliance costs that affect the provider's viability and ability to cater to underserved populations without significantly strengthening efforts to combat money laundering and terrorist financing. As stated in *chapter 2*, proportionality demands a solid knowledge of both a jurisdiction's risks of money laundering and terrorist financing and specific DFS business models and their benefits and risks. A risk-based approach should be applied in all phases of DFS regulation and supervision—from licensing and authorization to enforcement—to avoid stifling responsible innovation.

As noted in the previous chapter, within a risk-based approach, similar risks are regulated in a similar man-

ner, including an appropriate risk-based approach to supervision, oversight, and examination. It is integral to proportionality that supervisory procedures align with the risk profile of DFS providers and their systemic importance. This helps authorities optimize their use of scarce resources and avoid stifling responsible DFS innovation and growth.

The second fundamental attribute is the establishment of a clear regulatory perimeter, involving decisions regarding which types of FSPs (and associated third-party providers) and which activities are covered by the jurisdiction's regulations (that is, brought within the regulatory perimeter), and what type of activities are covered by licenses or registration. This entails determining whether new types of licensing or registration categories are needed; FATF has, for example, addressed this issue in its *Updated Guidance for a Risk-Based Approach to Virtual Assets and Virtual Asset Service Providers*.

How wide should the regulatory perimeter be cast? It is incumbent upon regulators to determine which new activities (products) and which new entities fall within the regulatory perimeter (that is, which require authorization/licensing, including the necessary interagency coordination, and regulatory requirements). The diverse ecosystems and new providers increasingly include nonfinancial companies that offer different types of both financial and nonfinancial products and services to low-income customers and micro and small businesses; regulators need to determine whether to regulate—and, if so, when and how to regulate—such nonfinancial companies that are acting as financial product/services originators, delivery channels, or providers themselves. With the help of the modularization of the value chain in delivering financial services, products can be integrated and rebundled in different ways, including by nonfinancial companies (for example, platforms) as embedded finance. (See [CGAP deck on modular services](#).) Embedded finance (referred to as EmFi) presents greater challenges, since the scale of effects is greater on the financial services markets than on bigtech. Part of the exercise of establishing the regulatory perimeter may involve launching initiatives to facilitate the adoption of responsible innovation in the financial system, such as innovation hubs, regulatory sandboxes, and innovation accelerators, allowing for initial regulatory responses within new ecosystems. Such initiatives can allow for a flexible, risk-based approach to establishing the regulatory perimeter, albeit with adequate oversight, to test new models before licensing. (See *chapter 2 on the use of sandboxes*; see below on



### BOX 3.1

## Defining the Regulatory Perimeter

**Uganda, Ethiopia, and Pakistan** each recently created a separate e-money issuer category for non-bank providers. Uganda has recently shifted from a bank/non-bank partnership model, where mobile network operators could not offer e-money services without a partnership with a bank, to bringing a non-bank model within the regulatory perimeter, whereby non-bank e-money issuers can offer services directly to customers.

In March 2022, the **Central Bank of Kenya** issued a regulation on digital credit for the licensing and supervision of digital credit providers, which were previously unregulated—that is, outside the regulator perimeter. Kenya was already a globally recognized example of the development of a regulatory perimeter for e-money. This began with a test-and-learn approach for the mobile money operator Safaricom, offering a restricted license while providing regulatory oversight.

**Mexico's 2018 Financial Technology Institutions Law** corresponds to the interest in having a single, all-encompassing law designed to establish the regulatory perimeter to cover the full range of fintech innovations, including, for example, crowdfunding institutions. There are, however, challenges to having a single law that draws the perimeter for all types of fintech entities. (See CGAP's "[Is Mexico's 'Fintech Law' Leading a New Trend in Fintech Regulation?](#)")

In 2020, the Central Bank of the Republic of **Argentina** extended the application of the Law on Financial Institutions to "other nonfinancial credit providers" and "nonfinancial companies that issue credit and/or purchase cards" (including digital lending companies), establishing that they will be bound by the rules on the "protection of users of financial services" with respect to the financing they provide. This includes regulations on disclosure and transparency with respect to interest rates, communication through electronic means, reporting systems for complaints, and submission of data. In May 2022, the central bank issued a communiqué prohibiting financial institutions from offering services to its clients related to digital assets not authorized by the central bank or another Argentine authority. The central bank prohibited financial institutions from performing nonfinancial activities that it had not approved.

**Dubai recently established** a separate Virtual Assets Regulatory Authority, underpinned by a law creating a legal framework for crypto assets in the Emirate of Dubai aimed at protecting investors and "designing much-warranted international standards" for industry governance. The new authority—distinct from the Dubai Financial Services Authority—creates a separate regulatory perimeter for crypto assets.

innovation facilitators.) Box 3.1 illustrates how regulatory perimeters have been defined by a few jurisdictions.

Related to the regulatory perimeter is the question of the licensing regime. It is important to ensure clear and consistent criteria for market participation and for offering specific types of DFS. There is a need to find a balance between a proliferation of new licensing windows and a broad, all encompassing, regulatory framework, balancing specificity and flexibility.

CGAP's "[How Can Licensing Regimes Keep Up with Financial Innovation in 2020?](#)" outlines options for

licensing regimes. It concludes that overly restrictive licensing requirements can **impede competition**, while excessively lax licensing can put systems and consumers at risk. Regulators should increase flexibility in their licensing regimes to accommodate innovation but keep risks at bay.

Digital transactions now routinely occur across a diverse ecosystem of players and platforms, and the relationships between actors that use digital payments (merchants, suppliers, individuals) and actors that provide or enable these payments (agents, aggregators, banks) are becoming more complex. Added to the com-

plexity is the rise of nonfinancial companies engaging in the financial value chain. (See above.) Regulators should determine how to ensure responsible behavior across the entire transaction value chain. Regulatory and supervisory challenges regarding platforms include (1) addressing risks in the area of data protection (questions around the control of data and customers' rights in the use of data are far from settled); (2) addressing threats to competition introduced by platforms and embedded finance; and (3) analyzing risks that may complicate fundamental decisions about when and how to regulate. It is important to be aware that activities extend beyond the domain of financial regulation, creating financial commitments and risks that might not be monitored. Regulators and supervisors may need to involve other domestic authorities in regulating the platform in areas such as competition, labor, consumer and data protection, telecom, and a range of commercial sectors. This necessitates a working mechanism for regulatory coordination. Also, certain platforms around the globe operate across multiple countries, which might call for international regulatory and supervisory cooperation. (See the February 2022 story “[3 Regulatory Challenges Posed by Platform-Based Finance](#)” on the CGAP blog.)

In most jurisdictions, accountability for these actors rests with the providers that hold a custodial responsibility over users' funds. However, user touchpoints, particularly at the last mile, are often with agents and third parties; there needs to be more clarity on who is responsible for either detecting or offering recourse for problems. For example, in Tanzania, a PSP is liable for omissions or errors by its agents, within the scope of agency agreements.

A third fundamental attribute is the decision to regulate activities or entities (or both). Within the world of global standard-setting bodies, increased attention is being given to regulation by activities, rather than by entity. Yet [the BIS has noted](#) that given the unique set of challenges that are generated by bigtechs' entry into financial services (such as the concentration of market power and data governance), a purely activities-based framework for regulation is likely to fall short of an adequate response to the policy challenges associated with bigtech. It notes the scope to address the policy challenges of bigtechs by developing specific entity-based rules that complement activities-based requirements.

The question of competition—the fourth fundamental attribute—is related to the questions of regulatory

perimeter and activities-based versus entity-based regulation. Regulators need to be aware that the features of fintech models, such as platform-based business models, may raise significant risks to fair competition. The Bali Fintech Agenda calls for the reinforcement of competition and a commitment to open, fair, and contestable markets. A recent occasional paper from the Financial Stability Institute, [Fintech Regulation: How to Achieve a Level Playing Field](#) (February 2021), outlines different approaches to competition.

These four fundamental tenets for DFS regulation underpin the consideration of a wide range of policy parameters, sketched out in the following sections of this chapter. (See box 3.2 for country examples of the four fundamental tenets.)

### (b) Basic Enablers/Prerequisites

In 2018, CGAP published the focus note [Basic Regulatory Enablers for Digital Financial Services](#), which policy makers and regulators now take as an industry reference point. It describes four enablers that are viewed across the DFS universe as necessary (although not sufficient) conditions for DFS to flourish. Along with the fundamentals outlined in the previous section, they serve as a basis for consideration of the further regulatory elements in the following two sections of this chapter. Box 3.3 highlights sound practices in implementing the following four basic enablers:

1. **Non-bank e-money issuance:** A basic requirement is to create a specialized licensing window for non-bank DFS providers to issue e-money accounts (also called prepaid or stored-value accounts) without being subject to the full range of prudential rules applicable to commercial banks and without being permitted to intermediate funds.
2. **Use of agents:** DFS providers—both banks and non-banks—are permitted to use third-party agents, such as retail shops, to provide customers access to their services. A CGAP [technical note](#) focuses on regulating DFS agent models within an enabling framework that fosters financial inclusion.
3. **Risk-based CDD:** A proportionate regulatory framework is adopted, allowing simplified CDD for lower-risk accounts and transactions. This is also relevant to the implementation of HLP 7. FATF adopted a risk-based approach to CDD, as detailed in the relevant FATF recommendations and guidelines. This is a fundamental component of AML/CFT compliance and monitoring.



## BOX 3.2

### Country Examples of Addressing the Four Fundamental Tenets for DFS Regulation

**Proportionality and risk-based approach:** In Bangladesh's National Risk Assessment, financially inclusive products have been recognized as products with low risks of money laundering and terrorism financing. As such, banks and financial institutions adopt the risk-based approach and apply a simplified KYC process for such products to support financial inclusion.

**Regulatory perimeter:** Singapore's Payments Services Bill (2019) replaced two pieces of legislation with one "modular" framework, encompassing seven types of services within the same framework, offering different types of licenses depending on the regulated activities performed and the related business volumes. (See also box 3.1 for more examples.)

**Regulating activities or entities:** *Work by Dvara Research* in India indicates that activities-based regulation may better complement the objectives of consumer protection. It proposes that the Reserve Bank of India define "credit" in a manner that includes products that provide the functionalities of credit. All such activities should be subject to uniform consumer protection regulation. *The Financial Stability Institute of the BIS* argues that a combination of activities-based and entity-based rules may be more appropriate: looking at activities is meaningful in relation to the large numbers of new models, while looking at entities is important given the market positions of large players such as bigtechs (given the risk of institutional failure). This view is becoming more widespread. Also see the FSI's *Entity-based vs activity-based regulation: a framework and applications to traditional financial firms and big techs*.

**Competition:** In South Africa, non-banks are required to partner with a bank to offer payment services. To relax the constraint and open the market to broader competition, giving non-banks the power to clear and settle certain transactions is under consideration. Payment services will also be a regulated activity in terms of the Conduct of Financial Institutions Act, which the National Treasury aims to table in parliament during 2022.

(This is incorporated in FATF's 2017 [guidance on AML/CFT measures and financial inclusion](#).) Depending on risk and available risk mitigants, simplified CDD may be appropriate for opening and using e-money accounts and conducting over-the-counter transactions with DFS providers. The point was underlined in the 2017 GPF report. A CGAP technical note provides guidance on using risk-based approaches to CDD, supported by examples drawn from around the world.

4. **Consumer protection:** Consumer protection rules are tailored to the full range of DFS providers and products—providing a necessary margin of safety and confidence. Treatment of this enabler is deepened in the paper [Making Consumer Protection Regulation More Customer-Centric](#) (CGAP, June 2020). Whether as a basic enabler or in relation to the newest innovations in the delivery of financial services,

financial consumer protection and capacity building are essential to ensuring the appropriate balance of innovation and risk. See *chapter 5 for a detailed overview of key considerations for implementing an effective financial consumer protection regime*.

#### (c) Further Policy Elements in the Rapidly Evolving Context: Enabling New Technologies while Mitigating Risks

[Fintech and the Future of Banking](#) (a CGAP web page) notes that new business models emerging among fintechs, digital banks, and platforms enable challengers and incumbents alike to put useful, user-friendly, lower-cost solutions into the hands of poor customers so that they can use them to improve their lives. At the same time, the rapid evolution of these models leads to ever-increasing regulatory challenges.



### BOX 3.3

## Sound Practices in Implementing the Four Basic Enablers

**Non-bank e-money issuance:** **Uganda, Ethiopia, and Pakistan** recently issued new regulations that allow non-banks to be e-money issuers and offer e-money services directly to customers.

**Use of agents:** **Rwanda's** agent regulation applies to different types of institutions, such as banks, PSPs, e-money issuers, and remittance service providers, and follows more of an activities-based approach. Indonesia has built a vast agent network, although challenges remain, such as uneven distribution across the country and economic viability. **Ghana** has more of an activities-based approach to agent regulations (see [Payment Services and Systems Act of Ghana](#)) and applies the same set of agent rules to different types of institutions, such as banks and dedicated e-money issuers.

**Risk-based CDD:** Three-tiered CDD systems—basic, medium, or full (enhanced) CDD—are used in Ghana, Myanmar, Pakistan, and Tunisia. (See also the G20/GPFI's [Digital Financial Inclusion: Emerging Policy Approaches](#) for examples of tiered CDD regimes in China, Mexico, and Tanzania.)

**Consumer protection:** Consumer protection rules, which apply to e-money issuers, are incorporated in Uganda's [National Payment Systems Act of 2020](#) and [National Payment Systems Regulations of 2021](#). The country also has [financial consumer protection guidelines](#) that apply to all financial services.

Building on the basic enablers in part 2, a set of five policy enablers were framed by the Financial Stability Institute in [Policy Responses to Fintech: A Cross-Country Overview](#). These policy enablers cover public policy measures and initiatives (for example, digital ID systems) that support the development of fintech activities. These policy enablers allow for the application of enabling technologies, such as APIs, cloud computing, DLT, and AI.

- **Digital IDs:** Governments have a role, with appropriate governance and other safeguards, in promoting trustworthy (that is, privacy-preserving, secure, consent-based) digital IDs that enable governments and businesses to deliver DFS that may increase financial inclusion.<sup>19</sup> Biometric digital IDs can be greatly helpful to migrants, refugees, and other vulnerable populations that lack proper ID documents. (See box 3.4 for an example.) Promoting digital IDs may also further the implementation of HLP 7. Financial authorities have included provisions in regulatory frameworks that clarify how digital ID systems may be used (including consent management and control of data when accessing DFS). (See *chapter 4, which covers the DFS infrastructure ecosystem*.)
- **Open banking regimes** (data-sharing schemes that are mandated or supported by regulators with a goal of creating competition and fostering innovation in financial services) allow a wide range of users, including fintechs,

to access customer data locked inside banks and other financial institutions to develop innovative financial products and services at a lower cost that are better suited to the needs of customers. [CGAP has examined 12 open-banking regimes](#) and identified the critical design components that are most likely to serve the needs of poor people.

- **Data protection:** The right to the privacy of personal data has gained more attention in recent years. Data generated by low-income consumers' use of mobile phones and DFS can help expand financial inclusion, but its use can also result in the loss of privacy and other harm. Many jurisdictions have issued data-protection laws whose most common requirement is to ask citizens for consent before data about them may be collected, used, or shared (although there is debate as to whether such consent is meaningful). More comprehensive frameworks establish new rights for individuals, such as data portability, the right not to be profiled, or the right to be forgotten. A challenge is to determine the boundaries between financial-sector regulation and data protection, data privacy, and competition. It is important to note here that fragmentation/lack of interoperability in data-protection regimes can affect cross-border regulatory access and therefore decrease competition; this has downstream effects on financial inclusion. (The work of the OECD

Working Party on Data Governance and Privacy in the Digital Economy serves as an international reference point on data protection. See also chapter 5.)

- **Innovation facilitators** (innovation hubs, regulatory sandboxes, and accelerators) have the potential to empower financial regulators struggling with fast-paced innovation. Allowing for the piloting of innovative new delivery channels, products, services, and business models without having to comply immediately with all regulatory requirements facilitates the adoption of new products and services. (See CGAP's [How to Build a Regulatory Sandbox: A Practical Guide for Policy Makers](#).) IOSCO has produced [The Use of Innovation Facilitators in Growth and Emerging Markets](#) (2022). (See also the full treatment of the question of innovation facilitators in chapter 2.)
- **Cyber security:** Governments are addressing this growing global challenge with initiatives such as issuing national and sectoral regulations and guidance, and with supervisory practices; establishing a cybersecurity framework is a common practice.

In addition to these five policy enablers, in the context of rapidly evolving market conditions, the following five issues constitute a set of new and evolving issues for policy makers and regulators. They are related to previous issues (for example, regulatory perimeter, competition, outsourcing); the focus here is on the fintech dimension of these regulatory parameters.

- **Regulatory treatment of the latest technological developments:** Developments such as, AI, instant payments, APIs, and CBDCs need to be the object of thorough policy development and risk-based regulatory treatment.
- **Regulation of third-party providers/outsourcing/cloud computing:** This question, related to the previous point, is a regulatory perimeter issue, treated above. Regulators are considering whether there are gaps in the traditional concept of outsourcing (whereby the FSP outsources to a third-party company while continuing to bear the risk of outsourcing). This puts the onus on the principal for managing the outsourcing of risk. Banking as a service (BaaS) is an example of a regulatory challenge, whereby the licensed bank is reduced to the functions of balance-sheet intermediation and compliance. Cloud computing by third-party providers for the most part is currently not subject to financial services regulation beyond outsourcing rules. Regulators are now considering if this approach should change. For example, the United Kingdom is in the process of introducing regulations that could be applied directly to cloud companies that provide critical services to financial firms, given potential impact of disruption of these services to financial stability. The Toronto Centre investigated a number of dimensions of the supervision of cloud services in its [Cloud Computing: Issues for Supervisors](#) (November 2020).



#### BOX 3.4

### Biometric Identification for Migrants in Colombia

In 2021, the President of **Colombia** announced protections to Venezuelan migrants, granting them Temporary Protection Status (TPS). The creation of the TPS was an unprecedented event in the region, as it allowed eligible Venezuelans to regularize their stay and reside in Colombia for 10 years, along with individual biometric documentation and identification documents. This initiative is expected to benefit more than 2.1 million Venezuelans over the next decade. The TPS comprises the following three steps:

- Online preregistration into Registro Único de Migrantes Venezolanos (RUMV)
- Individual biometric registration
- Delivery of documentation cards (Temporary Protection Permits)

This will facilitate access to a range of services such as healthcare, formal employment, and formal financial services.

*Additional reading:* UNHCR: [Colombia Is Stepping Up Support for Venezuelans with Historic Protection Policy](#), 2021.

- **Regulation of platform finance:** The dominance of bigtech platforms such as Alibaba, Amazon, and Tencent in social media and e-commerce, combined with their growing interest in offering financial services, has prompted concern by some policy makers worried about competition and data protection. See the recent story “[3 Regulatory Challenges Posed by Platform-Based Finance](#)” on the CGAP blog. (See also the Financial Stability Institute’s [Big Tech Regulation: What Is Going On?](#))
- **New data concerns:** There is a need to identify interventions that increase the value of data for poor and excluded customers and mitigate risks. In the paper [Virtual Banking and Beyond](#), the BIS notes that new technology-driven models exploit the expanding data footprints of individuals and firms to generate information capital and reduce the reliance on collateral when offering loans and other financial services. Data and the entities that manage data will be at the heart of this transformation. Financial regulators need to ensure that regulatory oversight delivers on the inclusion- and intermediation-enhancing benefits of digital finance without compromising traditional regulatory goals. In line with calls for increased data protection, there is a need for a system of data governance that allows consumers and businesses to exercise control over their data through the granting and withholding of consent to the use and transfer of their data. There is a move away from consent-only-driven data sharing to a more nuanced approach that considers the extent to which data sharing and use should be consent driven; this could be done by adopting a “legitimate purposes” test, allowing data uses that relate only to the product or service being offered or imposing a “fiduciary duty” requirement that data be used only in the customer’s interests.<sup>20, 21</sup>
- **Revisiting competition:** The digital transformation of financial services gives rise to a set of policy issues regarding competition (notably concerning bigtechs). The assumption that the entry of new providers increases competition may not hold anymore due to the [hypothesis of the Data-Network-Activities \(DNA\) loop](#). Bigtech platforms with access to certain data may use that data to achieve a dominant position in the market, which may hurt competition in the financial sector and may hurt consumers, especially low-income customers. Moreover, the emergence of bigtech entities in the financial services space has resulted in the juxtaposition of a small number of

bigtechs and many small, agile fintech firms in certain market segments. There is a need to support conditions that attract large international companies that develop DFS while providing the opportunity for small, innovative, domestic fintech startups. It is important to consider the market structure and competition implications of these developments. However, competition policy does not usually fall within the financial regulator’s (for example, the central bank’s) jurisdiction. There is a need for cooperation among the different authorities: competition, data, and financial sector. This cooperation is not yet well developed. The challenge here is the blurring boundaries between financial authorities and nonfinancial authorities—for example, telecommunications regulators, data-privacy authorities, competition authorities, and ministry of justice.

Regulatory technology (regtech) and supervisory technology (suptech) solutions are emerging for a wide range of regulatory focus areas, including regulatory change tracking, fraud detection, electronic KYC, countering the financing of terrorism, conduct and prudential risk management, systematized regulatory reporting, and associated auditable record keeping.<sup>22</sup> Certain suptech solutions enable supervisors to develop and transmit machine-readable and machine-executable regulations to their regulated entities, which in turn could result in more automated regulatory compliance, lower costs, and greater consistency in regulatory reporting. Other suptech solutions are focused on achieving real-time risk alerts, thereby enabling supervisory teams to shift focus to preemptive, rather than curative, oversight, in turn possibly improving the resilience and stability of the broader financial system. Similarly, regtech has also evolved as an innovation, allowing financial institutions and fintechs to create efficiencies in satisfying the requirements for regulatory reporting and improving the procedure for monitoring regulatory prerequisites. Whereas the application of these technologies has been minimal in developing and low-middle-income countries, mainly due to the high costs or lack of computing power, costs associated with the collection, validation, storage, processing, and dissemination of data have decreased significantly in recent years, resulting in several technologies becoming accessible. Examples of the application of regtech and suptech are presented in box 3.5. Broader coverage of the topic is found in the Alliance for Financial Inclusion’s [Regulatory and Supervisory Technologies for Financial Inclusion](#) (2022).



### BOX 3.5

## The Application of Regtech and Suptech: Country Examples

**Philippines:** The Financial Consumer Protection Department of the Central Bank of the Philippines (*Bangko Sentral ng Pilipinas*, or BSP) developed a chatbot and processing utility for customer complaints. The chatbot, named BOB for “**BSP Online Buddy**,” went live in late 2020, thus allowing Filipinos to file complaints through their mobile phones via an app or SMS.

**Nepal:** In 2017, the Nepal Rastra Bank unveiled its upgraded reporting system, which consisted of an e-mapping system based on the Geographic Information System. The platform provides real-time data on financial access and usage in Nepal, allowing the central bank to track how well any financial inclusion initiatives are being implemented. In addition, this platform allows for compliance of reporting by licensed banking and financial institutions to be tracked by class, institution, or reporting category.

**Nigeria:** The Central Bank of Nigeria implemented an agent banking database in 2015 to provide details of all approved agent banking relationships and agents of licensed mobile money operators. The intent is to have all banks, non-banks, and super-agents that report regularly to the registry to create an agent risk rating system and to allow for automatically created analytical reports for the supervisor.

**Rwanda:** As reported in the G20’s report [Digital Financial Inclusion: Emerging Policy Approaches](#), the National Bank of Rwanda started collecting disaggregated data from regulated institutions in 2017. It uses a completely automated data-collection mechanism. All data is stored in a central data repository at the national bank.

**Austria:** Austria’s central bank transformed its approach to data collection to increase granularity, timeliness, quality, and scope of data while reducing duplication, inconsistencies, and costs for both reporting institutions and supervisory authorities. Granular data gathered automatically from banks’ systems is sent to AuRep, a company owned by banks. The data at AuRep is represented by a “basic cube” that cannot be accessed by the central bank; a series of enhanced datasets are automatically prepared following standard definitions to be accessed and used anytime by the central bank.

The following resources provide deeper guidance and process considerations:

- **DFS reference guide:** [Inclusive Digital Financial Services: A Reference Guide for Regulators](#), sponsored by the Bill and Melinda Gates Foundation and released in 2019, covers basic enablers, licensing, prudential regulation and supervision, competition issues, integrity and security, agent regulation and supervision, and consumer protection. The guide, which focuses largely on e-money, was recently updated. The newly revised version focuses on emerging trends and brings in new case studies.<sup>23</sup>
- **FSI-Connect (of the BIS)** is a web-based information resource and learning tool available to central banks, supervisory authorities, deposit insurers, and eligible public-sector authorities. It covers international financial regulatory standards and sound supervisory

practices, including the latest prudential standards, key guidance on banking and insurance supervision, and relevant accounting and deposit insurance topics.

### 3.3 Challenges in Implementing HLP 3

Disruptive technologies are leading to the emergence of new providers, new business models, and new types of activities. Regulators and supervisors need to anticipate, and respond to, rapidly changing market conditions. This may be particularly challenging for small, low-income countries that are challenged to catch up with the latest regulatory developments.

Globally, regulators and supervisors face a rapidly evolving market context that makes the establishment of, and the evolution of, a DFS regulatory framework particularly challenging. Across EMDEs, central banks and regula-

tory authorities are grappling with formulating the policy and regulatory responses to rapidly evolving market developments. In almost all cases, EMDEs are still on the journey of designing new regulatory frameworks.

Another issue is supervisory capacity and resources in the context of the current state of suptech and regtech. DFS supervisors face common challenges: inadequate expertise and skills in the face of fast growth and changes in DFS. Building supervisory capacity, which also includes improving supervisory data, should be a top priority for DFS supervisors. Having adequate supervisory capacity means having the needed resources at the appropriate level to ensure that supervisory responsibilities can be carried out in an effective and timely manner. Risk-based supervision requires high-quality

data, good data management, and adequate data analytical tools, including modern data collection.

### 3.4 Looking forward

Whether in legacy or new DFS market contexts, outlining the implications of meeting the goals of inclusion, stability, integrity, and protection in developing a regulatory framework for DFS, as referenced in HLP 3, is a fundamental concern. In this context, regulators and supervisors are encouraged to adopt a more proactive role in assessing the risks facing vulnerable groups.

This applies to women in particular, especially low-income women, who remain more financially excluded than their higher-income counterparts.<sup>24</sup> In integrating



#### BOX 3.6

### UNCDF Policy Accelerator Guides

Applied thus far in more than 18 markets, the [United Nations Capital Development Fund's \(UNCDF\) process-focused guides](#) help regulators to accomplish the following: (1) identify policy opportunities, (2) assess the current market and regulatory landscape, (3) learn from peer markets, (4) investigate alignment with global standards, (5) consult with stakeholders, (6) analyze policy options, (7) create staff training modules, and (8) identify needs for regulatory harmonization. Using a digital platform to optimize accessibility (for example, mobile enabled, dual French/English, plain language), each guide includes several tools that are issue agnostic and process focused, allowing for a unique blend of flexibility and completeness. The guides do not prescribe a specific sequence; rather, regulators and policy makers can use the resource that best suits their own policy design process, accelerating implementation while ensuring alignment with their goals.

**Sierra Leone:** Between 2019 and 2021, the [Bank of Sierra Leone](#) used the UNCDF policy accelerator tools to investigate, design, and implement their financial consumer protection regulations. With an existing draft of the regulations in place, the bank used three guides to accelerate their regulatory reform process: [Learn from Peer Markets](#), [Alignment with Global Standards](#), and [Consult with Stakeholders](#). The subsequent draft of the regulations was thus more aligned with best practice in consumer protection regulation and benefited from stakeholder input from the private sector and civil society.

**ADDITIONAL INSIGHT:** In the context of the fundamental changes in the way financial services are offered, traditional regulatory approaches in EMDEs may need to adapt to such transformative innovations. Regulators need to be attentive to (a) redefining the regulatory perimeter (to facilitate market innovations while mitigating risks); (b) ensuring collaboration among authorities, cutting across multiple policy and regulatory domains; and (c) balancing opportunities and risks by implementing proportionate regulation and supervision of DFS.

gender considerations into DFS initiatives, policy makers, regulators, and supervisors should be aware that the gender gap, on the one hand, may reflect gender preferences and risk aversion but, on the other, may be explained by gender-based discrimination or social

norms and conditions that disadvantage women. In this latter case, policy interventions may be necessary to enhance the inclusiveness of DFS. This consideration should be transversal—across all the elements of DFS policy, regulation, and supervision.

### Resources Relevant to HLP 3

- AFI: [Policy Framework on the Regulation, Licensing and Supervision of Digital Banks](#), 2021
- AFI: [Regulatory and Supervisory Technologies for Financial Inclusion](#), 2022
- BIS: [Fintech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policy](#) (BIS Papers No. 117), 2021
- CGAP: [Fintech and the Future of Banking Collection](#):
- [Fintechs and Financial Inclusion: Looking past the Hype and Exploring Their Potential](#), 2019
- [Fintechs and Financial Inclusion: Lessons Learned](#), 2019
- CGAP: [Regulation for Inclusive Digital Finance](#) (web page)
- CGAP: [Proportional Supervision for Digital Financial Services DFS Collection](#) (web page)
- CGAP: [Digital Banks: How Can They Be Regulated to Deepen Financial Inclusion?](#) (reading deck)
- CGAP: [DFS Supervision Toolkit](#) (forthcoming)
- CGAP: [Transformative Innovative for Financial Inclusion: Implications for Regulatory Architecture](#) (forthcoming, fall 2022)
- CPMI, World Bank: [Payment Aspect of Financial Inclusion in the Fintech Era](#) (PAFI guidance), second phase, 2020
- FATF: [Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion, with a Supplement on Customer Due Diligence](#), 2017
- FSB: [The Use of Supervisory and Regulatory Technology by Authorities and Regulated Institutions](#), 2020
- FSI: [Policy Responses to Fintech: A Cross-Country Overview](#), 2020
- G20/GPFI: [Global Standard-Setting Bodies and Financial Inclusion: The Evolving Landscape](#), 2016
- G20/GPFI: [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#), 2017
- IADI: [Introductory Brief: Challenges for Deposit Insurers](#) (Fintech Brief No. 1), 2021
- IAIS: [Application Paper on the Use of Digital Technology in Inclusive Insurance](#), 2018
- World Bank: [A Roadmap to SupTech Solutions for Low Income \(IDA\) Countries](#), 2020
- World Bank: [Digital Financial Services](#), 2020
- World Bank: [Fintech and the Future of Finance](#), 2022
- World Bank, IMF: [The Bali Fintech Agenda](#), 2018



## HLP 4: Expand the DFS Infrastructure Ecosystem

**Statement of the HLP:** Expand the digital financial services ecosystem—including financial and information and communications technology infrastructure—for the safe, reliable, and low-cost provision of digital financial services to all relevant geographical areas, especially underserved rural areas.

### 4.1 Context: Importance of the HLP, Statement of Challenges in Current Market Contexts

This chapter identifies the role played by new fintech-led technologies, products, and access modes as critical enablers for expanding access to and usage of DFS for the unbanked individuals, MSMEs, and underserved population segments. Guidance is provided on the implementation of critical policy and infrastructure levers to improve the design of transaction accounts and payment products and lowering market barriers for new players and new approaches, to make DFS ubiquitously accessible and with enhanced user experience and awareness. Digital payments serve as a gateway to broader DFS, including savings and credit.<sup>25</sup>

New technologies not only offer new modes of accessing these new products by means of e-wallets, open banking, and super apps but also allow payments to be initiated through transaction accounts offered through existing products and services (for example, card accounts linked to pay wallets). Similarly, new products and access modes do not always rely on advances in technology but can leverage existing technologies to achieve scale. For example, fast payments can be offered based on traditional technologies and initiated via online banking, rather than e-wallets. Figure 4.1 highlights the evolution of new technologies, products, and access modes.

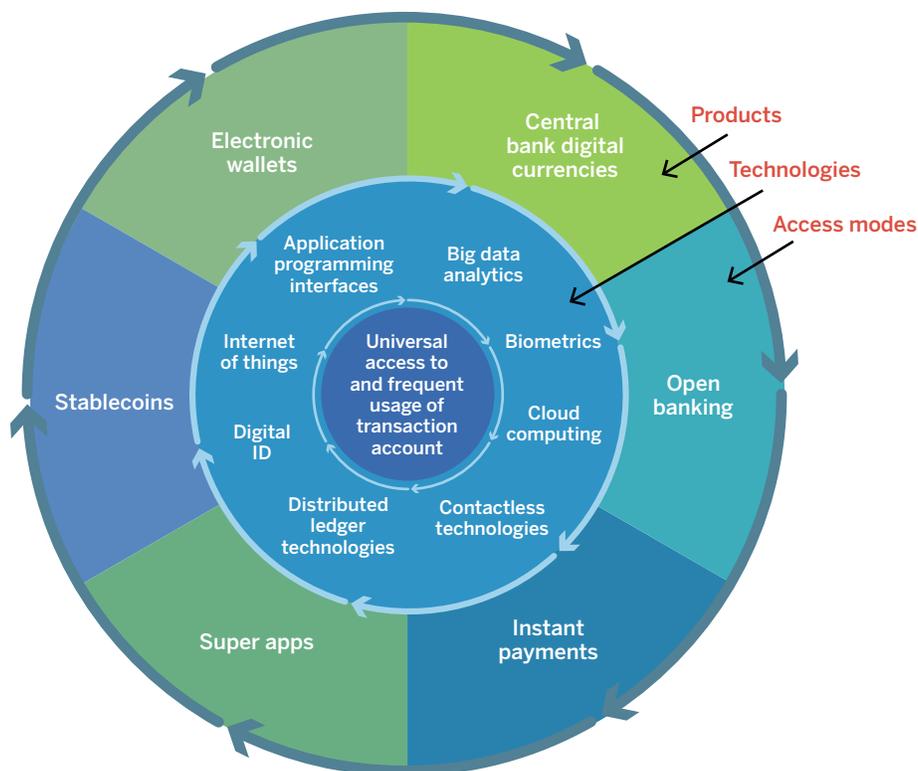
The success of such technologies also depends upon the quality of the underlying ICT infrastructure—such as mobile broadband infrastructure, credit registries, and open APIs, and including in remote areas, expansion of digital ID (which is also in furtherance of HLP7). These

investments should be complemented with the relevant legal and regulatory frameworks that can allow most people to benefit from DFS and ensure a competitive ecosystem. During the last two years, the COVID-19 pandemic has amplified the use of new technologies, products, and access modes to keep commerce thriving and financial systems functioning and provide end users with digital options to continue using financial services while also observing social distancing and other measures.

### 4.2 A Framework for Implementing HLP 4

The framework for implementing HLP 4 includes guidance for expansion of the DFS ecosystem—including financial and ICT infrastructures—for the safe, reliable, and low-cost provision of DFS to all relevant geographical areas, especially underserved rural areas. The framework uses the [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#) as a key reference point, in particular HPLG 1 (Promote a Competitive Environment for Banks and Non-Banks and Support the Development of a Widely Accessible, Secure and Responsible Digital Infrastructure and Interoperable Payment Systems), and HPLG 2 (Encourage the Availability and Affordability of Tailored Digital Financial Products, while Addressing the Needs for AML/CFT Safeguards and the Necessary Customer Due Diligence Measures and Digital ID Systems).<sup>27</sup> The guidance can be used by national authorities in determining effective courses of action to leverage the promise of new technologies, products, and access modes and mitigate the risks associated with them. The definitions for innovative technologies, products, and services that are part of this framework are also included in the glossary.

**Figure 4.1: PAFI Fintech Wheel<sup>26</sup>**



For the DFS system to serve all users and offer full user choice, payment interoperability across the ecosystem, preferably including cross-border, is critical. Many users experience services within fragmented ecosystems in which providers operate independently, neither sharing data nor transacting across one another. Some providers offer these flexibilities at a cost, which deters users from transacting with peers and retailers over platforms. These silos preclude digital payments from achieving the same convenience, affordability, and utility as cash. For underserved populations, many of whom reside in rural or low-income communities, these added costs make this a particularly untenable prospect. Supplementary opportunity costs—such as those incurred by users who physically travel to banks because they are blocked from digitally transacting with them—only exacerbate the issue.

**(a) The Design of Key Payment Infrastructures Should Consider the Use of New and Existing Technologies, Products, and Access Modes in a Balanced Way to Expand Access to and Usage of Transaction Accounts.**

Innovation in existing DFS products and services (for example, e-money, especially mobile money) has improved access to and usage of transaction accounts in recent years. The important role played by payment

infrastructures to leverage the existing technologies, products, and access modes for financial inclusion has been significant. The increasing momentum gained by fintech developments is altering the DFS ecosystem and improving prospects for financial inclusion, especially for the underserved segments. At the same time, DFS and fintech also pose risks to consumers and investors from an operational and cyber resilience point of view. Harnessing the benefits of fintech responsibly will require a balanced approach that provides clarity to the market and consumers, is activities-based, proportionate, and technology neutral, and serves the set policy objectives. Box 4.1 highlights the balanced policy approach taken by the Reserve Bank of India to promote innovation in DFS.

New technologies that are helping with the development of new products and access modes include APIs, big-data analytics, biometric technologies, cloud computing, near-field communication and QR code-based contactless technologies, digital ID, DLT, and the Internet of Things. New technologies facilitate the delivery of new products and access modes, including fast payments and CBDCs. New technologies not only offer new modes of accessing these new products by means of e-wallets, open banking, and super apps but also allow payments to be initiated via traditional transaction accounts and/or payment instruments.



#### BOX 4.1

### India's Approach to Innovation in DFS

To promote responsible innovation in DFS, the Reserve Bank of India launched an Innovation Hub in March of 2022. The hub was established on the premise that PSPs, policy bodies, start-ups, and businesses alone can not address the global shifts and regulatory and technological challenges of an increasingly complex, interdependent, and fast-transforming world of the financial sector, and that an established institutional setup was needed to enable informed collaboration and cooperation via a trusted platform. The hub aims to identify challenges in the Indian financial system using data and insights from applied research and stakeholder consultations and to address these challenges by creating and piloting collaborative solutions that leverage the power of existing and new technologies.

#### **(b) ICT and Shared Market Infrastructures Should Be Effective in Supporting Financial Inclusion Efforts by Providing Critical Information to FSPs, Including an Identification Infrastructure, a Credit Reporting System and Other Data-Sharing Platforms.**

ICT and shared market infrastructures should be appropriately designed, operate effectively, and be available to all PSPs equally. This can support financial inclusion efforts by providing the critical information needed for opening transaction accounts and improving usage. These include an effective and efficient identification infrastructure, a credit reporting system, and other data-sharing platforms using alternative data and collateral registry systems. Additionally, the availability and reliability of critical public infrastructures, such as transport networks, electrical grids, telecom and broadband access, and internet connectivity, can improve accessibility of access points such as ATMs and POS terminals. Further, the geographical coverage of ICT infrastructures and the overall quality of the service provided by those infrastructures are enhanced as necessary by their owners/operators so as not to constitute a barrier for the provision of transaction account services to underserved segments in remote and rural areas.

In the context of new technologies, the role of digital ID is important. Digital ID refers to a set of electronically captured and stored attributes and credentials that can uniquely identify an individual or legal person and is used for electronic transactions. Digital ID can support the development of KYC utility to collect, verify, store, and screen customer data and share it across all service providers in the market in real time or near real time.

Public- and private-sector stakeholders should support the establishment of a digital ID and shared market infrastructures for customers to digitally identify, authenticate, and provide consent. The standardization and sharing of the platform greatly improve the level of compliance as well as efficiency within the DFS market by reducing costs for PSPs. (*Also see the discussion of digital IDs in chapter 3.*)

Shared market infrastructures also increase the exposure to risks associated with data breaches and cyberattacks and concerns about the control and misuse of personal data, as well as flawed infrastructure design with regard to governance, access, coverage, data quality, connectivity, and interoperability. Therefore, regardless of the ownership model, clear lines of responsibility and inclusive and representative governance arrangements are essential to the overall safety and integrity of the shared market infrastructures.

#### **(c) Transaction Account and Payment Product Offerings Should Be Designed to Meet a Broad Range of Transaction Needs of the Target Population and at Low Cost.**

PSPs leverage new technologies and access modes to improve the design of transaction accounts and payment products for the benefit of all their customer segments. The development and adoption of new technologies, products, and access modes in combination with the existing technologies and business models avoid the exclusion of customer segments due to factors such as age, culture, gender, disability, religion, and financial literacy. Box 4.2 provides an example of how Spain is improving the accessibility of DFS for vulnerable groups, including people with disabilities.



#### BOX 4.2

### Spain's Initiative to Improve Accessibility of DFS for Vulnerable Groups

Spain's recently launched national initiative focuses on protecting certain vulnerable groups with a focus on senior citizens. To implement this, key bank associations signed a new protocol in February 2022 to improve access to and usage of DFS by the elderly and people with disabilities. The protocol includes 10 pillars aimed at eradicating the financial exclusion of elderly financial consumers (65 years old and older) using digital technologies. The protocol guarantees accessibility to DFS and the simplicity of ATMs, mobile apps, and web pages, offering versions with simplified language and adapted visualization characteristics.



#### BOX 4.3

### Brazil's Fast Payment System Pix

Brazil's fast payment scheme Pix was launched by the Central Bank of Brazil in 2020. It allows fund transfers between all types of transaction accounts in the Brazilian market—current, savings, and prepaid payment accounts—creating a payment service ecosystem with low acceptance costs and high levels of usability. Pix aliases, which inform the account data to start a transaction, are as simple as an e-mail address or a mobile phone number. The platform also actively uses QR codes as the access channel. Since its launch in November 2020, Pix has grown rapidly; by December 2021, approximately 109 million consumers and 7.6 million businesses, mostly MSMEs, were active users of the platform. That includes about 45 million citizens who previously did not have access to DFS. The strong adoption trend of the platform demonstrates that the effects go beyond a simple switch to a new digital means of payment, to positive digital financial inclusion outcomes. Some of the main drivers behind the adoption rates have been the single name and brand, building recognition and trust in the system; the mandatory participation of big banks, creating network externalities and scale; low transaction costs compared to other retail payment instruments (transactions are free for end users); an improved customer experience due to standardization of the way Pix is provided in participating institutions' apps; and a multiplicity of use cases, including P2P transfers, tax and bill payments, online, and card-present purchases.

Fast payments allow evolving end-user needs to be met by enabling individuals and businesses to make and receive payments at any time and access funds in real time. For fast payments to fulfill the needs of the financially excluded and underserved, they need to provide a close substitute for cash and act as a starter product for other financial services by being based on a general-purpose transaction account. In many product implementations, fast payments already demonstrate the immediacy of cash to be matched. However, broad acceptance and a wide range of use cases beyond P2P payments are also critical for the growth of fast payment services. The availability of overlay services, such as request to pay, can improve the user experience and cause

end consumers to adopt fast payment services more quickly. Box 4.3 provides an example of how Brazil's fast payment system Pix has rapidly digitalized the retail payment market by improving the possibilities for making any payment or transfer electronically, regardless of the payment amount and who is involved in the transaction.

Central bank digital currencies (CBDCs) could also be leveraged to ensure access to a basic, trustworthy means to pay and store value in situations where PSPs do not offer transaction accounts that effectively meet the needs of the unbanked and/or there is a lack of trust in DFS. Where access to cash is cumbersome, CBDCs could be designed to replicate certain cash-like attributes

to ensure that individuals and businesses have access to a simple, risk-free, and flexible means of payment.<sup>28</sup>

Super apps also are fast emerging to facilitate a wide range of services, including payments. Attracted by their convenience, ease of use, and discounts, users have an incentive to open transaction accounts (either at a financial institution or in the super app) as a requirement to access full-fledged services in the app. Given the large number of social media users and the number of use cases enabled by super apps, the potential impact on both access to transaction accounts and their frequent usage is substantial. Super apps assume that users have access to the internet and a smartphone. For this reason, the availability and affordability of ICT play a critical role.

**(d) Access Points Should Be Readily Available to Augment the Usefulness of Transaction Accounts.**

PSPs seek to leverage the potential of new technologies, products, and access modes to offer low-cost, easy-to-use access points and channels to expand the reach and acceptance of e-payment instruments while ensuring that a basic level of physical access points is maintained.

The payment industry and authorities consider the impact of the continued decline in the use of cash and the reduction in the availability and proximity of cash access points. Contactless technologies, and especially QR codes, are emerging as a low-cost alternative to traditional POS terminals in combination with mobile/e-wallets. QR codes offer a new alternative, by lowering hardware requirements on the payee and decreasing operating costs of acquirers. Merchants without an electronic device can also accept such transactions by simply displaying a printout of the QR code for the payer to scan. Even in markets with a high penetration of payment cards, POS terminals are being used to display QR codes for card acceptance. QR code acceptance is key to the deployment of fast payment services. Box 4.4 provides an example of how QR code technology is being used for social assistance programs in Indonesia.

Open banking allows authorized third parties to access PSP customer data and offer new and improved services to individuals and firms. In this regard, third parties can gain insights into customer data held by account-servicing PSPs and create new propositions that increase the usage of transaction accounts—for



**BOX 4.4**

**Digitization of Social Assistance Programs in Indonesia**

The Government of Indonesia and Bank Indonesia are pursuing a cashless-based social assistance program via digital channels that are easy to access by the public. This goal is to increase financial inclusion and provide economic opportunities to vulnerable groups. The existing landscape for digital disbursement of social assistance payments faces several challenges, including a lack of supporting regulation, fragmented data on eligible recipients, additional costs on card-based payments for noncash transfers, limited interconnectivity, especially among payment system bank agents, a lack of digital and financial literacy, and underutilization of existing digital payment instruments.

Bank Indonesia has identified three business models for digital social assistance programs: the Quick Response Code Indonesian Standard (QRIS), USSD, and face-recognition payments. Of the three business models, QRIS provides the most benefits, as it is already interconnected among banks and non-banks, free of charge for customers, and accepted at 17.5 million QRIS merchants. Banks can use the QRIS channel for customers who have smartphones and add the feature of face-recognition payment for recipients who do not have mobile phones. An additional feature of the application is the “whitelisting” of products or services that beneficiaries are allowed to buy with their social assistance money.

The Government of Indonesia and Bank Indonesia are also addressing the remaining challenges that are critical to the success of the program, including ICT infrastructures, particularly in remote regions, and access to stable and affordable mobile and internet connections. Another challenge is adjusting the payment applications used by merchants and bank agents to facilitate QRIS payments and biometric authentication.

example, by initiating credit transfers to online merchants. By breaking down data silos within and across PSPs, open banking could also provide a pathway to broader financial inclusion for the currently underserved by enabling new providers to offer savings, investment, or insurance products that cater to customers' specific needs. At the same time, through open banking, banks can personalize and expand the range of products they offer to their customers.

**(e) Relevant Public- and Private-Sector Stakeholders Should Engage in Ongoing and Effective Educational and Outreach Efforts to Support Awareness and Financial Literacy with an Appropriate Degree of Coordination.**

Educational and outreach efforts coordinated by public- and private-sector stakeholders should support awareness and financial literacy with respect to new technologies, products, and access modes, using both traditional and digital communication means. See *chapter 6* for a detailed discussion of digital skills and digital financial literacy.

Big-data analytical tools such as AI and ML are increasingly being used to build awareness of the features and functionality of DFS products, transmit tailored knowledge about their usage, and manage financial resources. PSPs are utilizing these technologies for customer support (for example, virtual assistants complementing telephone help desks), onboarding, and customer education. AI is also being utilized to augment customers' ability to navigate information-dense product offerings.

**(f) Large-Volume and Recurrent Payment Streams, Including Remittances, Should Be Leveraged to Advance Financial Inclusion Objectives, to Increase the Number of Transaction Accounts and Stimulate the Frequent Usage of These Accounts.**

New technologies, products, and access modes that facilitate the use of account-based, open-loop payment methods for large-volume and recurrent payments are considered important. International remittances are ideally placed to foster access to, and use of, transaction accounts by both senders and recipients. DLT has the potential to promote business model innovation in cross-border payments, as also indicated by the [G20 Roadmap for Enhancing Cross-Border Payments](#). In a permissioned/private environment, DLT could support the streamlining of business-to-business cross-border payments. Using DLT solutions could increase straight-through processing rates, lower reconciliation costs, bring down compliance costs, and improve the transparency and traceability of transfers, thereby also easing the impact of derisking issues. Moreover, as countries design CBDCs for their jurisdictions, the cross-border element should be considered with a focus on access frameworks and/or interlinkage options.

Further, the ability of fast payments to be used for remote payments makes them an attractive option for large-volume government use cases such as government-to-person and government-to-business payments, as well as acceptance of person-to-government (P2G) and business-to-government (B2G) payments.

**ADDITIONAL INSIGHT:** Remittances make up a significant portion of many countries' gross domestic product and play a critical role in the lives of large populations. Digitizing remittances at both ends and ensuring easy access to transaction accounts is critical for monitoring and measuring remittance flows and encourages account usage. However, adequate infrastructure, information about its availability, and trust in the services are key to promoting uptake.

**ADDITIONAL INSIGHT:** Extensive research shows that digitizing remittances reduces costs and produces savings in income due to reduced travel and wait times, and that there is a positive correlation between increased digital remittances and enhanced formal deposits and credits.

### 4.3 Challenges in Implementing HLP 4

**Alignment of policy objectives with technology implementations:** The technology chosen for DFS solution infrastructures will not define their success. Rather, technologies and design features need to cater to the policy objectives they intend to fulfill. In this context, countries should weigh carefully the pros and cons of technology choices and not get carried away by technological hype. Indeed, the alignment of public policy objectives with technology implementations is critical for promoting financial inclusion among the vulnerable segments identified above.

**Lack of domestic interoperability:** New technologies for financial inclusion both provide opportunities for specialization and pose challenges for market integration. A lack of interoperability and geographical coverage of payment and financial infrastructures and identity and verification systems is a challenge that impedes innovation and the implementation of new technologies.

**Lack of harmonized data standards for cross-border payment:** For cross-border payments, not all jurisdictions have adopted common international standards (for example, messaging standards, API standards) making interlinkages between payment systems across borders more difficult. This can result in fragmented and truncated data standards, high costs of capital, and weak competition. All these factors extend the life cycle of a cross-border transaction and affect the targets identified under the G20 road map for speed, cost, and transparency.

**Lack of a level playing field in accessing shared infrastructures:** A lack of access for non-bank PSPs to critical shared market infrastructures, including electronic KYC, digital ID, and credit scoring, can increase the cost of compliance and reduce the availability of services. A high cost of compliance often drives their business case to the ground unless scale is reached early in the implementation process.

**Investment and operational costs can be high for new technologies, products, and access modes:** For central banks and PSPs participating in new product ecosystems such as fast payments or CBDC, the initial investment costs and ongoing costs can be high to justify the necessary investments in infrastructure and development of access channels. Coordination of investment strategies between central banks and private-sector participants can also be a challenge, as the latter need

more assurances on profitability up front that have a bearing on product pricing.

**Operational and cyber resilience challenges:** DFS may rely on data infrastructures that are vulnerable to cyberattacks, system failures, and an overreliance on third-party service providers—for example, cloud storage and analytics data provision. This may compromise business continuity and financial stability and is closely related to data-governance concerns.

**Strong cash culture:** Many emerging economies still have a strong cash culture, which is a barrier to the adoption of DFS. The affinity for cash can be explained by such factors as a lack of trust in DFS, low levels of digital and financial literacy, and the perception of security, immediacy of payment, and simplicity in managing expenditures that cash provides. In the process, both demand- and supply-side-driven interventions are needed to transition to digital payment instruments and channels.

**Digital exclusion and a lack of digital literacy and digital financial literacy:** Low levels of digital literacy and digital financial literacy can reduce usage of DFS channels, which in turn has an impact on the scale of operations and required investments by the industry. This particularly affects women and populations in rural areas, who may not be aware that safer, cheaper, and more efficient alternatives to cash are available to them, which prevents them from adopting and benefiting from DFS, if available.

**Market concentration:** Due to economies of scale, reputation, and capital, there is the potential for large DFS platforms and bigtechs to reduce overall competition and increase the concentration of risks in the financial sector. In developing economies, bigtechs are already enjoying a dominant position across a range of financial services, such as payments, lending, insurance, and investment management.

### 4.4 Looking Forward

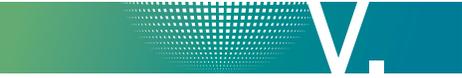
In combination with existing technologies and business models, new technologies, products, and access modes provide opportunities to address financial inclusion challenges by improving the potential for increasing access to and usage of transaction accounts, improve financial literacy, and utilize recurrent payment streams to drive both access and usage. However,

new technologies also come with challenges that must be adequately addressed to ensure that financial inclusion outcomes are not undermined. As both member and nonmember countries consider the application of the new technologies, products, and access modes to enhance digitization and financial inclusion efforts, they should take a balanced approach to maximize public- and private-sector commitment, strengthen the

legal and regulatory framework, and improve financial and ICT infrastructures. Additionally, stronger emphasis could also be placed on enhancing international and cross-sectoral coordination between authorities, clarifying the applicability of existing regulatory and oversight requirements and addressing any gaps that may arise, and fostering the resilience and availability of payment and ICT infrastructures.

#### Resources Relevant to HLP 4

- BIS: Platform-Based Business Models and Financial Inclusion, 2022
- BIS: Big Techs, QR Code Payments and Financial Inclusion, 2022
- CPMI, World Bank: Payment Aspects of Financial Inclusion: Application Tools, 2020
- CPMI, World Bank: [Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020
- FSB: [The Use of Supervisory and Regulatory Technology by Authorities and Regulated Institutions](#), 2020
- FSB: G20 Roadmap for Enhancing Cross-Border Payments, 2021
- G20/GPFI: [Advancing the Digital Financial Inclusion of Youth](#), 2020
- G20/GPFI: [Advancing Women's Digital Financial Inclusion](#), 2020
- G20/GPFI: [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#), 2020
- G20/GPFI: [Promoting Digital and Innovative SME Financing](#), 2020
- IMF: [The Bali Fintech Agenda](#), 2018
- World Bank: [A Roadmap to SupTech Solutions for Low Income \(IDA\) Countries](#), 2020
- World Bank: [Implementation Considerations for Fast Payment Systems](#), 2021
- World Bank: [Developing Digital Payment Services in the Middle East and North Africa: A Strategic Approach](#), 2021
- World Bank: [Digital Financial Services](#), 2021



## HLP 5: Establish Responsible Digital Financial Practices to Protect Consumers

**Statement of the HLP:** Establish a comprehensive approach to consumer and data protection that focuses on issues of specific relevance to digital financial services.

### 5.1 Context: Importance of the HLP, Statement of Challenges in Current Market Contexts

Effective financial consumer protection is essential to support meaningful digital financial inclusion, particularly given newly emerging risks and the rapid onboarding of previously underserved users.<sup>29</sup> HLP 5 highlights key actions to support responsible digital financial practices to protect consumers and address risks. The exponential growth of DFS, particularly accelerated by responses to the COVID-19 pandemic, brings many benefits and opportunities to financial consumers, but it also comes with new risks, especially for consumers experiencing vulnerability or with limited digital literacy and digital financial literacy. As described by the G20/OECD Task Force on Financial Consumer Protection (G20/OECD FCP Task Force), these risks emerge from several sources: they can be market driven, regulation and supervision driven, consumer driven, and technology driven.<sup>30</sup> New risks or new manifestations of risks<sup>31</sup> include, among others, new forms of theft, scams, or fraud perpetrated online, loss of consumer funds, data breaches, platform/technology unreliability or vulnerability, gaps in regulation due to new types of products or services, a lack of privacy, digital security incidents, inappropriate or discriminatory outcomes resulting from the use of AI, and excessive data profiling, leading to financial exclusion and the manipulation of consumers' behavioral biases when operating online.<sup>32</sup>

The dual objectives of digital financial inclusion—to broaden **access** to DFS and to ensure sustained **use**—require trust in digital financial products and interfaces.

This means that adapting and designing comprehensive consumer- and data-protection frameworks for the digital age are more important now than ever. The policies and approaches developed and adopted by financial consumer protection authorities need to evolve and adapt in line with the changing environment and must also include, where appropriate, tailored approaches and measures that focus on the specific needs and risks of vulnerable consumers, which can take different forms and be applicable in different circumstances.

### 5.2 A Framework for Implementing HLP 5

#### (a) Key International Standards and Guidance

With the endorsement of the G20 leaders in 2011, the [G20/OECD HighLevel Principles on Financial Consumer Protection](#)<sup>33</sup> (FCP Principles) are the leading G20 international standard for financial consumer protection and provides a useful framework for implementing HLP 5. Following a comprehensive [implementation assessment](#) conducted in 2021 encompassing all G20 countries, the FCP Principles were updated under the 2022 Indonesian G20 Presidency. Key additions include the cross-cutting themes of “Digitalization,” “Financial Well-being,” and “Sustainable Finance” (with specific examples of the themes throughout the principles) and two new principles: “Access and Inclusion” and “Quality Financial Products.”<sup>34</sup>

The [FCP Principles](#) set out 12 essential elements of an effective and comprehensive financial consumer protection framework (see table 5.1), which necessarily and appropriately includes DFS. This is reflected particularly

**Table 5.1: G20/OECD High-Level Principles on Financial Consumer Protection**

1. Legal, Regulatory, and Supervisory Framework	7. Disclosure and Transparency
2. Role of Oversight Bodies	8. Quality Financial Products
3. Access and Inclusion	9. Responsible Business Conduct and Culture of Financial Services Providers and Intermediaries
4. Financial Literacy and Awareness	10. Protection of Consumer Assets against Fraud, Scams, and Misuse
5. Competition	11. Protection of Consumer Data and Privacy
6. Equitable and Fair Treatment of Consumers	12. Complaints Handling and Redress
<b>Cross-cutting themes:</b> Digitalization, Financial Well-Being, and Sustainable Finance	

by the inclusion of digitalization as a cross-cutting theme relevant to the implementation of each and all the FCP Principles. This chapter focuses on the digital-specific angles.

In recent years, other international development organizations have also produced recent and comprehensive guidance with a focus on specific DFS risks in emerging markets and for lower-income consumer segments. Examples include the following:

- CGAP: [The Evolution of the Nature and Scale of DFS Consumer Risks: A Review of Evidence, 2022](#)
- BTCA: [UN Principles for Responsible Digital Payments, 2021](#)
- World Bank: [Consumer Risks in Fintech, 2021](#)
- UNCDF: [The Role of Consumer Protection in the Digital Economy, 2021](#)
- CPMI, World Bank: [Payment Aspects of Financial Inclusion in the Fintech Era \(Updated\), 2020](#)
- CFI: [Handbook on Consumer Protection for Inclusive Finance, 2019](#)

#### **(b) Policy Guidance and Effective Approaches for Implementing HLP 5**

G20/GPFI guidance (see table 5.2) has increasingly called for acknowledging and incorporating segment-specific (for example, women, MSMEs, youth) measures and/or initiatives including for the more vulnerable (for example, the elderly, the disabled, migrants, remote users and/or users with limited experience in using financial products) as part of more comprehensive and consistent financial consumer protection frameworks. The following countries are leading by example: (1) The Bank of Thailand’s 2018 market conduct regulation requires FSPs to take care of vulnerable consumers who may need cautious communication and additional support from a service provider; (2) the United King-

dom’s Financial Conduct Authority launched a digital sandbox during the pandemic that focused on areas exacerbated by COVID-19—scams and fraud, consumer vulnerability, and SME financing—and (3) in the Democratic Republic of Congo, the Banque Centrale du Congo created an ad hoc authorization requirement in 2018 that permitted DFS providers to accept refugee ID cards, instead of the national ID card, as proof of identity for banking operations. This was a key initiative by the Democratic Republic of Congo to provide targeted consumer protection for the 4.5 million refugees in the country.<sup>35</sup>

Furthermore, in collaboration with the GPFI, the G20/OECD FCP Task Force has produced policy guidance and effective approaches setting out practical and evidence-based support for implementation. The following are examples:

- [Financial Consumer Protection and Financial Inclusion in the Context of COVID-19, 2021](#)
- [Financial Consumer Protection Approaches in the Digital Age, 2018 \(part of the Compendium of Effective Approaches for Financial Consumer Protection in the Digital Age, 2020\)](#)

It is important to tailor implementation approaches to country context and to balance the need for consumer protection with the resulting impact on industry and innovation. Regulators first need to develop a good understanding of the digital financial market (different types of providers, operating models, product features, digital channels, and current and prospective customer bases and target markets), consumers’ experiences and expectations, and the current regulatory gaps. Information may be gathered from market research; consumer focus groups and meetings with providers, consumer and civil society representatives, and experts and other industry participants; complaints data; and supervisory activities and engagement arrangements such as sandboxes.

**Table 5.2: G20/GPFI Guidance and Policy Options**

G20/GPFI: Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection, 2021
<ul style="list-style-type: none"> <li>• Favor “protection by design”—that is, the design of new digital financial products and services that are oriented more to the needs of the financial consumer, help prevent aggressive and unfair market practices, and ensure the legitimate use of customer data.</li> <li>• Address risks of online fraud and scams and mismanagement of personal data.</li> <li>• Strengthen effective redress mechanisms to protect consumers.</li> <li>• Deploy data collection and enhance market monitoring to improve financial services.</li> <li>• Use behavioral insights to improve financial consumer protection and financial education.</li> </ul>
G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs, 2020
<ul style="list-style-type: none"> <li>• Consider the needs, risks, and vulnerabilities of women, youth, and SMEs in the digital environment in the context of (i) the financial consumer (price, terms, clear language) and (ii) data-protection approaches (security, privacy and responsible use of alternative data, and cybersecurity).</li> <li>• Support comprehensive consumer protections that address women’s needs, including requirements to disclose product prices and terms in clear language and appropriate measures to ensure data privacy and security.</li> <li>• Minimize the risks associated with the digitization of SMEs, particularly by ensuring data-protection and privacy rights and adequately managing cybersecurity risks.</li> <li>• Ensure the responsible use of alternative data consistent with applicable laws and good practices related to consumer protection, and remain vigilant to potential financial stability risks.</li> </ul>
G20 Fukuoka Policy Priorities on Aging and Financial Inclusion, 2019
<ul style="list-style-type: none"> <li>• “<b>Protect</b>,” tackle financial abuse and fraud; and “<b>Customize</b>,” address the diverse needs of older people</li> <li>• Encourage stakeholder engagement—a multisectoral approach.</li> </ul>
G20 Policy Guide: Digitisation and Informality, 2018
<ul style="list-style-type: none"> <li>• Adapt oversight arrangements and capability for financial consumer protection and improve disclosure and transparency.</li> </ul>

The COVID-19 pandemic also highlighted, among other effective implementation approaches that are not covered in the interests of brevity, the necessity for *effective stakeholder engagement*, with regulators coordinating more closely (formally and informally) and maintaining an ongoing dialogue with the industry, both with innovators and incumbents, as recommended by the Bali Fintech Agenda. (See box 5.1 for selected country examples.) Additionally, by including consumer stakeholders, civil society groups, and humanitarian organizations, implementors can incorporate continuous feedback to support the rapid deployment of appropriate responses to protect consumers.

The guidance below is structured around four key topics that are aligned with the recommendations of HLP 5 and the [G20/OECD FCP Principles](#).<sup>36</sup> Each topic is followed by additional guidance, where relevant.

*(i) Updated Legal, Regulatory, and Supervisory Framework to Address Risks from Digital Innovations and New Business Models*

Most financial consumer protection systems were adopted before the introduction of DFS such as app-based financial services and online payments. Now, with rapidly evolving developments that involve new technologies such as customer service chatbots, software

robot bankers, real-time lending using remote apps, sophisticated data manipulation, and new business models offering disaggregated service provision, policy makers should regularly review their existing financial consumer protection standards within their legal, regulatory, and supervisory frameworks, including the role of oversight bodies, and update them as necessary. These policy issues are covered by FCP Principle 1 (Legal, Regulatory and Supervisory Framework), FCP Principle 2 (Role of Oversight Bodies), and FCP Principle 3 (Access and Inclusion). Applying financial consumer protection requirements by activity, rather than by type of institution, can help ensure that entities are subject to financial consumer protection obligations regardless of their institutional type or business model.

The increased use of fintech and DFS can either be product specific or cross-cutting. Some of the key risks include (a) fintech operator fraud or misconduct, (b) platform/technology unreliability or vulnerability, (c) consumer disclosure and transparency in a digital context, (d) increased risk of product unsuitability, (e) conflicted fintech business models leading to conduct that is not in consumers’ interests, and (f) algorithmic decision-making leading to potentially unfair outcomes. These risks and emerging regulatory approaches have been discussed in the World Bank’s policy research



## BOX 5.1

### Effective Stakeholder Engagement

**Colombia's** Financial Regulation Unit, in collaboration with the National Planning Department, launched the [Ingreso Solidario](#) program to provide timely and adequate COVID-19 relief to affected households that were not beneficiaries of existing G2P payment schemes. The Financial Regulation Unit addressed the high risk of fraud and fast-tracked interoperability by positioning FSPs as co-creators of solutions. Private-sector participation in decision-making was welcomed via a “situation room” and was key to the successful rollout.

Ahead of issuing recommendations on digital credit offerings in July 2020, the **Banco de Portugal** took a range of practical steps, such as requiring providers to provide information (via a structured questionnaire) about how consumer credit products were being offered through digital channels. The central bank also held bilateral meetings with individual providers, during which providers demonstrated the contracting flows via online or mobile channels and created an open channel to discuss process revisions.

In **Spain**, a new [protocol](#) was signed in February 2022 by the main bank associations. The protocol contains 10 pillars oriented to eradicate the financial exclusion of elderly financial consumers (65 years old and older) derived from digitization.

paper Consumer Risks in Fintech. Box 5.2 discusses a few approaches adopted by jurisdictions to address risks from AI, data, and algorithms.

The legal, regulatory, and supervisory framework should provide regulators and supervisors with an appropriate regulatory toolkit that is flexible, so they can adapt to emerging risks as required, including to changes at the regulatory perimeter. Using behavioral insights to improve financial consumer protection can also help inform regulations.<sup>37</sup> Considering the experience and risks of key segments—for example, MSMEs<sup>38</sup> or vulnerable consumer segments—can also add nuance to consumer protection frameworks by considering the distinct and varied risks faced by these key segments when developing or reviewing financial consumer protection measures. Lessons from the COVID-19 crisis should also be incorporated into financial consumer protection frameworks—for example, through ensuring that consumers are supported by incorporating appropriate hardship arrangements into financial consumer protection frameworks.<sup>39</sup>

Updated financial consumer protection frameworks are most effective when regulators and supervisors have visibility of market developments, both at the service provider and the consumer level. As noted above,

it is important that regulators and supervisors have the resources, capability, flexibility, and the appropriate range of tools and powers to carry out their role. This includes adapting their supervision activities to the digital environment, including market monitoring. This also includes using tools and data to monitor financial sectors evolving due to new fintech entrants and offerings, including as-yet-unregulated providers and changed businesses of some already-regulated entities. Supervisors need to be able to analyze and react to data from an expanding range of sources (including consumer-side research, the monitoring of social as well as traditional media, activity on digital platforms, and industry-side data). For effective supervision and enforcement in the digital environment, regulators and supervisors may consider adopting—or updating—their suptech strategies to improve the effectiveness and speed of responsiveness, which ultimately benefits customers. Cross-border cooperation between authorities is also increasingly relevant—given the ease with which fintech entities may engage with consumers in other countries.

The following resources provide additional guidance for this topic:

- AFI: [Digitally Delivered Credit: Consumer Protection Issues and Policy Responses to New Models of Digital Lending](#)



## BOX 5.2

### Addressing Risks from Use of AI, Data, and Algorithms

Innovative business models may bring not only many financial inclusion benefits but also financial consumer protection risks that governments, oversight bodies (with an appropriate regulatory toolkit), and the industry need to be aware of—for instance, risks associated with AI and an increased reliance on data and algorithms. The examples below examine measures taken to address some of these risks.

The Monetary Authority of **Singapore** has looked specifically at the use of AI and data analytics in financial services and in 2020 introduced [Principles to Promote Fairness, Ethics, Accountability and Transparency](#) as a guide for FSPs. In early 2022, the authority released an open-source toolkit to help financial institutions adopt the principles, along with several white papers [detailing assessment methodologies to guide the use of AI](#).

The **European Banking Association's** guidelines on loan origination and monitoring require that, when using automated models for creditworthiness assessment and credit decision-making, financial institutions should have in place internal policies and procedures to detect and prevent bias and ensure the quality of input data. Financial institutions should also have internal policies and procedures to ensure that the quality of model outputs is regularly assessed, including back-testing the performance of the model, and control mechanisms, model overrides, and escalation procedures within the credit decision-making framework, including qualitative risk-assessment tools and quantitative limits.

In 2021, **China** finalized new anti-monopoly rules for digital platforms and their associated financial services. The rules target practices such as the use of data and algorithms to offer different prices to different consumers, as well as self-dealing by elevating in-house products over those of competitors selling on the same platform. The rules also bar companies from unfairly pricing products by inflating prices or pricing them below cost, or forcing merchants to choose between the country's top internet players. As China's internet regulator stated, Chinese tech firms should not force consumers to be "prisoners to algorithms."

In **Portugal**, financial institutions are explicitly required to inform bank customers of situations in which their creditworthiness assessments rely exclusively on automated decision-making processes, particularly AI models, to allow customers to exercise their rights under the European Union's General Data Protection Regulation.

- BIS: [Innovative Technology in Financial Supervision \(Suptech\)—The Experience of Early Users](#)
- CGAP: [Market Monitoring for Financial Consumer Protection](#)
- FinCoNet: [SupTech Tools for Market Conduct Supervisors](#)
- World Bank: [The Next Wave of Suptech Innovation: Suptech Solutions for Market Conduct Supervision](#)

#### *(ii) Responsible Business Conduct for FSPs, Bank and Non-Bank, and Their Intermediaries*

Given the speed and complexity of DFS, clear and responsible market conduct expectations must be articulated for FSPs and their intermediaries, to ensure fair

and equitable treatment of consumers, as well as effective disclosure and transparency. FCP Principle 6 (Equitable and Fair Treatment of Consumers), FCP Principle 7 (Disclosure and Transparency), FCP Principle 8 (Quality Financial Products), and FCP Principle 9 (Responsible Business Conduct and Culture of Financial Service Providers and Intermediaries) set this out clearly. Fair treatment in this case must also include the provision of suitable and quality financial products and embedding financial inclusion and protection objectives in innovation policies, thereby widening the range of suitable financial products and services available to vulnerable and underserved financial consumers. Box 5.3 discusses emerging regulatory approaches to addressing some of these risks.



### BOX 5.3

## Emerging Regulatory Approaches to Address Risks Related to Product Unsuitability, Disclosure and Transparency, and Business Conduct

**Product unsuitability:** Emerging regulatory approaches to addressing risks from product unsuitability (FCP Principles 8 and 9) include imposing limits on consumer exposure to specific products (examples include **Dubai (UAE)**, **Australia**, and **India**, which have imposed limits on consumer exposure to crowdfunding and P2P lending), and imposing requirements to assess the appropriateness of products. (For example, the **European Union's** regulation on crowdfunding requires that platform operators run an entry knowledge test on their prospective investors and that these prospective investors simulate their ability to bear loss.)<sup>40</sup>

**Consumer disclosure and transparency in a digital context:** For enhanced disclosure and transparency (FCP Principle 7), authorities may seek to mandate the content of contractual terms and conditions for digital finance products and ensure that these cover all key aspects for consumers. Where relevant, it is important that conduct standards are sufficiently flexible—for instance, by providing different disclosure formats for different user segments. For example, P2P platform operators in Brazil must include information on the rights, obligations, and responsibilities between investor, borrower, and platform in P2P loan agreements.<sup>41</sup> On the other hand, countries such as Kenya<sup>42</sup> and the Philippines<sup>43</sup> require that e-money issuers provide a written agreement to each consumer covering the terms of the service and any related fees.

**Business conduct that is not in consumers' interests:** To further responsible business conduct (FCP Principle 9), in the United Kingdom one of the “Principles for Business” to which authorized firms must adhere is to paying due regard to

the interests of their customers. Another principle applying to all authorized firms requires fintech entities to manage conflicts of interest fairly, both between themselves and the consumers they deal with, as well as between consumers.<sup>44</sup>

**Addressing consumer vulnerabilities:** The conduct supervision employed by the Central Bank of **Brazil** requires FSPs to assess their customer base considering the consumers' vulnerabilities, in a risk-based approach, as an additional layer of protection to general legal accessibility standards. These vulnerabilities are not defined by regulation in an exhaustive manner, allowing each FSP to identify and manage vulnerabilities in their own way. Once the vulnerable groups are mapped, institutions are required to adjust their procedures accordingly to each group, to mitigate risks for the institution itself and primarily to prevent misleading and unsuitable products and services for the most vulnerable customers.

**Introducing legal framework to minimize risk of unauthorized money transfers:** Remittances play an important role in the context of supporting digital financial inclusion and consideration. However, the emerging risk of fraud and identity theft give rise to the concern of unauthorized transactions (FCP Principles 10 and 11). Emerging risk mitigation approaches by regulators include mandating the use of multifactor authorization for digital payment transactions, as in the case of **Australia**<sup>45</sup> and **Indonesia**,<sup>46</sup> strengthening consumer data protection and privacy oversight to prevent leaks of confidential personal information, and ensuring strict legal enforcement (suspension or other penalties) for the execution of unauthorized transfers by service providers.

(iii) *Data Governance and Privacy Rules and Protecting Consumers against Fraud and Misuse*

The rapidly expanding use of consumer data is having profound effects on all sectors, especially financial services. The digital collection of consumer data serves many useful purposes for service provision, from remote onboarding to improved service design and enhanced credit reporting,<sup>47</sup> but it is also accompanied by significant risks, in terms of ID theft, fraud, algorithmic exploitation or bias, and the improper use and monetization of that data. Policy makers need to ensure that rules address the collection, storage, ownership, access, and use of all consumer data. This should cover both traditional and innovative forms of data (such as data on utility payments, mobile airtime purchases, use of digital wallet or e-money accounts, and social media and e-commerce transactions). These rules need to apply to all organizations that collect consumer data. FCP Principles 10 (Protection of Consumer Assets against Fraud, Scams and Misuse) and 11 (Protection of Consumer Data and Privacy) provide the relevant standard. (See box 5.4 for examples of data-governance rules adopted by different jurisdictions.)

Policy makers may consider adopting policies to raise awareness on the part of financial consumers and

MSMEs, especially the most vulnerable consumers, about the potential risks of digital financial products and services and basic elements of safety. Policies to improve the ability to recognize instances of online fraud and scams, and policies to raise awareness that some products may be unregulated, should also be considered. (See box 5.5 for examples of emerging approaches.) This is increasingly important given the increase in cross-border payments in a digital environment.

The following resources provide additional guidance for this topic:

- AFI: [Guideline Note on Data Privacy for Digital Financial Services](#)
- G20: [G20 Policy Guide: Digitization and informality](#)
- G20/GPFI: [Data Protection and Privacy for Alternative Data](#)
- OECD: [Financial Consumer Protection Policy Approaches in the Digital Age: Protecting Consumers' Assets, Data and Privacy](#)
- World Bank, ICCR: [Credit Scoring Approaches Guidelines](#)
- World Bank: [Financial Consumer Protection and New Forms of Data Processing beyond Credit Reporting](#)



**BOX 5.4**

**Data-Governance Rules That Protect Privacy and Consumer Data**

A number of EMDE countries have established data-protection laws in the last few years. **Brazil's** *Lei Geral de Proteção de Dados Pessoais* (General Personal Data Protection Law), which went into effect in September 2020, was modeled directly after the European Union's General Data Protection Regulation and is nearly identical in terms of scope and applicability, but with less harsh financial penalties for non-compliance. In 2018, **Chile's** constitution was amended to include data privacy as a human right. In 2020, **Egypt** approved Law No. 151 to protect personal data. The **Nigeria** Data Protection Regulation was issued in January 2019, and in November 2020, the National Information Technology Development Agency provided a related Implementation Framework.

Some countries are going so far as to create new categories of institutions to support data-privacy rules. **India's** Electronic Consent Framework by the Reserve Bank of India established "account aggregators," for-profit intermediaries to facilitate the consent-based flow of data between users and FSPs.<sup>48</sup> Account aggregators are "data blind" and cannot view, store, use, or modify user data. The system uses a smartphone front end that includes streamlined registration that simplifies the legalese and integrates with other mobile money platforms, reducing both the cognitive burden on, and hassle for, users.



## BOX 5.5

### Mitigating Online Fraud and Scams

Many jurisdictions reported a rise in fraud and scams during COVID-19, while others reported that investment fraud is especially rising in the field of crypto assets. For instance, **Latvia** described incidents of misleading phone calls from abroad encouraging consumers to invest in crypto assets; different methods of persuasion resulted in consumers giving fraudsters access to their assets.

Coordination among different regulatory and supervisory authorities with overlapping or related mandates has proved effective in tackling financial scams and fraud. Given the cross-border nature of many online scams, international cooperation on financial scams and fraud will also be increasingly important.

For example, BSP, the central bank of the **Philippines**, increased its cyber surveillance activities on potential cyber threats and preventive measures through close coordination with regulated institutions. Looking to the future, international cooperation on financial scams and fraud will be increasingly important, given the cross-border nature of many online scams. Another example is in **Italy**, where the authority responsible for regulating the securities market (CONSOB), issued orders to internet and other telecommunication service providers to ban access to websites through which investment services or activities are offered or carried out without the requested authorizations. In **Brazil**, after investigators identified at least 18 fake apps with the name of the government's COVID-19 G2P program in the Android app Play Store, the central bank limited transfer amounts and worked with banks to issue communications around criminal activity.

#### *(iv) Accessible, Affordable, Timely, and Fair Complaint-Handling and Redress Mechanisms*

With the combination of increased, continuously evolving, and more complex risks, given the speed of innovation of DFS delivery, well-functioning and user-friendly complaint-resolution mechanisms are essential. FCP Principle 12 (Complaints Handling and Redress) provided standards on this. The pandemic has especially highlighted the importance of appropriate complaint-handling and redress mechanisms to support financial customers effectively when things go wrong. For all financial consumers, especially newly onboarded and previously underserved consumers, the timely resolution of issues and problems is critical to maintaining trust in and, ultimately, continued use of DFS. Technology can facilitate the design of effective redress mechanisms that are more affordable and widely available to financial consumers. Recourse to an independent redress process should be available. For instance, where there are disputes, a third-party financial ombudsman is good practice. Box 5.6 discusses examples of using technology for complaint resolution and related supervisory activities.

The following resources provide additional guidance for this topic:

- CGAP: [Applying Behavioral Research to Consumer Protection: Recourse and Complaints Handling](#)
- INFO Network: [Guide to Setting Up a Financial Services Ombudsman Scheme](#)
- IOSCO: [Complaint Handling and Redress System for Retail Investors](#)
- World Bank: [Complaints Handling within Financial Service Providers: Principles, Practices, and Regulatory Approaches](#)
- World Bank: [Resolving Disputes between Consumers and Financial Businesses: Fundamentals for a Financial Ombudsman](#)

### 5.3 Challenges in Implementing HLP 5

Implementation of effective financial consumer protection frameworks is dependent on a number of issues, many of which continue to evolve. Constant technological evolution and rapidly changing market conditions, with new non-bank actors, mean that regulators are



## BOX 5.6

### Use of Technology for More Effective Consumer Protection and Complaint Resolution

In the **Philippines**, BSP's chatbot "BOB" allows customers to file complaints via social media and other communications platforms in English and Tagalog. "BOB" is an example of supotech. Using AI technologies such as ML and natural language processing, it can even process complaints that are made in "Taglish" (a combination of Tagalog and English). "BOB" responds directly to queries or escalates them to a call center that registers them centrally, giving the central bank visibility into issues beyond those reported by FSPs.<sup>49</sup>

In Africa, the African Development Bank is supporting the National Bank of **Rwanda**, Bank of **Ghana**, and Competition and Consumer Protection Commission of **Zambia** in establishing a complaint-handling system for financial regulators. The system will use multilingual chatbots and AI and interface with key FSPs in the three countries. It will incorporate key local languages for ease of use, record customer complaints, including audio complaints from those unable to read and write, and track their resolution.<sup>50</sup>

Bank of **Italy** is leveraging AI's potential for strengthening financial consumer protection in the banking and financial sectors through "EspTech, the complaints handling tool based on text mining and machine learning." This tool automatically detects common phenomena that ease and improve the capabilities of analysts in investigating certain topics, widening the information for the bank's supervisory work. Since AI techniques are not immune from the risk of producing discriminatory outcomes, the bank's process includes final decision-making by a human arbitrator. EspTech also provides a full-text search (like Google) that can access the contents of complaints and the related attached files.

challenged, especially in EMDEs, by how to regulate and supervise in ways that enable inclusion while protecting users and the integrity and stability of the financial system. While all jurisdictions face unique challenges, policy makers note common gaps in designing effective financial consumer protection frameworks. Some of these have been discussed below.

Developing a comprehensive regulatory framework, which is technology neutral, requires a general legal financial consumer protection framework that applies to all sectors, not just regulated banks, as well as oversight bodies with explicit responsibility for financial consumer protection, with the necessary authority to fulfil their mandates. Few EMDEs have such frameworks in place and therefore need to develop them. At the same time, many EMDEs lack comprehensive national data-privacy and protection laws that apply to all sectors.

The rapidly evolving landscape for digital financial products and services, as well as the emergence of new types of FSPs, present challenges for policy makers, regulators, and supervisors to adapt and respond to such changes. EMDEs often have limited organizational resources to

invest in appropriately qualified staff, adequate and flexible processes, and new tools, such as supotech and regtech, that can aid in market conduct supervision, monitoring, and data gathering. Supervisors will need new strategies and new technological tools to monitor financial sectors that are expanding and changing due to fintech entrants and offerings, including as-yet-unregulated providers and changed businesses of some already-regulated entities.

In addition to ensuring sufficient capabilities and resources, it is important that regulators and supervisors have sufficient knowledge of the market—for example, by conducting market reviews or research to understand developments and engage with business and consumer stakeholders. A key consideration is how the industry can extrapolate practical expectations of regulations for the purpose of compliance. To supplement regulations, especially where they are still under development, regulators should welcome consultations with supply-side actors and consider encouraging initiatives such as self-regulation,<sup>51</sup> to set enforceable responsible business conduct requirements.

New consumers, especially more vulnerable consumer segments or those in rural areas who have less exposure to digital platforms, are likely challenged with inadequate digital and financial literacy and awareness, which increases consumer risks/harms. (See *chapter 6*.) This lack of awareness may also apply to agents of FSPs serving these consumers. Hence, financial consumer protection frameworks should incorporate relevant mitigatory measures.

## 5.4 Looking Forward

The rapid growth of DFS and the continuously evolving pace of innovation are unlikely to slow down, and new means of fraud and consumer harm are evolving as well. Policy makers, regulators, and supervisors will never be able to eliminate these risks, but they can put in place rules and mechanisms that protect consumers and help to instil trust in the financial system and support financial inclusion. Specifically, they need to ensure that

- The regulatory framework can accommodate ever-changing technologies and business models, especially around the use of data;
- Market conduct standards are well understood and effectively enforced while also allowing for flexibility as new information is received;
- Visibility of the market is broad and up to date, supported by market-monitoring tools and effective stakeholder engagement, including other regulators, the private sector, and civil society organizations;
- Consumers understand adequately product benefits and risks and their rights and responsibilities, and feel empowered and enabled to pursue redress when they face problems; and
- DFS entities have an awareness and understanding—through measures such as regulator guidance and capacity-building and training efforts—of consumer expectations, risks, and issues, as well as of their responsibilities to consumers.

### Resources Relevant to HLP 5

#### Implementing the G20/OECD High-Level Principles on Financial Consumer Protection

- G20/OECD Task Force: [Report on the Implementation of the Recommendation of the Council on High-Level Principles on Financial Consumer Protection, 2022](#)
- G20/OECD: [G20/OECD Report on Lessons Learnt and Effective Approaches to Protect Consumers and Support Financial Inclusion in the Context of COVID-19, 2021](#)
- G20/OECD Task Force on Financial Consumer Protection: [Compendium of Effective Approaches for Financial Consumer Protection in the Digital Age, 2020](#)
- [Extensive G20/OECD Task Force implementation guidance and reports](#)
- CGAP: [Implementing Consumer Protection in Emerging Markets and Developing Economies: A Technical Guide for Bank Supervisors](#)

#### Digitalization

- CGAP: [The Evolution of the Nature and Scale of DFS Consumer Risks: A Review of Evidence, 2022](#)
- G20/GPFI: [Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection, 2021](#)
- BTCA: [UN Principles for Responsible Digital Payments, 2021](#)
- CGAP: [FinDev Gateway resources, 2021](#)
- OECD: [G20/OECD Policy Guidance: Financial Consumer Protection Approaches in the Digital Age, 2018](#)
- [G20 Principles for Innovative Financial Inclusion, 2010](#)

## Resources, *continued*

### Vulnerable Groups

- G20/GPFI: [Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection, 2021](#)
- G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs. The guidelines are supported by three reports published in 2020: (1) [Advancing the Digital Financial Inclusion of Youth](#); (2) [Advancing Women's Digital Financial Inclusion](#); and (3) [Promoting Digital and Innovative SME Financing](#)
- OECD: [Financial Consumer Protection and Ageing Populations, 2020](#)
- G20: [G20 Fukuoka Policy Priorities on Aging and Financial Inclusion, 2019](#)
- OECD: [Protecting Consumers in Peer Platform Markets, 2016](#)

### Data Protection

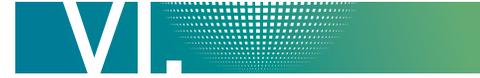
- OECD: [Financial Consumer Protection Policy Approaches in the Digital Age: Protecting Consumers' Assets, Data and Privacy, 2020](#)
- G20: [G20 Policy Guide: Digitisation and Informality, 2018](#)
- World Bank: [Financial Consumer Protection and New Forms of Data Processing beyond Credit Reporting, 2018](#)

### Market Conduct and Monitoring

- CGAP: [Market Monitoring for Financial Consumer Protection, 2022](#)
- World Bank: [The Next Wave of SupTech Innovation: SupTech Solutions for Market Conduct Supervision, 2021](#)
- BIS: [Fintech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policy, 2021](#)
- FinCoNet: [Supervisory Challenges Relating to the Increase in Digital Transactions, Especially Payments, 2022](#)
- FinCoNet: [SupTech Tools for Market Conduct Supervisors, 2020](#)
- FinCoNet: [Digitalisation of Short-Term, High-Cost Consumer Credit: Guidance to Supervisors, 2019, and Practices and Tools Required to Support Risk-Based Supervision in the Digital Age, 2018](#)
- AFI: [Digitally Delivered Credit: Consumer Protection Issues and Policy Responses to New Models of Digital Lending, 2017](#)

### Cross-Cutting

- G20/OECD Task Force on Financial Consumer Protection: [Compendium of Effective Approaches for Financial Consumer Protection in the Digital Age](#)
- ITU-T Focus Group on Digital Financial Services: [Main Recommendations](#)
- World Bank: [Product Design and Distribution: Emerging Regulatory Approaches for Retail Banking Products](#)
- FinCoNet: [Digitalisation of Short-Term, High-Cost Consumer Credit: Guidance to Supervisors](#)



## HLP 6: Strengthen Digital and Financial Literacy and Awareness

**Statement of the HLP:** Support and evaluate programs that enhance digital and financial literacy in light of the unique characteristics, advantages, and risks of digital financial services and channels.

### 6.1 Context: Importance of the HLP, Statement of Challenges in Current Market Contexts

Digital financial literacy is essential in supporting digital financial inclusion. As DFS are rapidly evolving, and new players and products and services are emerging, individuals need to be equipped with the necessary skills to be aware of the characteristics, benefits, and risks of DFS, to be able to use them safely and to know where to obtain information and help in case of need. Consumers can also benefit from being able to use existing digital tools to interact with FSPs and to manage their finances effectively, such as comparison websites and budgeting apps. In this respect, not only do consumers need financial literacy<sup>52</sup> and digital skills, but they also need the skills at the intersection of these elements, on what is referred to as “digital financial literacy”—that is, a combination of knowledge, skills, attitudes, and behaviors necessary for individuals to be aware of and safely use DFS and digital technologies with a view to contributing to their financial well-being.<sup>53</sup>

The digitization of finance has further accelerated during the COVID-19 crisis, meaning that many people started to use DFS for the first time and were exposed to new forms of financial fraud and scams online. All this meant that many consumers, and especially the most vulnerable, underserved, and inexperienced users, have needed to understand the benefits and risks of DFS, how to make online transactions safely, and ways to identify and financial fraud and scams.

Having adequate digital financial literacy is important for all financial consumers, but especially for vulnerable and underserved groups. The Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection,<sup>54</sup> developed by the GPFI in 2021, highlights that digitalization offers great opportunities for a leap forward in financial inclusion and acknowledges that digital financial information and education should be designed in an inclusive way. As recalled in the G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs, it is important to enhance the financial and digital literacy and skills of young people, women, and owners of MSMEs. In addition, people with limited digital access and digital skills, as well as the financially excluded and underserved, stand to gain the most from improving their digital financial literacy to benefit from digital financial products and tools.

In emerging economies and low-income countries with limited levels of financial inclusion, digital financial literacy can be a key foundation stone to allow greater financial access and financial inclusion via digital means. Also in more-developed economies, improving digital financial skills can be a way of ensuring that financial consumers have a better understanding of the features and risks of DFS and are better able to protect themselves against attempts of fraud and scams.

In the current context of increasing digitization and financial insecurity, digital financial literacy is not only a crucial tool to enable the possibilities offered by digital financial inclusion but also a building block for lon-

ger-term financial resilience and financial well-being, as recalled by the 2021 G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy.<sup>55</sup>

## 6.2 A Framework for Implementing HLP 6

### (a) Key International Policy Instruments

The 2020 OECD Recommendation on financial literacy<sup>56</sup> recognizes that financial literacy policies are important in facilitating informed and responsible use of a broad variety of financial products and services, including DFS, and that new financial products and services, including DFS, may change the way that consumers make financial decisions and product choices. In this respect, the Recommendation encourages governments to do the following:

- Promote awareness and understanding of the characteristics of traditional and innovative financial products and services, including digital ones, and of the financial risks associated with them
- Take into account the needs of specific target groups, including people with low digital skills and limited access to digital technologies
- Ensure the effective delivery of financial literacy programs, including through digital tools

The [G20/OECD INFE Policy Guidance: Digitalisation and Financial Literacy](#) offers more detailed guidance about identifying and promoting effective initiatives that enhance digital and financial literacy in light of the unique characteristics, advantages, and risks of DFS and channels. In particular, it includes a checklist of policy actions for designing and implementing effective financial-education initiatives on DFS. Depending on national circumstances, policy makers should make sure the following steps are considered when implementing digital financial literacy initiatives:

- Develop a national diagnosis of the impact of digital finance on individuals and entrepreneurs (including potential vulnerable groups)
- Ensure coordination between public authorities and private and not-for-profit stakeholders
- Support the development of a national core competency framework on digital financial literacy
- Support the effective delivery of financial education through digital and traditional means
- Facilitate and disseminate the evaluation of financial-education programs addressing DFS

These elements are used to structure the remaining of this section. The following sections include selected country examples and case studies based on available evidence.

### (b) Collecting Evidence and Developing a Diagnosis

The implementation of HLP 6 should draw on solid empirical evidence whenever possible. Public authorities and other stakeholders should have a good understanding of the benefits and risks created by DFS, and how these may affect consumers and owners of micro and small businesses. They should also know about awareness of, demand for, and current use of DFS across the population and the level of digital financial literacy of consumers and owners of micro and small businesses. Financial-sector authorities should use such diagnoses to detect emerging areas of consumer risks that warrant priority, as well as core education gaps and needs of different consumer profiles.

The OECD/INFE is planning a new wave of its survey of the financial literacy of adults for 2022-23 using a revised [toolkit](#). The upcoming survey will also investigate awareness and use of DFS among adults and explore levels of digital financial literacy, alongside standard measures of financial literacy, inclusion, resilience, and well-being. Surveys may be supplemented with qualitative methodologies and human-centered designed tools to obtain useful behavioral insights.

### (c) Developing Coordinated and Strategic Approaches to Strengthening Digital Financial Literacy

Given the complexities of digital financial inclusion and the role of different actors in promoting it, it is important to have a strategic approach not only to digital financial inclusion but also to digital financial literacy, so that policy makers, regulators, and FSPs can work together. Such coordinated approaches should notably involve the variety of stakeholders that are actively providing DFS and products—from traditional providers, such as banks, to telecommunication and fintech companies.

Based on identified needs and gaps, financial-sector authorities should consider opportunity areas where core financial-education messages can be integrated to help consumers better use DFS and support financial decision-making. Accordingly, financial-sector authorities may build partnerships with key institutions to embed financial education into programs offering DFS

at scale (that is, cash-transfer programs, agricultural lending programs, and so on, using digital means). Additionally, financial-sector authorities may provide guidance to FSPs to encourage them to integrate financial education holistically into their day-to-day operations and interactions with consumers. Box 6.1 discusses the role of national strategies for financial inclusion and for financial literacy in supporting digital financial literacy.

#### BOX 6.1

### Examples of Strategic Approaches Strengthening Digital Financial Literacy

Several countries have included objectives to promote digital financial literacy and support the use of DFS in their national strategies for financial literacy.

**Canada's National Financial Literacy Strategy 2021–2026** sets out the vision of “a Canada where everyone can build financial resilience in an increasingly digital world.” One of the priorities of the strategy is reducing barriers (for example, reducing the digital divide and use of AI and algorithms that can harm access to appropriate products or services) for financial consumers by supporting increased digital access (inclusion) and digital literacy. The Financial Consumer Agency of Canada will support this priority by collaborating with partners to strengthen digital financial literacy and access. The national strategy encourages those in the financial services industry to test and build financial tools, resources, and services that are appropriate for audiences with a diverse range of digital access and skills and to provide non-digital alternatives when needed.

In **India**, one of the strategic pillars of the National Strategy for Financial Education 2020-25 is improving the safe use of DFS. Financial-sector regulators regularly organize financial-education initiatives on the topic, including webinars and awareness campaigns, such as the Digital Financial Services Day. In **Italy**, the operational plan for implementing the national strategy for financial literacy aims to improve digital financial skills and considers digital skills as a factor that enables financial inclusion and contributes to financial resilience.

#### (d) Developing Competency Frameworks on Digital Financial Literacy

The development of effective policies and programs on digital financial literacy crucially hinges on identifying the key competencies that consumers and owners of micro and small businesses need to have to use digital financial products and services safely.

Promoting digital financial literacy is among the key goals of **Portugal's National Plan for Financial Education 2021–2025**. This strategic goal includes explaining the characteristics and risks of new digital financial products and services (for example, crypto assets, digital currency, payment initiation and aggregation services, insurtech), raising awareness of the emergence of new service providers in this market and the growing cross-border offer of financial products and services, and raising awareness of the behavioral biases that may arise when using DFS. This pillar of the strategy also includes promoting informed access to financial products and services on digital channels and the safe use of digital financial products and services, with a view to ultimately contributing to digital financial inclusion. As part of these efforts, the central bank of Portugal is developing a dedicated digital financial literacy strategy, including a survey of the level of digital financial literacy in the population, in collaboration with the OECD and the European Commission.

Developing financial education to support the use of DFS is also one of the objectives of **Spain's Financial Education Plan 2022–2025**. The plan foresees actions to develop information-sharing and training initiatives aimed at new users of DFS, focusing mainly on preventing financial fraud. Activities conducted under the national plan include seminars, conferences, and online information on financial digitization and online fraud and scams to improve consumers' knowledge of digital products and services and promote awareness of the possible risks associated with them.

*continued*

### **BOX 6.1, continued**

In **Morocco**, the financial-education strategic plan coordinated by the Moroccan Foundation for Financial Education is aligned with the guidelines of the national strategy for financial inclusion. Financial education to support digital financial inclusion includes the development of content to support the safe use of DFS, with a focus on mobile and online payments, online banking services, crowdfunding, and nano loans. These programs are addressed mainly at vocational training students, university students, craftsmen, micro entrepreneurs, small farmers, rural households, women, and illiterate or low-literacy groups.

In **Zambia**, the three financial regulators (Bank of Zambia, Securities and Exchange Commission, and Pensions and Insurance Authority) implemented a joint awareness campaign to educate the public on digital financial security and safety. The campaign was developed as a response to the increase in the number of people falling prey to online financial scams, which were reducing the effectiveness of the efforts to advance digital financial inclusion.

The [G20/OECD INFE Policy Guidance: Digitalisation and Financial Literacy](#) already identifies core financial literacy competencies for the safe use of digital financial products and services. Box 6.2 offers other examples.

#### **(e) Ensuring the Effective Delivery of Programs to Enhance Digital Financial Literacy**

The effective delivery of programs to enhance digital financial literacy should take into account the needs, abilities, and preferences of the target audience. As discussed in the [G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy](#), digital tools offer a great potential to improve digital financial literacy and digital financial inclusion and support the broader goals of financial resilience and financial well-being. Digital financial-education tools—such as online awareness campaigns, mobile apps, comparison websites, and online simulations—may be particularly useful to extend reach and scale in cost-effective ways, tailoring content and format to the needs of different groups and embedding features inspired from behavioral insights, such as reminders, comparison tools, features to set personal goals, features to “learn by doing” (for example, simulations), and so on. In particular, emerging evidence suggests that key behavioral tools and practices, such as simplifying financial education into concrete, actionable steps, personalizing education, providing short, timely messages, and making education convenient and easy to access, have successfully changed consumer knowledge, decision-making, and financial behaviors.<sup>57</sup>

However, when using digital financial-education tools, policy makers and other stakeholders should pay attention not to exacerbate the digital and financial exclusion of vulnerable groups, and especially those with limited digital access and skills. Considering that the groups most in need of learning about DFS may also be those whose digital access and skills are most limited, traditional delivery methods, or combinations of traditional and digital channels, may be best suited to deliver information and education about DFS.

Box 6.3 presents selected examples from a range of countries and economies of how (digital, traditional, and hybrid) financial-education initiatives are supporting awareness of, the safe use of, and trust toward, DFS. The examples cover a wide range of groups that may experience financial vulnerabilities and limited digital financial inclusion, such as young people, the elderly, women, migrants, refugees, and forcibly displaced persons, and emphasize examples of programmers who try to bridge the digital divide. More examples are available in a variety of existing publications.<sup>58</sup>

#### **(f) Facilitating the Evaluation of Financial-Education Programs to Enhance Digital Financial Literacy**

Public authorities and other stakeholders should promote and support the monitoring and evaluation of financial-education programs addressing DFS and aimed at enhancing digital financial literacy. Wherever digital delivery tools are used, their analytical features can be used to monitor their use, while considering all



## BOX 6.2

### Examples of Financial Literacy Competency Frameworks Related to DFS

The G20/OECD INFE Policy Guidance: *Digitalisation and Financial Literacy* includes a set of core financial literacy competencies for the safe use of DFS, covering especially the following areas:

- Building trust and promoting beneficial use of DFS and related technological innovation
- Protecting consumers and small businesses from vulnerability to digital crime and misuse/mis-selling
- Empowering consumers to counter new types of exclusion due to the potential misuse of data sources, including data analytics and digital profiling
- Supporting consumers at risk of overreliance on easy access to online sources of credit

In 2021, the European Commission and the OECD/INFE released the *Financial Competence Framework for Adults in the European Union*. While covering all areas of financial literacy, this framework devotes special attention to competencies related to financial digitization. In particular, it includes competencies related to DFS, digital tools relevant for personal finance, digital assets, or any other competency related to digital media with relevance for personal finance. As digital financial competencies are crosscutting and relevant across the whole framework, they are integrated horizontally throughout all the content areas and sections. Particular attention has been devoted to formulating competencies in a flexible way to take into account potential future developments.

**Italy** has developed competency frameworks on financial literacy for both youth and adults. Both

frameworks pay particular attention to DFS and to the skills needed to use new digital tools (fintech, digitech, insurtech) appropriately. Basic skills include knowing how to use ATMs and POS terminals, home banking and mobile banking, and how to avoid basic cyber risks. More advanced skills relate to sophisticated products and services, such as robo-advisors, crowdfunding, sophisticated cyber risks, instant insurance, or peer-to-peer insurance.

BSP, the central bank of the **Philippines**, considers digital literacy in connection with financial literacy as a necessary skill in the 21st century. BSP defines digital financial literacy as a core competency with the following dimensions:

- Knowledge of DFS: Consumers are aware of the existence of DFS, have a basic understanding of how DFS are used, and are able to compare pros and cons of each product type.
- Awareness of risks in DFS: Consumers understand potential pitfalls of DFS usage, such as phishing, spoofing, personal data theft, hacking, and other cyber risks.
- Digital financial risk control: Consumers have the ability to protect themselves from cybersecurity risks related to the use of DFS through appropriate cyber hygiene practices, such as password/PIN protection, multifactor authentication, and account/data confidentiality.
- Knowledge of rights and redress procedures: Consumers know their basic rights as DFS users and what to do in case they fall victim to risks mentioned above.



### BOX 6.3

## Examples of Financial-Education Programs Supporting the Safe Use of DFS

### Leveraging Digital Tools to Promote Digital Financial Literacy

The Central Bank of **Brazil** has used social media campaigns and cooperated with digital influencers to increase awareness among Brazilians of a new digital payment scheme (Pix). The central bank produced more than 30 videos posted on YouTube and disseminated over a hundred social media posts to explain the technical features of Pix and generate trust in the population at large. This approach and the cooperation with digital influencers allowed the bank to reach a wide audience and fostered quick adoption of the innovation. The Brazilian Bank Federation (Febraban), with technical support from the Central Bank of Brazil, developed a digital financial-education platform (Meu Bolso em Dia, [plataforma.meubolsoemdia.com.br](http://plataforma.meubolsoemdia.com.br)). The platform offers personalized and interactive content, which is based on a financial health assessment with input from the users. As participants complete tasks and modules, the platform awards “tokens” that can be exchanged for benefits at banks associated with Febraban, such as higher yield rates in investments, discounts when contracting insurance, and discounts at other online educational resources.

In **India**, the RBI designed a social media campaign highlighting the features and benefits of using digital modes of payments, using an Indian film industry celebrity. In the fall of 2021, the Bank of **Italy**, with other public authorities, industry associations, and FSPs, launched campaign to raise awareness of how to use digital tools safely. The campaign was broadcast on TV and radio and appeared in magazines and social media.

The Superintendency of Banking, Insurance and Private Pension Fund Administrators of **Peru** has the added safe use of DFS to its distance-learning program Finanzas para Ti as a consequence of the COVID-19 crisis. The program now covers the adequate use of DFS, fraud prevention, and digital applications for financial decision-making.

### Addressing the Needs of Those with Limited Digital Access and Skills

In **Argentina**, the Central Bank of the Republic of Argentina, in cooperation with the Ministry of Education, has undertaken a financial-education campaign that includes tutorials to promote the use of debit cards; the management of security codes for ATMs and for non-bank cash withdrawal points; the use of online banking and digital wallets for the payment of services; cybersecurity; and the protection of financial consumers. The campaign was distributed digitally and on public television, to reach those without internet access, and is also used in schools. The central bank is also deploying the “Finances Nearby” program, which trains representatives of ministries, agencies, and other organizations that assist groups that are vulnerable due to economic, social, and gender- and age-related issues, among others. The purpose of the program is to encourage people’s financial inclusion, including DFS.

In **Germany**, BaFin collaborates with a local NGO to organize webinars for the elderly that can be followed online or watched by small groups of people meeting in person with a mediator (through so-called regulars’ tables). The webinars cover various digital topics, including new developments in digitization in the banking sector, or the risks of fraudulent activities that consumers need to be aware of. The elderly have an opportunity to ask BaFin experts questions, and mediators can further facilitate the exchange.

In **Malaysia**, the Securities Commission, as part of the Financial Education Network, has launched an initiative to improve the digital literacy of seniors (55 years old and older), with the aim of increasing their digital financial inclusion. The program includes monthly webinars for seniors who have access to the internet and the ability to go online and a face-to-face “digital clinic” involving tutors and a small group of seniors with little knowledge on digital applications. The face-to-face sessions provide step-by-step guidance on digital knowl-

*continued*

### BOX 6.3, continued

edge covering basic financial literacy, banking, and investing.

Digital financial literacy interventions by the Bank of **Uganda** include integrating digital financial aspects into all trainings, train-the-trainer programs, and other public education-related activities of the central bank.<sup>59</sup> The bank also conducts radio talk shows that feature public awareness of DFS providers and DFS features, benefits, risks, and redress mechanisms, including mobile money providers.

#### Young People

The Central Bank of **Portugal** designed a digital financial-education campaign aimed at young people addressing the necessary precautions to be adopted online with respect to the use of digital financial channels and services (#toptip). The central bank also ran awareness campaigns on strong customer authentication (two-factor authentication) and new security rules for digital payments and for accessing accounts online, and on new transaction limits on contactless payments.

#### The Elderly

In **Hong Kong, China**, the Investor and Financial Education Council launched a Digital Financial Services Workshop specifically designed for retirees to learn about the application of common fintech services. The workshop uses simulation games, which allow retirees to experience the applications of e-wallet and biometric authentication.

In **Israel**, the Bank of Israel and the Ministry for Social Equality developed an education and training program for older people, known as E-Banking Empowerment, to help senior citizens adjust to e-banking and to give them tools to improve their skills in using e-banking services.

In **Spain**, the industry association of banks, saving banks, and credit cooperatives signed a protocol to reduce the financial exclusion of older financial consumers (65 years old and older) derived from digitization. The protocol includes measures on financial, digital, and fraud-prevention education offered to older customers.

#### Women

The Bank of Italy implemented (virtual and face-to-face) training courses for low-income and/or low-education women to respond to the challenges of the COVID-19 pandemic. Modules relate to topics of particular relevance during the crisis, including digital payments and the risk of fraud and scams.

#### MSMEs

The Bank of **Italy** has developed a financial education program aimed at craftsmen and small business owners to strengthen their competences in making financial decisions, dealing with banks, and using customer protection tools. The program - which is based on self-training sessions through e-learning platforms and meetings with trainers - includes a specific module on the risks and opportunities of using digital payment instruments.

The Financial Education Foundation in **Morocco** hosts a section on entrepreneurship on its financial-education website. Owners of micro and small firms can test their knowledge of accounting and other important aspects of business creation and development, find calculators to help manage business finances, and navigate tax issues. During the COVID-19 crisis, the foundation stepped up its digital initiatives to support MSMEs on topics linked to DFS and managing a company in times of crisis.

#### Migrants, Refugees, and Forcibly Displaced Persons

The Bank of **Italy** recently developed various resources for migrants and asylum seekers, including a digital simulator to calculate the cost of remittances, information in Italian, English, and Ukrainian on the basic financial instruments available to displaced asylum seekers, and a financial-education smartphone app for adults who attend public schools, who are mainly migrants.

The Central Bank of **Jordan** and the Deutsche Gesellschaft für Internationale Zusammenarbeit are implementing the Digi#ances project, which is part of the German Federal Ministry for Economic Cooperation and Development's special initiative "Tackling the Root Causes of Displacement, Reintegrating

*continued*

### BOX 6.3, continued

Refugees.”<sup>60</sup> The project includes campaigns and training courses to promote the responsible use of DFS among Syrian refugees in Jordan.

The Bank of **Rwanda** is targeting forcibly displaced people with digital financial literacy initiatives to

support the uptake of DFS. Stakeholders in the country are delivering financial-education training programs via videos sent on mobile phones, to overcome the limitations imposed by the COVID-19 pandemic.<sup>61</sup>

applicable personal data-protection rules and ethical considerations.<sup>62</sup> Evaluation evidence will allow policy makers and program designers to gain insights into the links between financial education and digital financial literacy, as well as the necessary policy mix that can better support consumers and owners of micro and small businesses to enhance their digital financial inclusion through financial education. When feasible, authorities should support the piloting of interventions prior to full-scale rollout. Piloting helps test the effectiveness of financial-education interventions on a smaller set of beneficiaries and provides an opportunity to adjust and recalibrate the financial-education content, delivery tools, and mechanisms used to address the needs of consumers.<sup>63</sup>

### 6.3 Challenges in Implementing HLP 6

The digitization of finance and society is rapidly advancing, and more and more people are becoming digitally and financially included. Nevertheless, challenges remain in advancing digital financial inclusion and in the way in which digital financial literacy can support digital financial inclusion.

Digital financial literacy programs need to keep pace with innovation in finance and technology and stay ahead of evolving forms of online financial fraud and scams, to remain relevant and to ensure their effectiveness. Moreover, digital financial literacy programs should leverage the opportunities offered by digital tools but be mindful of not leaving behind the most vulnerable segments of the population. Unbanked and underserved consumers and owners of micro and small business tend to have the lowest levels of digital financial literacy, and their possibilities for accessing and using digital tools are more limited.

Finally, more efforts could be made to evaluate the impact of initiatives aimed at supporting digital financial

literacy. This would allow policy makers and practitioners to understand which traditional or digital approaches are more effective for different audiences, to scale up programs that have been shown to be effective, and to use resources more effectively.

### 6.4 Looking Forward

A significant number of initiatives have taken place in recent years to enhance digital financial literacy and to support the implementation of HLP 6, under the overall framework set by the OECD Recommendation on financial literacy and the G20/OECD INFE Policy Guidance: Digitalisation and Financial Literacy. Efforts include the development of dedicated digital financial literacy strategies, the development of a competencies framework on digital finance topics, and the implementation of a wide range of programs and initiatives for different target audiences.

Significant work is under way at the international and national level to further efforts in strengthening digital financial literacy as a way to support digital financial inclusion. For instance, these efforts will include the following:

- Implementing a digital financial literacy module as part of the 2022/23 OECD/INFE financial literacy survey of adults, to obtain internationally comparable data
- Developing a finance competency framework for children and youth in the European Union, jointly carried out by the European Commission and the OECD/INFE as a complement to the existing framework for adults published in 2021

As policy makers, financial regulators, and FSPs strive to enhance the digital financial literacy of consumers, in conjunction with developing appropriate regulatory and financial consumer protection frameworks, they need to

## Resources Relevant to HLP 6

### Policy Guidance

- OECD: Recommendation of the Council on Financial Literacy, 2020
- G20/GPFI: G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs, 2020
- G20/OECD: G20/OECD INFE Policy Guidance: Digitalisation and Financial Literacy, 2018
- Toronto Centre: Financial Literacy and Digital Financial Inclusion: Supervisory Policy and Practice, 2022
- World Bank: Designing a Financial Education Approach, 2021
- OECD: OECD/INFE Guidance on Digital Delivery of Financial Education, 2022

### Defining Competency Frameworks and Assessing Digital Financial Literacy

- OECD: OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022, 2022
- AFI: Digital Financial Literacy Toolkit, 2021
- OECD: Financial Competence Framework for Adults in the European Union, 2022
- G20: The Need to Promote Digital Financial Literacy for the Digital Age, 2019

### Addressing the Needs of Vulnerable Groups

- G20/OECD: Advancing the Digital Financial Inclusion of Youth, 2020
- FinEquity: Enabling Women's Financial Inclusion through Digital Financial Literacy, 2021
- Digital Tools
- OECD: Digital Delivery of Financial Education: Design and Practice, 2021
- G20/OECD: G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy, 2021

### Personal Data

- OECD: Personal Data Use in Financial Services and the Role of Financial Education: A Consumer-Centric Analysis, 2020

follow a strategic approach building on synergies from all relevant stakeholders, and they should take into account consumers' characteristics, preferences, skills, biases, and access to digital tools. Enhancing international

cooperation and exchange on digital financial literacy and education, as is done in the GPFI, OECD/INFE, and other international forums, can help member and non-member countries to advance faster.

## APPENDIX: Self-Assessment Tool

The organization of the questions in each HLP-specific checklist corresponds to the building blocks in the guidance chapters, with a focus on inclusivity and specific risks affecting underserved customer segments, such as low-income women, youth, and MSMEs. Additionally, relevant questions for each building block are ordered according to the following two levels:

- 1) **LEVEL 1:** Minimum standards that should be in place in any jurisdiction where digital financial products and services are being delivered
- 2) **LEVEL 2:** Additional policy and regulatory levers and tools that can be employed to address newly emerging risks specifically and more effectively

Users of this checklist should refer to the compendium of resources at the end of the implementation guide for further tools and guidelines to address the objectives of each HLP.

### HLP 1: Promote a Digital Approach to Financial Inclusion

#### Key Topics and Associated Questions for Implementing HLP 1

##### UNDERSTAND YOUR FINANCIAL INCLUSION LANDSCAPE

###### LEVEL 1:

- ▶ Have you conducted a **diagnostic** of the country's stage of DFS development to ensure a robust evidence-based approach?
- ▶ Can you identify any **gaps in or constraints** on the development of a DFS ecosystem:
  - Enabling financial and digital infrastructure (payment systems, credit infrastructure, digital connectivity infrastructure). (See chapter 4, on HLP 4.)
  - Ancillary government support systems (data platforms, digital ID, financial-management platforms)
  - Conducive legal and regulatory frameworks. (See chapter 3, on HLP 3.)

###### LEVEL 2:

- ▶ Are you working with the private sector (for example, banking and fintech associations, microfinance groups) to develop a coordinated supply- and demand-side map of DFS accounts and usage?

##### DEVELOP A NATIONAL FINANCIAL INCLUSION STRATEGY

###### LEVEL 1:

- ▶ Have you implemented a **multistakeholder engagement approach** that includes the central bank and other financial regulators and supervisors, telecom regulators, government ministries (finance, justice, ICT), FSPs including fintechs, industry associations (banks, payments, non-bank financial institutions, cooperatives, telecoms), consumer groups?
- ▶ Have you identified **key goals and indicators**, including target groups and geographical regions?
- ▶ Have you **validated your targets** to ensure that they are realistic and measurable, particularly within the time frame of the strategy?
- ▶ Have you validated your goals and targets with the **private sector** to clarify how or if the sector will be able to help you realize the goals or work with you to implement them?

###### LEVEL 2:

- ▶ Are **incentives** in place for FSPs to increase their provision of DFS to target groups and geographical regions?

## TRANSACTION ACCOUNT AND PAYMENT PRODUCT OFFERINGS THAT EFFECTIVELY AND AFFORDABLY MEET THE NEEDS OF TARGET POPULATIONS

### LEVEL 1:

- ▶ Are there payment or **transaction accounts** that cater to lower-income or excluded populations—for example, basic accounts that are low-cost or free of charge and accessible to excluded segments?
- ▶ Are PSPs encouraged/incentivized to include such offerings in their service portfolio? Are payment apps accessible via social media or e-commerce platforms?

### LEVEL 2:

- ▶ Have **formal research** studies been conducted or are stakeholder engagement programs in place to ensure that new payment technologies, products, and access modes do not exclude underserved and priority groups, such as women, youth, and MSMEs? Are there requirements for PSPs to inform and/or justify to the regulator any plans to discontinue products that may cater to such groups?

## LEVERAGE LARGE-VOLUME AND RECURRENT PAYMENT STREAMS, INCLUDING REMITTANCES, TO INCREASE THE NUMBER OF TRANSACTION ACCOUNTS AND STIMULATE USAGE

### LEVEL 1:

- ▶ Are you **digitizing large-volume government payment streams** (G2P/P2G/B2G)?
- ▶ Are **incentives** or policy measures in place to foster adoption and usage of transaction accounts in connection with **large-volume and recurrent payments** (for example, rebates of value-added taxes, discounts for adopting direct debit or recurrent payment)? If not, are there any plans to devise and implement them soon? If incentives are in place, are they applied to all types of transaction accounts, including new products and access modes?
- ▶ Are **incentives** or policy measures in place to encourage the use of digital transaction accounts in connection with large-volume payment streams, including G2P payments, salary payments, domestic and international remittances?

### LEVEL 2:

- ▶ Are the procedures and requirements for conducting **cross-border payments** easily understood and adoptable by PSPs? Are cross-border licensing agreements in place for new PSPs?
- ▶ Is monitoring in place to **measure and monitor international remittance levels** by geographic region and whether they are received in cash or via digital transaction account?

### Guidance of Relevance to HLP 1:

- AFI: [National Financial Inclusion Strategy Monitoring and Evaluation Toolkit, 2021](#)
- CPMI, World Bank: [Payment Aspects of Financial Inclusion: Application Tools, 2020](#)
- CGD: [A Decision Tree for Digital Financial Inclusion Policymaking, 2020](#)
- World Bank: [Developing and Operationalizing a National Financial Inclusion Strategy: A Toolkit, 2018](#)

## HLP 2: Balance Innovation and Risk to Achieve Digital Financial Inclusion

### Key Topics and Associated Questions for Implementing HLP 2

#### PROPORTIONATE APPROACH TO REGULATING AND SUPERVISING BANKS AND NON-BANKS

##### LEVEL 1:

- ▶ Are regulatory frameworks in place that take a **proportionate approach** to regulation and supervision—that is, they tailor regulatory requirements to a firm’s size, systemic importance, complexity, and risk profile?
- ▶ Do the regulatory frameworks cover the entire range of financial and nonfinancial institutions that serve low-income and unserved populations, including banks, non-bank financial institutions, microfinance institutions, credit unions, coops, PSPs, postal systems?
  - An effective approach under HLP2 requires a **comprehensive view and coherent alignment** of the rules as they apply to all institutions serving customers.
  - Such frameworks help regulators adapt to **new institutions, business models, and products** entering the regulated space, especially those aimed at underserved and vulnerable groups.
- ▶ Has a **national risk assessment** been undertaken to identify potential risks of money laundering and terrorist financing in your jurisdiction?

##### LEVEL 2:

- ▶ Based on the national risk assessment and financial inclusion strategy (HLP 1), has an AML/CFT framework that is risk based been implemented. For example, do the CDD requirements allow for simplified KYC for lower-risk customers and transactions? Are there provisions for remote onboarding, including remote customer identification and verification using simplified CDD for low-risk customers and financial services activities?

#### TOOLS TO SUPPORT INNOVATION

##### LEVEL 1:

- ▶ Are **knowledge-sharing systems**, both formal and informal, in place with the private sector to exchange information on innovations and new business models?
  - Are there convenient means for innovators to meet with regulators in a safe, off-the-record environment, such as “office hours,” to discuss licensing and other regulation?
  - Are there product specialists within the regulatory team who regularly consult with private-sector players to provide deep domain expertise related to specific trends?
- ▶ Are official mechanisms in place for creating a **safe testing environment** for new innovations, such as sandboxes?

#### PUBLIC SECTOR INNOVATION INITIATIVES

##### LEVEL 1:

- ▶ Are regulators looking at **public innovations** aimed at promoting digital financial inclusion, which could include enhanced credit reporting systems, payment system modernization, digitizing public registries, and so forth?

### Guidance of Relevance to HLP 2:

- FSI: [Fintech and Payments: Regulating Digital Payment Services and E-money, 2021](#)
- World Bank: [Impact of the FATF Recommendations and Their Implementation on Financial Inclusion: Insights from Mutual Evaluations and National Risk Assessments, 2021](#)
- World Bank: [Central Bank Digital Currency: A Payments Perspective, 2021](#)
- CGAP: [How to Build a Regulatory Sandbox: A Practical Guide for Policy Makers, 2020](#)
- FATF: [FATF Guidance: Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion, with a Supplement on Customer Due Diligence, 2017](#)
- BCBS: [Guidance on the Application of the Core Principles for Effective Banking Supervision to the Regulation and Supervision of Institutions Relevant to Financial Inclusion, 2016](#)
- ITU: [Cooperation Frameworks between Authorities, Users and Providers for the Development of the National Payments System, 2016](#)

## HLP 3: Provide an Enabling and Proportionate Legal and Regulatory Framework for Digital Financial Inclusion

### Key Topics and Associated Questions for Implementing HLP 3

#### FUNDAMENTALS OF REGULATING THE DFS LANDSCAPE

##### LEVEL 1:

- ▶ Has a **risk-based approach** based on the principle of proportionality, encompassing all types of FSPs and addressing the question of **entity-based and/or activities-based regulation**, been utilized in the regulatory framework? (See *chapter 2, on HLP 2.*)
- ▶ Have policy makers, regulators, and supervisors worked to strike a balance among financial **inclusion**, financial **stability**, financial **integrity**, and financial consumer **protection**?
- ▶ Do existing DFS regulations address the specific risks facing priority groups such as women, youth, MSMEs, and other vulnerable groups?

##### LEVEL 2:

- ▶ Has the jurisdiction allowed for the **piloting of innovative new delivery channels, products, and services and business models** without having to comply immediately with all regulatory requirements facilitating the adoption of new products and services?
- ▶ How is the regulation of third-party providers/outsourcing addressed?
- ▶ What role do companies with access to platform data play in the provision of financial services? Have issues of competition and data protection been addressed? Is further regulation warranted?
- ▶ Have the regulatory authorities considered the risks to **fair competition** of DFS? Do competition frameworks incorporate a commitment to open, fair, and contestable markets?
- ▶ Does **cooperation among three different authorities—competition, data, and financial sector—exist**, or is it foreseen? Have the blurring boundaries between financial authorities and nonfinancial authorities (for example, telecom regulators, data-privacy authorities, competition authorities) been addressed?

#### BASIC ELEMENTS OF AN ENABLING FRAMEWORK

##### LEVEL 1:

- ▶ Has a specialized licensing window for non-bank DFS providers to issue **e-money accounts** been created?
- ▶ Are there regulatory provisions for the **use of third-party agents** to provide customers access to financial services?
- ▶ Has a proportionate anti-money-laundering framework been adopted? Does it allow **simplified CDD** for lower-risk accounts and transactions? (See *chapter 2, on HLP 2.*)
- ▶ Are **consumer protection** rules tailored to the full range of DFS providers and products and enforced? (See *chapter 5, on HLP 5.*)

##### LEVEL 2:

- ▶ Has the government promoted the introduction and expansion of **digital IDs**, including to low-income populations? Have the financial authorities included provision in regulatory frameworks that clarify how digital ID systems may be used?
- ▶ Have the regulators mandated or supported an **open banking regime**?
- ▶ How have regulators dealt with the possible exploitation of expanding data footprints of individuals, including poor and excluded customers, by technology-driven models? Does a system of data governance exist? (See *chapter 5, on HLP 5.*)
- ▶ Have regulators addressed **regulatory treatment of technological developments** that change the financial services landscape (for example, cloud computing, AI, instant payments, APIs, CBDCs)?
- ▶ Has the issue of **cybersecurity** been addressed with initiatives such as issuing national and sectoral regulations, guidance, and supervisory practices?

#### Guidance of Relevance to HLP 3:

- Bill and Melinda Gates Foundation: [Inclusive Digital Financial Services: A Reference Guide for Regulators](#), 2019 (update forthcoming)
- CGAP: DFS Supervision Toolkit (forthcoming)

- CGAP: [Regulatory Sandboxes: A Practical Guide for Policy Makers](#), 2021
- AFI: [Policy Framework on the Regulation, Licensing and Supervision of Digital Banks](#), 2021
- UNCDF: [Policy Accelerator Guides](#), 2020
- CGAP: [How to Build a Regulatory Sandbox: A Practical Guide for Policy Makers](#), 2020
- CGAP: [Risk-Based Customer Due Diligence: Regulatory Approaches](#), 2019
- A2ii/IAIS: [Insurance Core Principles Self-Assessment Tool](#), 2019
- CGAP: [I-SIP Toolkit: Policy Making for an Inclusive Financial System](#), 2018

## HLP 4: Expand the DFS Infrastructure Ecosystem

### Key Topics and Associated Questions for Implementing HLP 4

#### USE OF NEW AND EXISTING TECHNOLOGIES, PRODUCTS, AND ACCESS MODES IN PROMOTING ACCESS AND USAGE OF TRANSACTION ACCOUNTS

##### LEVEL 1:

- Does the existing infrastructure include real-time gross settlement systems, ACH, payment card switch(es), fast/instant payment system, widespread POS systems, and so on?
- What are the main payment projects that were launched/implemented in recent years within the country?
- Are further actions planned to **enhance/improve retail payment systems**—for example, mandating interoperability of all payment instruments?
- Is promoting innovation and competition one of the development policy actions for retail payment systems?
- Are you implementing one or more of the following **new technologies**?
  - APIs, big-data analytics, biometrics, contactless (near-field communication, QR code), cloud computing, AI/ML, DLT, Internet of Things, digital ID
- What existing or new products are using the following technologies?
  - Payment cards, mobile payments, fast payments, CBDCs
- Are new access channels being leveraged—for example, e-wallets, open banking?
- Do national-level financial inclusion efforts seek to leverage fintech expertise among all relevant public- and private-sector stakeholders in implementing these technologies, products, and access channels?

#### EFFECTIVENESS OF ICT AND SHARED MARKET INFRASTRUCTURES IN SUPPORTING FINANCIAL INCLUSION EFFORTS SUCH AS IDENTIFICATION INFRASTRUCTURE, CREDIT REPORTING SYSTEMS, AND OTHER DATA-SHARING PLATFORMS

##### LEVEL 1:

- What ICT and shared market infrastructures currently exist to support financial inclusion efforts? Do the infrastructures adequately support digital financial inclusion efforts, such as a modern (for example, digital) and robust ID system that supports electronic KYC procedures, including the digital ability to identify, authenticate, and provide consent?
- Is there a **credit reporting system** that supports decision-making or the ongoing operation of PSPs (for example, to facilitate access to credit or other financial products to holders of transaction accounts, to support KYC procedures, and so forth)?
- Are the criteria for accessing the underlying ID and credit reporting services open and fair for all FSPs (including fintechs) irrespective of their institutional standing?
- Can other types of **data-sharing platforms** be leveraged by PSPs for other types of decision-making?
- What are the **barriers** to full penetration of mobile phone or internet services? For example, are costs associated with providing or subscribing to these services a barrier to access?

##### LEVEL 2:

- Are coverage rates of **power and telecommunications** (voice and data) systems adequate within the country, including in rural regions? Are plans in place to address disparities—for example, tower sharing?
- Are ICT services **affordable** for most of the population? If not, is there a plan to achieve lower prices?

## EFFECTIVENESS OF TRANSACTION ACCOUNT AND PAYMENT PRODUCT OFFERINGS TO MEET A BROAD RANGE OF TRANSACTION NEEDS OF THE TARGET POPULATION, AT LOW COST

### LEVEL 1:

- What kind of payment services do PSPs offer to consumers as part of their transaction account offering?
- Do PSPs offer some payment services free of charge?
- Do PSPs make use of new technologies and access modes to improve their product offering to customers, including by making their products more affordable?

### LEVEL 2:

- How are the needs of the unserved or underserved (for example, women, youth, and MSMEs) addressed by PSPs?
- Have formal research studies been conducted or are there any measures to prevent these customer segments from remaining excluded or becoming excluded due to a general migration of the payment industry to new technologies, products, and access modes?

## BROAD AVAILABILITY OF PAYMENT ACCESS POINTS TO AUGMENT USAGE OF TRANSACTION ACCOUNTS, ESPECIALLY THOSE CATERING TO THE NEEDS OF TARGET POPULATIONS

### LEVEL 1:

- Are **basic types of physical access points** (for example, branches, agents, ATMs, POS terminals) widely available and within reach of all population segments? Are these payment access points available to all accounts, including basic transaction accounts that are low cost or free?
- Are remote/electronic access channels such as mobile banking and internet banking widely available and widely used? If not, what are the main obstacles?
- What are the main drivers behind the usage of various types of access points? Describe the main disparities in the coverage/density of the various types of access points between regions (or rural versus urban).
- Is geospatial mapping used to **measure coverage** and identify areas in need? How are access points monitored to ensure proper function and availability for use?

### LEVEL 2:

- Is data collected on payments processed by **type of access point/channel** for retail payments—ATM, POS terminals, and any other payment transaction-accepting devices (for example, mobile phones via QR codes, near-field communication or other forms, internet payment gateways, post office, bank branch, mobile banking, internet banking, other agents, and so on)?
- How are access points monitored to ensure proper function and availability for use?
- Do stakeholders monitor whether the availability and proximity of cash access points is declining? Is there an explicit intention to avoid this outcome?

## LEVERAGE LARGE-VOLUME AND RECURRENT PAYMENT STREAMS, INCLUDING REMITTANCES, TO INCREASE THE NUMBER OF TRANSACTION ACCOUNTS AND STIMULATE USAGE

### LEVEL 1:

- Have large-volume **government payment streams** (for example, rebates of value-added taxes, fees and fines, taxes, salary payments, social protection payments, and so forth) been **digitized** to ensure that all outgoing and incoming payments can be conducted via digital transaction accounts?
- Are **incentives** in place, such as reduced or no fees for users making digital payments to government departments?
- Are there **widespread digital points of service**, such as merchants, agents, and ATMs, for users to conduct government payment transactions via digital transaction accounts?

### LEVEL 2:

- How does the payment industry seek to improve its transaction account offering to encourage the use of these accounts in connection with large-volume payment streams, including G2P payments, salary payments, and domestic and international remittances?
- How do the relevant stakeholders use new technologies, products, and access modes to underpin the use of transaction accounts for cross-border payments? How do these practices contribute to increasing the competitiveness and convenience of transaction accounts for sending and receiving remittances and other cross-border payments?

#### Guidance of Relevance to HLP 4:

- CPMI, World Bank: [Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020
- CPMI, World Bank: [Payment Aspects of Financial Inclusion: Application Tools](#), 2020
- World Bank, ITU: [Digital Regulation Handbook](#), 2020

#### HLP 5: Establish a comprehensive approach to consumer and data protection that focuses on issues of specific relevance to DFS

##### Key Topics and Associated Questions for Implementing HLP 5

##### UPDATED LEGAL, REGULATORY, AND SUPERVISORY FRAMEWORK TO ADDRESS RISKS FROM DIGITAL INNOVATIONS AND NEW BUSINESS MODELS

###### LEVEL 1:

- Is there a consumer protection framework with standards and requirements<sup>64</sup> that address risks specific to DFS and products?
  - Is a consumer protection framework in place that meets the [G20/OECD High-Level Principles on Financial Consumer Protection](#)?
  - Is your jurisdiction an adherent to the [G20/OECD High-Level Principles on Financial Consumer Protection](#)?<sup>65</sup>
  - Elements of this framework would typically include safeguarding client funds, differentiated and proportionate standards and regulations for new or nontraditional DFS providers, clarity on procedures and responsibility for unauthorized or mistaken transactions and system outages, data use and protection rules, and minimum consumer redress systems.
- Are there oversight bodies with explicit responsibility for financial consumer protection?
  - Does the oversight body (bodies) in your jurisdiction use data collection and behavioral insights to inform market-monitoring activities?

###### LEVEL 2:

- Are plans for one or more of the following responsible practices in place?
  - Standards or requirements to **ensure accessibility** to financial products and services for all including underserved populations
  - Guidelines that consider the needs of underserved consumers, which could then include a focus on the specific risks and challenges faced by **women, youth, or MSMEs**
- Are DFS providers also encouraged to self-regulate—for example, through an enforceable, industry-based code of conduct (either where regulations are not in place or to supplement regulatory standards)?

## **RESPONSIBLE BUSINESS CONDUCT FOR FSPs, BANK AND NON-BANK, AND THEIR INTERMEDIARIES**

### **LEVEL 1:**

- Are standards or requirements in place that provide for disclosure and transparency, quality financial products, and responsible business conduct?
- Do standards or requirements address market conduct of all DFS providers with proportionate requirements across the full suite of DFS products and services?
  - This includes clear and comparable disclosures of terms, fees and commissions, requirements for periodic account statements showing transactions and fees, responsible and fair lending, and debt-collection practices.
- Do standards or requirements protect financial systems from attacks by cyber criminals, which can result in system downtime and reduced, inefficient, or erroneous processes and, ultimately, financial losses for users?
- Are requirements in place, formally or informally, for FSPs to report the types and volume of cybersecurity problems or events, both at the institutional and at the consumer-interface level?

### **LEVEL 2:**

- Are standards or requirements in place relating to the fair treatment of consumers and the use of AI in DFSs to avoid inappropriate or discriminatory outcomes?
- Are there standards or requirements to prevent anti-competitive behavior to ensure client choice?
- Are there standards or requirements for DFS providers to train employees, agents, and their other third-party partners in extending transparency and access standards?
- Do regulators and supervisors have access to monitoring tools (regtech, supotech) for market oversight?

## **DATA-GOVERNANCE RULES THAT PROTECT CONSUMER DATA AND PRIVACY AND PROTECT CONSUMERS AGAINST FRAUD AND MISUSE**

### **LEVEL 1:**

- Are there standards or requirements relating to protection of consumer data and privacy?
  - Is there a data-governance framework or act covering the responsible use of consumer data, including ownership, consent, transparency, protection, privacy, and the retention and transparency of personal data usage?
  - Is there a clear legal definition of “personal data,” taking account of the ability to combine different categories of information to identify a person?
- Are there standards or requirements relating to protection of consumer assets against fraud, scams, and misuse, particularly through digital channels?
- Do oversight body (bodies) in your jurisdiction regularly monitor and collect data on new forms of DFS-related theft, scams, or fraud perpetrated online or via mobile apps and take action to prevent these irresponsible practices?

### **LEVEL 2:**

- If standards or requirements are in place, do they encompass
  - Security safeguards to protect against unauthorized use, disclosure, modification, and destruction of personal data; and
  - Meaningful choice and control over personal data?
  - Do standards or requirements encompass responsible use of data particularly where AI and ML are employed, to avoid inappropriate or discriminatory outcomes, for example in access to credit and insurance for women?

## **ACCESSIBLE, AFFORDABLE, TIMELY, AND FAIR COMPLAINT-HANDLING AND REDRESS MECHANISMS**

### **LEVEL 1:**

- Is a complaint-handling and redress framework in place?
- Are there standards or requirements that are enforced and require FSPs to provide consumers convenient access to affordable (preferably free), timely, and fair complaint resolution via multiple channels that are remotely accessible and easy to understand?
- Are there external dispute-resolution mechanisms—for example, financial ombudsman?

### **LEVEL 2:**

- Are there more responsible standards encouraging service providers to submit periodic reports on data covering DFS complaints broken down by key target groups (gender, demography, geography)?

### **Guidance of Relevance to HLP 5:**

- G20/OECD: [High-Level Principles on Financial Consumer Protection](#), 2022
- G20/OECD Task Force: [Report on the Implementation of the Recommendation of the Council on High-Level Principles on Financial Consumer Protection](#), 2022
- G20/GPFI: [Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection](#), 2021
- BTCA: [UN Principles for Responsible Digital Payments](#), 2021
- CGAP: [Market Monitoring for Financial Consumer Protection](#), 2021
- IOSCO: [Complaint Handling and Redress System for Retail Investors](#), 2021
- AFI: [Guideline Note on Data Privacy for Digital Financial Services](#), 2021
- CGAP/FinDev: [Guide to Financial Consumer Protection in the Digital Era](#), 2021
- OECD: [Financial Consumer Protection Policy Approaches in the Digital Age: Protecting Consumers' Assets, Data and Privacy](#), 2020
- G20/OECD Task Force on Financial Consumer Protection: [Compendium of Effective Approaches for Financial Consumer Protection in the Digital Age](#), 2020
- OECD: [Financial Consumer Protection for Ageing Populations](#), 2020
- FinCoNet: [SupTech Tools for Market Conduct Supervisors](#), 2020
- CFI: [Handbook on Consumer Protection for Inclusive Finance](#), 2019
- G20/GPFI: [G20 Policy Guide: Digitisation and Informality](#), 2018
- G20/GPFI: [Data Protection and Privacy for Alternative Data](#), 2018
- World Bank: [Good Practices for Financial Consumer Protection: 2017 Edition](#), 2017

## HLP 6: Strengthen Digital and Financial Literacy and Awareness

### Key topics and Associated Questions for Implementing HLP 6

#### DIGITAL AND FINANCIAL LITERACY STRATEGIES

##### LEVEL 1:

- Is there a digital financial literacy strategy in your country—either within an NFIS, within a financial literacy strategy, or standalone—with clear goals and targets?
- Are there multistakeholder agreements between public authorities, the financial industry, and civil and humanitarian organizations to develop and provide digital financial literacy educational programs and materials to consumers?

##### LEVEL 2:

- Are there guidelines or criteria for the involvement of stakeholders implementing programs on digital financial literacy (including FSPs and nonprofit organizations)?
- Are requirements in place for FSPs to make instructions available, through traditional or digital means and in multiple languages, if applicable, that instruct new users on how to use DFS?
- Are there cooperative agreements with relevant stakeholders for designing and delivering digital financial literacy training and messaging to specific groups?

#### DEFINING AND ASSESSING DIGITAL FINANCIAL LITERACY COMPETENCIES

##### LEVEL 1:

- Are there frameworks defining digital financial literacy competencies in the country/economy?
- Is there evidence of digital financial literacy in the country/economy, or in some regions, or for some specific groups of the population?
- Are there regular supply- and demand-side assessments of financial inclusion, financial literacy, and digital financial literacy that help identify specific weaknesses and gaps in various segments—for example, rural or specific priority groups?

##### LEVEL 2:

- Are minimum digital financial capabilities outlined—for example, how to manage personal data and privacy, understanding terms and conditions of DFS, and comparing terms and conditions across different providers?

#### INITIATIVES TO IMPROVE DIGITAL FINANCIAL LITERACY, INCLUDING FOR SPECIFIC GROUPS

##### LEVEL 1:

- Are digital financial literacy training, materials, or information available, through traditional or digital means?
- Are plans in place for digital financial literacy lessons and materials to be made available in the school systems?
- Are digital financial literacy training, materials, or information available to specific groups?
- Are there any efforts to evaluate the impact and effectiveness of program, materials, and tools to improve digital financial literacy?

##### LEVEL 2:

- Are there regular awareness campaigns to provide transparent, impartial, and non-vendor-specific information and to alert users to new types of fraud?
- Are incentives in place for FSPs to hire or partner with members of targeted groups to improve outreach—for example, women agents, multilingual staff?
- Do digital financial literacy initiatives incorporate a combination of traditional and digital delivery tools and channels as a means of bridging the digital divide?

### Guidance of Relevance to HLP 6:

- Toronto Centre: [Financial Literacy and Digital Financial Inclusion: Supervisory Policy and Practice](#), 2022
- OECD: [OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022](#), 2022
- OECD: [Financial Competence Framework for Adults in the European Union](#), 2022
- OECD: [OECD/INFE Guidance on Digital Delivery of Financial Education](#), 2022

- AFI: [Digital Financial Literacy Toolkit](#), 2021
- OECD: [Digital Delivery of Financial Education: Design and Practice](#), 2021
- G20/OECD: [G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy](#), 2021
- G20/OECD: [Advancing the Digital Financial Inclusion of Youth](#), 2020
- OECD: [Recommendation of the Council on Financial Literacy](#), 2020
- G20: [The Need to Promote Digital Financial Literacy for the Digital Age](#), 2019
- G20/OECD: [G20/OECD INFE Policy Guidance: Digitalisation and Financial Literacy](#), 2018



## Glossary

**Agent** is any third party acting on behalf of a bank, financial institution, or non-bank institution (including an e-money issuer or another PSP) to deal directly with customers, under contractual agreement. The term “agent” is commonly used even if a principal-agent relationship does not exist under the regulatory framework in place.

**Agent network** is a collection of independent business, such as retailers, with which a bank or another FSP contracts to serve as points of interaction with the provider’s customers.

**Anti-money-laundering/countering the financing of terrorism (AML/CFT)** refers to laws, regulations, and supervisory and enforcement actions to prevent, detect, investigate, or prosecute movements or deposits of funds that proceed from or fund crime.

**Application programming interfaces (APIs)** are a set of rules and specifications that enable software programs to communicate with each other and form an interface between different programs to facilitate their interaction. APIs have several use cases—for example, they can allow PSPs to integrate payment and financial services and enable payment-initiation services and broader open banking models. APIs can also be used for facilitating electronic KYC processes and supporting AML/CFT checks by integrating with relevant infrastructures.

**Bank-based model** is a DFS business model in which (i) the customer has a contractual relationship with the bank, and (ii) the bank is licensed or otherwise permitted by the regulator to provide mobile financial services.

**Bank-led model** is a DFS business model, bank based or non-bank based, in which the bank is the primary driver of the product or service, typically taking the lead in marketing, branding, and managing the customer relationship.

**Big-data analytics** are emerging as technologies that enable faster and more accurate predictive analysis of the high volume, variety, and velocity of data. Some of

big data’s uses in payment services include supporting customer onboarding processes for new customers through automated screening processes that check names against sanction lists as well as making predictions about a person’s creditworthiness. Big data also authorizes and authenticates existing customers by using various data sets, such as biometrics. Lastly, big data has been extensively used for financial literacy purposes, giving accountholders customized advice using chatbots and robo-advisers.

**Biometrics** are technologies that use an individual’s unique physiological and behavioral attributes to establish and authenticate his or her identity. In DFS, biometrics can overcome some of the challenges associated with PINs, passwords, or forms of identification.

**Cloud computing** and its associated delivery models, such as banking-as-a-service (BaaS) and payment-as-a-service (PaaS), are improving access to technology by PSPs of all sizes and acting as an enabler of innovation in payments and associated services. Cloud computing reduces the need for large investments in IT, thereby lowering market-entry barriers for new providers that can specialize in developing customized interfaces for specific customer segments.

**Contactless** technologies, including near-field communication and QR codes, are fast becoming prevalent in facilitating acceptance of payment instruments at the point of sale. The role of the latter is particularly critical in the uptake of fast payment systems. Contactless technologies, in combination with tokenization, are instrumental to the provision of e-wallets.

**Customer due diligence (CDD)**, often used synonymously with KYC measures, generally refers more broadly to the policies and procedures used by an FSP to obtain customer information and assess the risks of money laundering and terrorist financing posed by a customer, including detecting, monitoring, and reporting suspicious activities.

**Digital financial inclusion** is the use and promotion of DFS to advance financial inclusion.

**Digital financial literacy** is a combination of knowledge, skills, attitudes, and behaviors necessary for individuals to be aware of and safely use DFS and digital technologies with a view to contributing to their financial well-being.

**Digital financial service provider** is a mobile network operator or another non-bank entity that offers various financial services but only by electronic means—for example, using a mobile phone or the Internet.

**Digital financial services (DFS)** refer to the broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances, and insurance. The DFS concept includes mobile financial services.

**Digitalization** is the use of digital technologies and data, as well as interconnection, that results in new activities or changes to existing activities.

**Distributed ledger technologies (DLT)** enable entities, through the use of established procedures and protocols, to carry out transactions without necessarily relying on a central authority to serve as the system of record for the ledger. Applications of such technologies to the financial sector are addressing some of the long-standing challenges to enhancing access to financial services.

**E-money** is a record of funds or value available to consumers that is stored on a payment device, such as a chip, prepaid card, or mobile phone, or on a computer system, as a nontraditional account with a banking or a non-banking entity. E-money products can be further differentiated into network money, mobile money, electronic purse, and e-wallet.

**E-money account** is an account held with an e-money issuer. In some jurisdictions, e-money accounts may have similar characteristics as conventional bank accounts but are treated differently under the regulatory framework due to the nature of their purpose (that is, surrogate for cash or stored value to facilitate transactional services).

**E-money issuer** is the entity that initially issues e-money against receipt of funds. Some countries permit only banks to issue e-money (see bank-based and bank-led models), while other countries permit non-banks to issue e-money. (See non-bank-based and non-bank-led models.)

**E-payment** is any payment made through an electronic funds transfer.

**E-wallet** is an e-money product for which the record of funds is stored on a specific device, typically a chip on a card or in a mobile phone.

**Financial Action Task Force (FATF)** is an intergovernmental body that sets international standards that aim to prevent and sanction money laundering, terrorism financing, and proliferation financing. As a policy-making body, the FATF works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas.

**Financial consumer** is generally considered to include private individuals at a minimum but may also include small businesses/MSMEs, depending on the definitions used by jurisdictions.

**Financial consumer protection** refers to the framework of laws, regulations, and other measures generally designed to ensure the fair and responsible treatment of financial consumers as they purchase and use financial products and services and in their dealings with FSPs.

**Financial education** is the process by which financial consumers/investors improve their understanding of financial products, concepts, and risks and, through information, instruction, and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being.

**Financial literacy** is a combination of the financial awareness, knowledge, skills, attitudes, and behaviors necessary to make sound financial decisions and ultimately achieve individual financial well-being. This definition is consistent with national and international definitions of similar concepts, such as financial capability.

**Financial resilience** is the ability of individuals or households to resist, cope with, and recover from negative financial shocks.

**Financial well-being** takes into account objective and subjective elements of financial well-being, including in particular (i) objective factors contributing to resilience, including disposable income, personal wealth, and financial control, and (ii) subjective evaluation of day-to-day financial life and longer-term financial plans. The OECD financial well-being framework also acknowledges the importance of a wide range of factors associated with, or

supporting, financial well-being, such as knowledge and skills, including adaptability and self-control; physical and mental health; the support of friends, family, and the broader community; and economic stability and growth.

**Fintech** refers to advances in technology that have the potential to transform the provision of financial services, spurring the development of new business models, applications, processes, and products.

**Government-to-person (G2P) payments** are payments made by government entities to individuals, including social transfers as well as wage and pension payments.

**Internet of Things** is one of the sources of big data and encompasses software, sensors, and network connectivity embedded in physical devices, buildings, and other items that enable those objects (i) to collect and exchange data, and (ii) to send, receive, and execute commands. The Internet of Things is increasingly being integrated with payment services in combination with other innovative technologies to improve the customer experience.

**Interoperability** is a situation in which instruments belonging to a given scheme may be used in platforms developed by other schemes. Interoperability requires technical compatibility between systems, but it can take effect only when agreements have been concluded between the schemes concerned. In mobile money markets, interoperability implies the ability of users of one network to transact with users of another network. Interaction can be achieved at different levels: at the customer level, agent level, or platform level.

**Know your customer (KYC)** refers to a set of due-diligence measures undertaken by a financial institution, including policies and procedures, to identify customers and the motivations behind their financial activities. KYC is a key component of AML/CFT regimes.

**National strategy for financial literacy** is a sustained, coordinated approach to financial literacy that (1) recognizes the importance of financial literacy—through legislation, where appropriate—and agrees to its scope at the national level, taking into account identified national needs and gaps; (2) is coherent with other strategies fostering economic and social prosperity, such as those focusing on financial inclusion and financial consumer protection; (3) involves cooperation with relevant stakeholders as well as the identification of a national leader or coordinating body/council; (4) includes the establishment of a road map to support the achievement of specific and predetermined objectives within a set period of time; (5) provides guidance to be applied by individual programs implemented under the national strategy to contribute efficiently and appropriately to the overall strategy; and (6) incorporates monitoring and evaluation to assess the progress of the strategy and propose improvements accordingly.

**Payment service provider (PSP)** is an entity that provides payment services to end users—payers and payees. PSPs include banks and other deposit-taking institutions, as well as specialized entities, such as money-transfer operators, e-money issuers, payment aggregators, and payment gateways.

**Super apps** are applications that encompass multiple different services and attempt to be a single point of entry and consolidation for a variety of user needs.

**Supervisory technology (suptech)** is defined by the Basel Committee on Banking Supervision as the use of technology to facilitate and enhance supervisory processes from the perspective of supervisory authorities.

**Unbanked** customers, usually the very poor, are customers who do not have a bank account or a transaction account at a formal financial institution.



## Compendium of Resources

### HLP 1: Promote a Digital Approach to Financial Inclusion

1. AFI: [Bringing the Informal Sector Onboard \(toolkit\)](#), 2021
2. AFI: [National Financial Inclusion Strategy Monitoring and Evaluation Toolkit](#), 2021
3. CGD: [A Decision Tree for Digital Financial Inclusion Policymaking](#), 2020
4. CGAP: [Customer-Centric Guide](#), 2016
5. CPMI, World Bank: [Payment Aspects of Financial Inclusion: Application Tools](#), 2020
6. CPMI, World Bank: [Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020
7. G20/GPFI: [Advancing the Digital Financial Inclusion of Youth](#)
8. G20/GPFI: [Advancing Women's Digital Financial Inclusion](#)
9. G20/GPFI: [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#), 2020
10. G20/GPFI: [Promoting Digital and Innovative SME Financing](#)
11. UNSGSA, BTCA, UNCDF, World Bank: [Igniting SDG Progress through Digital Financial Inclusion](#), 2018
12. World Bank: [FISF Learning Series videos on NFIS development and operationalization](#), 2021
13. World Bank: [Digital Financial Services](#), 2020
14. World Bank: [Developing and Operationalizing a National Financial Inclusion Strategy: Toolkit](#), 2018
15. World Bank: [Coordination Structures for Financial Inclusion Strategies and Reforms](#), 2013

### HLP 2: Balance Innovation and Risk to Achieve Digital Financial Inclusion

1. BCBS: [Guidance on the Application of the Core Principles for Effective Banking Supervision to the Regulation and Supervision of Institutions Relevant to Financial Inclusion](#), 2016
2. BIS: [Fintech and Payments: Regulating Digital Payment Services and E-money \(FSI Insights on Policy Implementation No. 33\)](#), 2021
3. BIS and World Bank: [Proportionality in Bank Regulation and Supervision—A Joint Global Survey](#), 2021
4. CGAP: [How to Build a Regulatory Sandbox: A Practical Guide for Policy Makers](#), 2020
5. CGAP: [The Evolving Nature and Scale of Consumer Risks in Digital Finance](#), 2021
6. FATF: [FATF Guidance: Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion](#), 2017
7. FATF: [FATF Guidance: National Money Laundering and Terrorist Financing Risk Assessment](#), 2013
8. G20/GPFI: [Advancing the Digital Financial Inclusion of Youth](#), 2020
9. G20/GPFI: [Advancing Women's Digital Financial Inclusion](#), 2020
10. G20/GPFI: [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#), 2020
11. G20/GPFI: [Promoting Digital and Innovative SME Financing](#), 2020
12. ITU: [Cooperation Frameworks between Authorities, Users and Providers for the Development of the National Payments System](#), 2016

13. UNSGSA: [Early Lessons on Regulatory Innovations to Enable Inclusive Fintech](#), 2020
14. World Bank: [Central Bank Digital Currencies: A Payments Perspective](#), 2021
15. World Bank: [Digital Financial Services](#), 2021
16. World Bank: [Global Experiences from Regulatory Sandboxes](#), 2020
17. World Bank: [Impact of the FATF Recommendations and Their Implementation on Financial Inclusion: Insights from Mutual Evaluations and National Risk Assessments](#), 2021

### **HLP 3: Provide an Enabling and Proportionate Legal and Regulatory Framework for Digital Financial Inclusion**

1. AFI: [Policy Framework on the Regulation, Licensing and Supervision of Digital Banks](#), 2021
2. AFI: [Regulatory and Supervisory Technologies for Financial Inclusion](#), 2022
3. BIS: [Fintech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policy](#) (BIS Papers No. 117), 2021
4. CGAP: [DFS Supervision Toolkit](#) (forthcoming)
5. CGAP: [Digital Banks: How Can They Be Regulated to Deepen Financial Inclusion?](#) (reading deck)
6. CGAP: [Digital financial services regulation and supervision collection](#)
7. CGAP: [Proportional Supervision for Digital Financial Services DFS Collection](#) (web page)
8. CGAP: [Transformative Innovative for Financial Inclusion: Implications for Regulatory Architecture](#) (forthcoming)
9. CGAP: [Fintechs and Financial Inclusion: Lessons Learned](#), 2019
10. CGAP: [Fintechs and Financial Inclusion: Looking past the Hype and Exploring Their Potential](#), 2019
11. CPMI, World Bank: [Payment Aspects of Financial Inclusion in the Fintech Era](#) (PAFI guidance) (Second Phase), 2020
12. FATF: [FATF Guidance: Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion, with a Supplement on Customer Due Diligence](#), 2017
13. FSB: [The Use of Supervisory and Regulatory Technology by Authorities and Regulated Institutions](#), 2020
14. FSI: [Policy Responses to Fintech: A Cross-Country Overview](#), January 2020
15. G20/GPFI: [Advancing the Digital Financial Inclusion of Youth](#), 2020
16. G20/GPFI: [Advancing Women's Digital Financial Inclusion](#), 2020
17. G20/GPFI: [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#), 2020
18. G20/GPFI: [Promoting Digital and Innovative SME Financing](#), 2020
19. G20/GPFI: [Global Standard-Setting Bodies and Financial Inclusion: The Evolving Landscape](#), 2014
20. G20/GPFI: [Digital Financial Inclusion: Emerging Policy Approaches](#), 2017
21. IADI: [Introductory Brief: Challenges for Deposit Insurers](#) (Fintech Brief No. 1), 2021
22. IAIS: [Application Paper on the Use of Digital Technology in Inclusive Insurance](#), 2018
23. UNCDF: [Policy Tools and Resources](#)
24. World Bank, IMF: [The Bali Fintech Agenda](#), 2018
25. World Bank: [How Countries Can Expand Access to Digital Financial Services](#), 2020
26. World Bank: [Fintech and the Future of Finance](#), 2022
27. World Bank: [A Roadmap to SupTech Solutions for Low Income \(IDA\) Countries](#), 2020

### **HLP 4: Expand the DFS Infrastructure Ecosystem**

1. CPMI, World Bank: [Payment Aspects of Financial Inclusion: Application Tools](#), 2020
2. CPMI, World Bank: [Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020

3. CPMI: [Enhancing Cross-Border Payments: Building Blocks of Global Roadmap](#), 2020
4. FSB: [The Use of Supervisory and Regulatory Technology by Authorities and Regulated Institutions](#), 2020
5. FSB: [Targets for Addressing the Four Challenges of Cross-Border Payments: Consultative Document](#), 2021
6. G20/GPFI: [Advancing the Digital Financial Inclusion of Youth](#), 2020
7. G20/GPFI: [Advancing Women's Digital Financial Inclusion](#), 2020
8. G20/GPFI: [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#), 2020
9. G20/GPFI: [Promoting Digital and Innovative SME Financing](#)
10. IMF: [The Bali Fintech Agenda](#), 2018
11. World Bank: [A Roadmap to SupTech Solutions for Low Income \(IDA\) Countries](#), 2020
12. World Bank: [Implementation Considerations for Fast Payment Systems](#), 2021
13. World Bank: [Developing Digital Payment Services in the Middle East and Africa: A Strategic Approach](#), 2021
14. World Bank: [Digital Financial Services](#), 2021

### **HLP 5: Establish Responsible Digital Financial Practices to Protect Consumers**

1. AFI: [Digitally Delivered Credit: Consumer Protection Issues and Policy Responses to New Models of Digital Lending](#), 2017
2. BIS: [Fintech and the Digital Transformation of Financial Services: Implications for Market Structure and Public Policy](#), 2021
3. CGAP: [FinDev Gateway resources](#), 2021
4. CGAP: [Market Monitoring for Financial Consumer Protection \(toolkit\)](#), 2022
5. CGAP: [The Evolution of the Nature and Scale of DFS Consumer Risks: A Review of Evidence](#), 2022
6. CGAP: [Implementing Consumer Protection in Emerging Markets and Developing Economies: A Technical Guide for Bank Supervisors](#)
7. [G20/OECD Task Force implementation guidance and reports](#)
8. FinCoNet: [Financial Product Governance and Culture](#), 2021
9. FinCoNet: [Financial Advertising and Consumer Protection: Supervisory Challenges and Approaches](#), 2020
10. FinCoNet: [SupTech Tools for Market Conduct Supervisors](#), 2020
11. FinCoNet: [Digitalisation of Short-Term, High-Cost Consumer Credit: Guidance to Supervisors](#), 2019
12. G20: [G20 Fukuoka Policy Priorities on Aging and Financial Inclusion](#), 2019
13. G20/GPFI: [Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection](#), 2021
14. G20/GPFI: [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#)
15. G20: [G20 Policy Guide: Digitisation and Informality](#), 2018
16. G20/GPFI: [G20 Principles for Innovative Financial Inclusion](#), 2010.
17. G20/OECD: [High-Level Principles on Financial Consumer Protection](#), 2022
18. G20/OECD: [G20/OECD Report on Financial Consumer Protection and Financial Inclusion in the Context of COVID-19](#), 2021
19. G20/OECD Task Force on Financial Consumer Protection: [Compendium of Effective Approaches for Financial Consumer Protection in the Digital Age](#), 2020
20. G20/OECD: [Report on the Implementation of the Recommendation of the Council on High-Level Principles on Financial Consumer Protection](#), 2022
21. G20/GPFI: [Advancing the Digital Financial Inclusion of Youth](#), 2020
22. G20/GPFI: [Advancing Women's Digital Financial Inclusion](#), 2020
23. G20/GPFI: [Promoting Digital and Innovative SME Financing](#), 2020

24. ITU: [ITU-T Focus Group Digital Financial Services: Main Recommendations](#), 2017
25. OECD: [Financial Consumer Protection and Ageing Populations](#), 2020
26. OECD: [Financial Consumer Protection Policy Approaches in the Digital Age: Protecting Consumers' Assets, Data and Privacy](#), 2020
27. OECD: [Protecting Consumers in Peer Platform Markets](#), 2016
28. BTCA: [UN Principles for Responsible Digital Payments](#), 2021
29. World Bank: [Product Design and Distribution: Emerging Regulatory Approaches for Retail Banking Products](#), 2019
30. World Bank: [Financial Consumer Protection and New Forms of Data Processing beyond Credit Reporting](#), 2018
31. World Bank: [The Next Wave of Suptech Innovation: Suptech Solutions for Market Conduct Supervision](#), 2021
32. World Bank: [Consumer Risks in Fintech: New Manifestations of Consumer Risks and Emerging Regulatory Approaches](#), 2021

### **HLP 6: Strengthen Digital and Financial Literacy and Awareness**

1. AFI: [Digital Financial Literacy Toolkit](#), 2021
2. FinEquity: [Enabling Women's Financial Inclusion through Digital Financial Literacy](#), 2021
3. G20: [The Need to Promote Digital Financial Literacy for the Digital Age](#), 2019
4. G20/OECD: [Advancing the Digital Financial Inclusion of Youth](#), 2020
5. OECD: [G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy](#), 2021
6. OECD: [G20/OECD INFE Policy Guidance: Digitalisation and Financial Literacy](#), 2018
7. G20/GPFI: [Advancing Women's Digital Financial Inclusion](#), 2020
8. G20/GPFI: [G20 High-Level Policy Guidelines on Digital Financial Inclusion for Youth, Women and SMEs](#), 2020
9. G20/GPFI: [Promoting Digital and Innovative SME Financing](#), 2020
10. OECD: [Digital Delivery of Financial Education: Design and Practice](#), 2021
11. OECD: [OECD/INFE Guidance on Digital Delivery of Financial Education](#), 2022
12. OECD: [Financial Competence Framework for Adults in the European Union](#), 2022
13. OECD: [Personal Data Use in Financial Services and the Role of Financial Education: A Consumer-Centric Analysis](#), 2020
14. OECD: [Recommendation of the Council on Financial Literacy](#), 2020
15. OECD: [OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022](#), 2022
16. Toronto Centre: [Financial Literacy and Digital Financial Inclusion: Supervisory Policy and Practice](#), 2022
17. World Bank: [Building a Financial Education Approach: A Starting Point for Financial Sector Authorities](#), 2021

### **HLP 7: Facilitate Customer Identification for DFS**

1. BTCA: [Reaching Financial Equality for Women](#), 2021
2. CGAP: [Risk-Based Customer Due Diligence: Regulatory Approaches](#), 2019
3. FATF: [COVID-19-Related Money Laundering and Terrorist Financing: Risks and Policy Responses](#), 2019
4. FATF: [FATF Guidance: Anti-Money Laundering and Terrorist Financing Measures and Financial Inclusion, with a Supplement on Customer Due Diligence](#), 2017
5. G20/GPFI: [G20 Digital Identity Onboarding](#), 2018
6. GPFI: [Advancing Women's Digital Financial Inclusion](#), 2020
7. ID4D/World Bank Group: [Principles on Identification for Sustainable Development: Toward the Digital Age](#), 2021
8. ITU: [Digital Financial Inclusion](#), 2021

9. ITU: [e-KYC Use Cases in Digital Financial Services](#), 2021
10. ITU: [Implementation of Secure Authentication Technologies for Digital Financial Services](#), 2020
11. World Bank: [Digital ID Assessment Instrument: Financial Sector Module](#), 2021
12. World Bank: [Digital ID to Enhance Financial Inclusion: A Toolkit for Regulatory Authorities](#), 2021

#### **HLP 8: Track Digital Financial Inclusion Progress**

1. AFI: [Digital Financial Service Indicators](#), 2019
2. AFI: [National Financial Inclusion Strategy Monitoring and Evaluation Toolkit](#), 2021
3. CPMI: [Payment Aspects of Financial Inclusion](#), 2016
4. CPMI: [Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020
5. CPMI: [Payment Aspects of Financial Inclusion: Application Tools](#), 2021
6. G20: [G20 Financial Inclusion Indicators](#), 2016; see also [G20 Financial Inclusion Indicators](#), 2016
7. OECD: [OECD/INFE Toolkit for Measuring Financial Literacy and Financial Inclusion 2022](#), 2022
8. World Bank: [Global Financial Inclusion and Consumer Protection \(FICP\) Survey](#) (database and reports)
9. World Bank: [How to Measure Financial Inclusion](#), 2015
10. World Bank: [Measuring Financial Inclusion: The Global Findex Database](#), 2012
11. World Bank: [The Global Findex Database 2021](#) (database and reports)

## Endnotes

1. This focus on working-age adults is not intended to ignore the distinct financial service needs of youth, those in old age, or SMEs. Similarly, it should be acknowledged that it does not capture gender-linked barriers to financial inclusion.
2. There are specific challenges to women's financial inclusion, given, for example, difficulties in account opening, among other constraints. The Global Findex database shows that women in developing countries are less likely to have an account than men, even after controlling for income and other individual characteristics. In developing economies, the gender gap has fallen to six percentage points in 2021 from nine percentage points in 2014, which had remained unchanged for several years.
3. [CPMI, World Bank: Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020.
4. Findings from the Global Findex 2021 show that gender gaps and rural-urban gaps in account ownership and digital access persist across many countries.
5. The PAFI framework will be discussed in greater detail in HLP 4.
6. This is also relevant to the implementation of HLP 8.
7. See also HLP 7 on facilitating customer identification for DFS.
8. World Bank: [Digital Financial Services](#), 2020.
9. The first enabler, Enabling Financial and Digital Infrastructures, is discussed in chapter 4.
10. The fourth enabler, Conducive Legal and Regulatory Frameworks, is discussed in chapter 3.
11. CGD: [A Decision Tree for Digital Financial Inclusion Policymaking](#), 2020.
12. This report also has a dedicated application tool that can be found [here](#).
13. National Treasury of the Republic of South Africa, 2022.
14. FATF: [FATF Guidance: National Money Laundering and Terrorist Financing Risk Assessment](#), 2013.
15. The Nation Thailand: [KBank to Test E-banking Mobile App for Visually Impaired](#), 2017.
16. Some of these examples are discussed in BIS's [Platform-Based Business Models and Financial Inclusion](#), 2022.
17. BIS, World Bank: [Central Bank Digital Currencies: A New Tool in the Financial Inclusion Toolkit?](#), 2022.
18. The following 4 of the 12 pillars of the Bali Fintech Agenda pertain directly to the legal and regulatory framework for fintechs: (III) Reinforce Competition and Commitment to Open, Free, and Contestable Markets; (VI) Adapt Regulatory Frameworks and Supervisory Practices for Orderly Development and Stability of the Financial System and Facilitate the Safe Entry of New Products, Activities, and Intermediaries; (VII) Safeguard the Integrity of the Financial System by Strengthening AML/CFT Compliance and Monitoring; and (VIII) Modernize Legal Frameworks to Provide an Enabling Legal Landscape.
19. See ID4D/World Bank's [Principles on Identification for Sustainable Development: Toward the Digital Age](#), 2021.
20. See CGD's [Data Protection: Consent Is Dead \(Long Live Privacy\)](#), 2021.
21. This does not apply to consumer-driven data sharing through open banking or an equivalent regime.
22. See also the work of the [BIS Innovation Hub on regtech and supotech](#).
23. The coverage of the reference guide will be expanded in stages until October 2023 to include DFS more broadly (not just e-money, which is the focus of the current iteration). The following themes are being considered: supervision of DFS, enabling innovation (sandboxes, innovation hubs, accelerators), competition issues, lending platforms, the role of non-banks beyond mobile network operators and mobile money, data protection/privacy, gender, more on cybersecurity, outsourcing (cloud-based services, transnational data processing), and financial capability.
24. Research from the International Monetary Fund (IMF) has shown that DFS have not served to close the gender gap in financial inclusion, as DFS/fintech do not address barriers such as cultural or social norms, financial and digital literacy, and safety and disparity in access to resources, and that such barriers are higher for women. See the 2022 IMF working paper [Fintech: Financial Inclusion or Exclusion?](#). This is corroborated by the BIS ([The Fintech Gender Gap](#), BIS Working Paper No. 931, 2021).
25. World Bank: [Digital Financial Services](#), 2020.
26. CPMI, World Bank: [Payment Aspects of Financial Inclusion in the Fintech Era](#), 2020.
27. These are also relevant to implementation of HLP 7.
28. With respect to fast payments and CBDC, the FSB's 2021 cross-border roadmap, [Targets for Addressing the Four Challenges of Cross-Border Payments](#), and the CPMI's 2020 Stage 2 report [Enhancing Cross-Border Payments: Building Blocks of a Global Roadmap](#) also provide an overview of challenges and targets to address them. More specifically, the interlinking of payment systems for cross-border payments, including fast payment systems, are addressed under Building Block 13, and the potential for CBDC to enable cross-border payments is addressed under Building Block 19.
29. In this chapter, "financial consumer" is generally considered to include private individuals at a minimum but may also include small businesses/MSMEs, depending

- on the definitions used by jurisdictions. The differences have not been explored, given the limited scope of this chapter.
30. See, for example, OECD: [G20/OECD: Policy Guidance: Financial Consumer Protection Approaches in the Digital Age](#), 2018.
  31. World Bank: [Consumer Risks in Fintech: New Manifestations of Consumer Risks and Emerging Regulatory Approaches](#), 2021.
  32. See, for example, CGAP: [The Evolution of the Nature and Scale of DFS Consumer Risks: A Review of Evidence](#), 2022.
  33. The [G20/OECD FCP Principles](#) are developed and maintained by the G20/OECD Task Force on Financial Consumer Protection (G20/OECD Task Force) comprising policy makers and experts from G20 and OECD countries, among others.
  34. The “Sustainable Finance” cross-cutting theme is not mentioned in this chapter in detail, given the objectives of HLP 5. The [FCP Principles](#) can be applicable to individual financial consumers and MSMEs, depending on the definitions used by jurisdictions.
  35. AFI: [Consumer Protection for Digital Financial Services: A Survey of the Policy Landscape](#), 2021.
  36. Overlaps with other [FCP Principles](#). For example, FCP Principle 4 (Financial Literacy and Awareness) and FCP Principle 10 (Competition) are addressed in other HLPs and therefore not covered in this chapter.
  37. G20/GPFI: [Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection](#), 2021.
  38. For example, frameworks could consider how to enable decoupling of business and personal assets, which is a key consideration for MSMEs.
  39. G20/GPFI: [Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection](#), 2021.
  40. EU Regulation 2020/1503 of October 7, 2020, on European crowdfunding service providers for business, art. 21.
  41. National Monetary Council Resolution Number 4,656 of April 26, 2018 (Brazil).
  42. National Payment System Regulations 2014 (Kenya), ss. 41(1)(a) and (2).
  43. BSP E-Money Circular 2009 (Philippines), s. 4(G).
  44. FCA Principles for Businesses, October 2020 (United Kingdom), 2.1.1R.
  45. Reserve Bank of Australia: [Payments System Board Annual Report: Trends in Payments, Clearing and Settlement Systems](#), 2020.
  46. OJK: [POJK Nomor 12-POJK.01-2017 tentang Penerapan Program APU PPT di Sektor Jasa Keuangan](#), 2019.
  47. G20/GPFI: [Use of Alternative Data to Enhance Credit Reporting to Enable Access to Digital Financial Services by Individuals and SMEs Operating in the Informal Economy: Guidance Note](#), 2018.
  48. CGAP: [India’s New Approach to Personal Data-Sharing](#), 2020.
  49. BTCA: [UN Principles for Responsible Digital Payments](#), 2021.
  50. Proto: [African Development Bank and Proto to Automate Financial Consumer Protection in Ghana, Rwanda, and Zambia](#), n.d.
  51. In Indonesia, the Financial Services Authority (*Otoritas Jasa Keuangan*, or OJK) has enhanced regulation of the fintech industry by appointing the Indonesia Fintech Association (*Asosiasi Fintech Indonesia*, or AFTECH) as a self-regulatory organization to complement efforts to supervise market conduct and protect digital financial consumers. Accordingly, any violation of the approved code of ethics and conduct by AFTECH members can result in OJK sanctions.
  52. The OECD Recommendation on Financial Literacy defines financial literacy as a combination of the financial awareness, knowledge, skills, attitudes, and behaviors necessary to make sound financial decisions and ultimately achieve individual financial well-being.
  53. OECD/INFE guidance on digital delivery of financial education (forthcoming from the OECD in 2022). This is similar to the [definition](#) used by the Alliance for Financial Inclusion.
  54. G20/GPFI: [Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection](#), 2021.
  55. G20/OECD: [G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy](#), 2021.
  56. OECD: [Recommendation of the Council on Financial Literacy](#), 2020.
  57. OECD: [Smarter Financial Education: Key Lessons from Behavioural Insights for Financial Literacy Initiatives](#), 2019.
  58. See, for instance, G20/OECD’s [G20/OECD-INFE Report on Supporting Financial Resilience and Transformation through Digital Financial Literacy](#); OECD’s [Advancing the Digital Financial Inclusion of Youth](#); OECD’s [Personal Data Use in Financial Services and the Role of Financial Education](#); OECD’s [Digital Delivery of Financial Education: Design and Practice](#); AFI’s [Digital Financial Literacy Toolkit](#); World Bank’s [Building a Financial Education Approach](#); and forthcoming OECD publications on seniors and women.
  59. AFI: [Digital Financial Literacy Toolkit](#), 2021.
  60. GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit): [Creating the Conditions for Money Transfers without Borders](#) (last updated October 2021).
  61. AFI: [Advancing the Financial Inclusion of Forcibly Displaced Persons in Rwanda](#), 2021.
  62. OCED: [OECD/INFE Guidance on Digital Delivery of Financial Education](#), 2022.
  63. World Bank: [Building a Financial Education Approach: A Starting Point for Financial Sector Authorities](#), 2021.
  64. “Standards or requirements” refer generally to all kinds of instruments ranging from voluntary guidelines and self-regulatory codes to mandatory regulation or legal requirements.
  65. Adherence is where a jurisdiction formally makes a commitment to adhere to the [G20/OECD FCP Principles](#). All G20 countries and OECD and FSB jurisdictions are adherents. Other countries are welcome to become adherents.