Digital Financial Inclusion and Literacy from a G20 Perspective

Saon Ray, Visiting Professor, Indian Council for Research on International Economic Relations
Peter Morgan, Senior Consulting Economist and Advisor to the Dean, Asian Development Bank Institute
Vasundhara Thakur, Former Research Associate, Indian Council for Research on International Economic Relations

1. Introduction

Digital financial inclusion refers to “deployment of the cost-saving digital means to reach currently financially excluded and underserved populations 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” (World Bank 2014).

In this policy brief, we discuss digital finance and literacy from the perspective of G20 countries. The layout of the policy brief is as follows: in Section 2 we discuss digital financial inclusion and literacy from the lens of income inequality, gender gap, and digital access. We also discuss the impact of the pandemic on digital finance and literacy. Section 3 discusses policies for digital financial inclusion and financial literacy in terms of strategies of emerging and developed countries. In section 4, we present the regulatory and risk aspects of digital financial inclusion. Section 5 discusses what the G20 has accomplished in terms of digital financial inclusion and digital financial literacy (DFL) and what needs to be done. In section 6, we discuss our recommendations to the G20 for the way forward and section 7 concludes.

2. Digital Financial Inclusion and Literacy: An Emerging Market Economy Lens

According to the World Bank’s Global Findex Survey 2021, 76% of adults worldwide have financial accounts, with the figure in developing countries being 71% (Demirgüç-Kunt et al. 2022). These accounts were at a bank or regulated institution such as a credit union, microfinance institution, or mobile money service provider. The share of adults with account ownership around the world increased from 51% of adults in 2011. In developing countries, the share of adults owning an account increased by 8 percentage points, from 63% of adults in 2017. In the G20 countries (except the European Union), the account ownership rate is above 80% for 13 countries, of which only four are emerging markets (see Figure 1).
The other G20 emerging markets are behind in account ownership. The G20 advanced economies have over 80% of individuals using digital payments (see Figure 2). Of the G20 emerging markets, only the Russian Federation, the People’s Republic of China (PRC), and South Africa have over 80% of individuals using digital payments.

The remaining G20 emerging markets are behind. Germany is leading in both account ownership and the use of digital payments. Figure 3 presents data on the use of mobile phones or the internet to pay bills (for people aged 15 and above) among the G20 countries in 2021. This figure reveals this rate is as high as 75% for Australia, while lower than 10% for India and Mexico.

Figure 4 reveals the data on the use of mobile phones or the internet to send money (by people aged 15 and above) for the G20 countries in 2021. The leader, in this
case, is the Republic of Korea at 70%, followed by the PRC at almost 70%. Indonesia reports the lowest at less than 10%.

### 2.1.1 Gender Gap

The genesis of gender-based digital exclusion lies in barriers to access, lack of reasonable cost, lack of financial and digital literacy and skills, and gender biases and sociocultural norms (OECD 2018). Digital tools and skills are not equally available among communities—this is especially relevant for women, rural households, and low-income adults, who tend to lag in terms of access to digital technologies and skills. While women globally are 26% less likely than men to have a smartphone, in South Asia, 70% of women are less likely than men to

---

**Figure 3: Share of Persons Who Used a Mobile Phone or the Internet to Pay Bills (aged 15+), 2021 (%)**

![Figure 3](image1.png)

**Figure 4: Share of Persons Who Used a Mobile Phone or the Internet to Send Money (aged 15+), 2021 (%)**

![Figure 4](image2.png)
own a smartphone. Worldwide, roughly 327 million more men than women have a smartphone (OECD 2018). According to the GSM Association, in low- and middle-income countries, 20% fewer women than men have a smartphone. This is partly due to a lack of skills, ID ownership, and poor product design.¹ Men are significantly more likely than women to use e-commerce; e.g., in Türkiye, men are 14 percentage points more likely than women to use digital merchant payments, while in Mexico men are nearly twice as likely as women to make such payments.

### 2.1.2 Digital Access

Access forms a crucial foundation for digital financial inclusion. Different indicators have been used to measure digital access such as the share of internet users and mobile phone ownership. There exists a divide in terms of the number of internet users between developed and developing countries, although it decreased to some extent in 2021 (International Telecommunication Union 2021). Across both developed and developing countries, internet usage statistics are skewed in favor of the male population, the younger population, and the urban population. However, these differences are sharper for developing economies. Notably, the developed economies are ahead of the developing economies in achieving gender parity in internet usage with the former having achieved gender parity in internet use.

Mobile cellular subscriptions moved upward in 2021 after suffering a small dip in 2020 (with Africa showing a reverse trend). A similar trend was seen for mobile broadband subscriptions. In 2018–20, the share of mobile phone ownership was over 90% for 29 countries. This figure was less than 50% for only three countries. While some countries have more or less achieved gender parity in mobile phone ownership, there are some countries where mobile phone ownership is skewed in favor of the male population (OECD 2018).

While digital access provides a foundation for digital financial inclusion, usage hinges critically on the presence of digital skills. It has been observed that individuals are lagging behind on even basic information and communication technology (ICT) skills as the share of the population with basic ICT skills is 80%–100% only in a handful of economies (OECD 2018). The use of digital payments for the older population is more challenging due to their lower digital access and absence of skills. Another factor is their resistance to moving away from cash (Klapper and Miller 2021).

In India, digital payment adoption has been driven by smartphone ownership among other factors such as debit card possession, “bank mitra”² access, and mobile banking applications. However, access to “bank mitras” and mobile banking applications was less important for digital payment adoption in India. It has been observed that the older survey respondents’ payment mode preference was cards, whereas younger and middle-aged respondents preferred India’s digital payment enabler, United Payments Interface (UPI)³ and mobile wallets (Reserve Bank of India 2022).

### 2.2 Impact: The COVID-19 Pandemic

The COVID-19 pandemic propelled the use of digital payments. The Global Findex Database 2021 report documents an increase in the use of digital merchant payments in the period after the coronavirus outbreak in India, the PRC, and other developing economies (Demirgüç-Kunt, et al. 2022). Some households in India undertook digital transactions for the first time during the pandemic-induced lockdown (Reserve Bank of India 2022). Similarly, as a result of the pandemic, both government and the private sector undertook more digital payments. While the government used cash and standard bank accounts as mediums to channel pandemic support, it also resorted to digital channels such as mobile money and money wallets for the same (Klapper and Miller 2021). An interesting case underlined by Klapper and Miller (2021) is Brazil, where pandemic-related payments to low-income informal workers were made in fully digital accounts.

The pandemic not only drove up digital payments’ usage but also increased account usage. As per the latest Global Findex Database 2021 report, 6% of adults in developing economies paid utility bills from an account for the first time after the coronavirus outbreak (Demirgüç-Kunt, et al. 2022).

---

¹ OECD (2018) shows that, in Mexico and the PRC, while nearly one-third of women with mobile phones do not use mobile internet because of lack of digital skills, only 15% of men do not use mobile internet for the same reason. Products should be convenient, affordable, and easy to use especially for women consumers, who have lagged men in adoption of digital finance.

² A bank mitra is a facilitator for banking services in India.

³ UPI is an enabler of digital transactions in India. For more on UPI, see section 3 on policies.
2.3 Financial Literacy

Education promotes financial literacy but only affects the usage of financial services indirectly. Financial literacy and digital skills (in a digital financial inclusion context) enable consumers to use financial services more effectively and protect them against risks.

Among the unbanked, about two-thirds lack the knowledge to use financial institution accounts. Nearly one-third of those who hold mobile money accounts in sub-Saharan Africa require aid to use their mobile money accounts, with the situation being worse for women than for men (World Bank 2022).

Among the G20 countries, France has the highest financial literacy score (Table 1). Saudi Arabia is at the extreme other end, with the lowest financial literacy score among these G20 economies. These financial literacy scores average around 12.7 for these 15 G20 countries (OECD 2017).

3. Digital Financial Inclusion Policies

3.1 National Strategy of Emerging Countries

The G20 high-level policy guidelines (HLPGs) for digital financial inclusion, i.e., HLPG1, HLPG5, HLPG7, and HLPG8, stress developing an enabling environment, a robust digital infrastructure, and payment systems; enhancing inclusivity, literacy, and education; and protecting the interests of consumers (Reserve Bank of India 2021). The BRICS countries have undertaken effective policy initiatives in alignment with select G20 HLPGs to not only strengthen and spread financial services and literacy but also make them inclusive of youth, women, people with disabilities, rural areas, low-income households, and small enterprises (Reserve Bank of India 2021).

India has seen much progress on the financial inclusion front; in particular, the number of deposit accounts has increased after the Pradhan Mantri Jan Dhan Yojana in 2014. In the period following demonetization in 2016, the uptake of digital finance in India has increased. In India, the government and central bank together have adopted several initiatives for enhancing financial inclusion such as no-frill accounts (those that require minimum or no balance), Electronic Benefits Transfer, Pradhan Mantri Jan Dhan Yojana, and MUDRA banks. While these efforts have led to an increase in bank account ownership in India, the share of individuals saving using a bank account is still low, i.e., many accounts are inactive (Barik and Sharma 2019). India’s digital financial infrastructure comprising of components such as a national digital biometric identity (Aadhaar) and a digital payment platform has helped include more individuals financially (D’Silva, et al. 2019). UPI allows person-to-person (P2P) and person-to-merchant (P2M) digital payments and works on both application-based smartphones and unstructured supplementary service data (USSD)-based feature phones. It also provides

<table>
<thead>
<tr>
<th>Table 1: G20/OECD INFE-Financial Literacy Score (G20 Countries)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td>France</td>
</tr>
<tr>
<td>Canada</td>
</tr>
<tr>
<td>People’s Republic of China</td>
</tr>
<tr>
<td>Republic of Korea</td>
</tr>
<tr>
<td>Germany</td>
</tr>
<tr>
<td>Indonesia</td>
</tr>
<tr>
<td>United Kingdom</td>
</tr>
<tr>
<td>Türkiye</td>
</tr>
<tr>
<td>Russian Federation</td>
</tr>
<tr>
<td>Brazil</td>
</tr>
<tr>
<td>Mexico</td>
</tr>
<tr>
<td>India</td>
</tr>
<tr>
<td>Argentina</td>
</tr>
<tr>
<td>Italy</td>
</tr>
<tr>
<td>Saudi Arabia</td>
</tr>
</tbody>
</table>


Note: Financial literacy scores for Japan and South Africa are not available.

Source: G20/OECD INFE report on adult financial literacy in G20 countries (2017).
other non-financial features such as balance inquiry (Reserve Bank of India 2021).

India has also undertaken another initiative, the Payments Infrastructure Development Fund, that promotes the deployment of points of sale infrastructure, physically and digitally, in Tier-3 to Tier-6 centers and northeastern states in India. For improving payment system coverage in rural areas in India, the Aadhar-enabled payment system (AePS) has been particularly helpful. In India, Small Finance Banks and Payments Banks have also been established for reducing the proportion of the financially excluded population.

Brazil’s Central Bank launched Pix, a digital payment platform, in November 2020. Pix has been noted for its overall ease of undertaking digital payments. Another Brazilian initiative here is the Brazilian Open Banking Project (Reserve Bank of India 2021). In Russia, the Bank of Russia and the National Payment Card System together have put in place the Faster Payments System for enabling interbank transfers through mobile phone numbers. The Faster Payments System permits both P2P and B2P transactions. It has also installed a country-wide digital platform, the Unified Biometric System. Through this system, individuals can open deposit accounts and obtain credit remotely by identification through face and voice recognition. Additionally, the Russian Federation has enhanced financial inclusion for persons with disabilities, the elderly, and other low-mobility population groups (Reserve Bank of India 2021).

The PRC has deployed many initiatives aimed at developing and strengthening the payments infrastructure, which also works as an underlying element for digital payment platforms. These initiatives include inter-bank clearing systems and local clearing systems, UnionPay, China Payment, and Clearing Association, Guidelines on Comprehensively Promoting and Deepening the Development of Payment Service Environment in Rural Areas, the Fundamental Database for Financial Credit Information, Lankao Pilot Zone Model for Digital Financial Inclusion Reform, and the People’s Bank of China (PBoC) Credit Reference Center. The PRC’s Plan for Advancing the Development of Financial Inclusion (2016–2020) is noted for its particular focus on financial inclusion (Reserve Bank of India 2021).

In the PRC, the Plan for Promoting the Development of Financial Inclusion details raising the accessibility, adoption, and quality of financial products and services, with a strong emphasis on digital financial services. It promotes new development of digital financial products and services, the adoption of cutting-edge technologies (such as big data and cloud computing) by financial institutions, and the use of the internet as a key tool for attaining accessibility and low cost of financial services (GPFI 2017).

In order to encourage the adoption of electronic payments and e-commerce in rural areas, PBOC has encouraged resource sharing between agent service points and e-commerce outlets in rural areas. By the end of 2016, the number of rural withdrawal service points in the PRC rose to 983,400, covering more than 500,000 administrative villages (over 90%). In 2016, these service points made a total of 255 million payment transactions, worth CNY120 billion (GPFI 2017).

South Africa’s initiatives of risk-based “know-your-client” and microinsurance have been seen as noteworthy (Reserve Bank of India 2021). In Argentina, the National Registry of Individuals developed the Digital Identity System that links IDs with biometric information, which enables the remote opening of bank and non-bank accounts for natural and legal persons. In 2021, the Central Bank of the Argentine Republic approved a policy improving ATM operation and geographical distribution (GPFI 2021b). Bank Indonesia, in 2019, launched a digital payments system, Quick Response Code Indonesia Standard, which promoted financial inclusion among micro, small, and medium-sized enterprises (MSMEs) in Indonesia (Deloitte 2020).

In Mexico, the National Financial Inclusion Policy was adopted by the National Financial Inclusion Council in June 2016. One of its primary goals is to use digital technology to enable low-income persons to access financial goods and services by instituting a regulatory framework that promotes innovation while maintaining the soundness and stability of the financial system. The policy outlines a suite of steps to increase financial inclusion, including overhauling the regulatory framework to permit the entry of new financial service firms and the supply of financial services through new

---

8 The centers in India have been classified as per population: Tier 1 (100,000 and above); Tier 2 (50,000 to 99,999); Tier 3 (20,000 to 49,999); Tier 4 (10,000 to 19,999); Tier 5 (5,000 to 9,999); and Tier 6 (fewer than 5,000). The population is as per India’s 2001 census (Reserve Bank of India 2011).

9 AePS is India’s bank-driven financial inclusion initiative. It allows for bank-related transactions such as deposits, withdrawal, and balance enquiry through authentication of Aadhar, India’s identity system.
pathways, encouraging innovations that reduce the need for cash and increase the demand for digital financial products and services, and promoting interoperability of digital financial services (GPFI 2017).

**Digitizing Government-to-Person Payments**

In Brazil, the Bolsa Familia conditional cash transfer program, beginning in 2003, uses an electronic benefit card to reach nearly 14 million households. In Mexico, the federal government centralized its disbursements and increased the share of these, including some social benefits payments, that are transferred digitally to transaction accounts.

**Test and Learn** Approaches in the US and UK

In the United Kingdom (UK), the Financial Conduct Authority set up a “Regulatory Sandbox” under its Project Innovate program. The objective is to provide a safe environment for firms to try out innovative products, services, business models, and mechanisms of delivery while maintaining adequate protection of consumers.

Similarly, the US Consumer Financial Protection Board’s Project Catalyst “encourage[s] consumer-friendly innovation in markets for consumer financial products and services” by providing innovators with various opportunities to engage with it. For example, the Consumer Financial Protection Board allows innovators to implement pilot programs in a sandbox-like setting, so new methods of satisfying regulatory and disclosure requirements can be analyzed by both the agency and the firm (GPFI 2017).

**Creating an Enabling Legal and Regulatory Framework**

There have been several moves to develop regulatory frameworks that promote the development of innovative goods and services and provide a greater scope of action for new, non-bank players. The European Union’s Payment Services Directive, adopted in 2007 and updated in 2015, is an important early example of this. It has the object of opening up the European retail payment market to emerging fintech companies and improving consumer protection. It does so by easing market entry for new payment providers, increasing transparency, and harmonizing regulations of EU member states to promote competition and innovation.

The Financial Action Task Force’s adoption of the risk-based approach is another regulatory innovation aimed at expanding the reach of digital financial services. It requires that regulatory, compliance, and oversight measures for anti-money-laundering/combating the financing of terrorism (AML/CFT) be adjusted to account for the actual risk posed by providers, customers, products, and services.

**Tiered CDD Regimes**

Introducing tiered consumer due diligence (CDD) requirements can promote financial inclusion. In 2011, Mexico adopted such a tiered system for opening deposit accounts at financial institutions. The system provides a model for inter-agency coordination, as it included all the concerned departments at the central bank, the Ministry of Finance, and the banking regulator. This system has four levels, i.e., three low-risk accounts, and the traditional current account, and allows opening requirements for low-value, low-risk accounts to be flexible, and then increase steadily as transaction values rise. Most notable was the introduction of “Level 1” requirements, which were exempted from identity verification requirements on account of their low level of risk. This permitted non-face-to-face account opening for e-wallets related to low-value debit cards (GPFI 2017).

Effective July 2016, the PRC set new rules which tightened the CDD requirements for non-bank payments. They established three tiers, including real-name registration of all accounts and increasing levels of verification requirements as the transaction level rises. These rules also brought the concept of tiered regulation to payment platforms. In addition to adopting new rules for digital payment providers, the PBOC also promoted the establishment of the China National Internet Finance Association as a way to self-police the industry (GPFI 2017).

**Payments Infrastructure and Credit Reporting Systems**

Much of the PRC’s progress in advancing digital financial inclusion is a result of its work in recent years to adopt an integrated urban and rural approach to strengthen its financial infrastructure. In collaboration with other stakeholders, the PBOC set up a far-reaching and strong national payments system infrastructure in the PRC.

**Transactional Database**

The Central Bank of Mexico developed a database that gives banks an overall picture of their customers’ international financial transactions. The object of this open and efficient digital infrastructure is to support the industry’s AML/CFT work and help reduce the negative side effects
of de-risking. The database contains information about clients’ and other users’ international transfers.

Expanding Merchant Acceptance of Digital Payments

In August 2016, the Central Bank of Argentina instructed banks that they should offer the immediate transfer of funds (online credit transfers and direct debits) through the "Mobile Payments Platform."

3.2 Financial Literacy and Education in G20 Emerging Economies

Brazil has implemented the Aprender Valor Program initiative for financial education. Brazil also swiftly adopted an initiative for digital and financial literacy in early 2020. In South Africa, the financial education programs "Teach Children to Save" and "StarSaver", with a specific focus on the younger population, have been put in place by the Banking Association South Africa. In South Africa as well, an initiative focuses on providing assistance through the Financial Sector Conduct Authority’s “My Life, My Money” consumer education website (Reserve Bank of India 2021).

In G20 emerging market economies such as the Russian Federation, there are initiatives that focus on disseminating financial information and providing assistance in financial matters using the Bank of Russia's mobile app “CB online”. In India, financial education measures are being deployed as part of the National Strategy for Financial Education, and the authorities have set up centers for spreading financial literacy and financial education. In the PRC, these initiatives take on a national plan that has a broader aim of bolstering scientific literacy, The PRC State Council’s National Action Plan for Scientific Literacy 2021–2035 (Reserve Bank of India 2021).

4. Digital Financial Inclusion Regulatory Aspects

4.1 Risks

Three triggers of digital financial risks are identified as the “new parties and arrangements”, digital technology, and agent involvement. Consumer fund protection and electronic storage and management of data are two risks associated with digital transaction platforms, whether it is a bank or a non-bank entity. The risks associated with the electronic storage and management of data could be amplified if a third party is involved in data management. Two key risk factors linked with digital technology are its quality and reliability (CGAP 2015).

Risks related to agents can be operational (such as substandard cash management, inferior data handling, and agent errors), criminal (fraud, theft and data theft, non-compliance with AML/CFT rules), and consumer-based (such as non-transparency, involvement in unfair practices of overcharging, etc., and non-compliance of data confidentiality) (CGAP 2015).

Product bundling can create concerns about operational risks and regulatory supervision. These new products and financial services are likely to create new consumer protection issues but can provide better consumer protection as well. The involvement of several parties may obscure who will bear the liability if the consumer incurs a loss, so coordination and communication between involved stakeholders will become critical, and privacy principles may need to be devised at the national and international levels (CGAP 2015).

4.2 Consumer Protection Regulations

Brazil has built-in security protocols within its digital payment system, Pix. Pix provides a secure environment for conducting digital transactions. The three components of this secure environment are user digital authentication, encryption, and operating rules. While Pix provides a secure environment for conducting digital transactions, Brazil has also aligned its actions to resolve issues with its other mobile application, Caixa TEM. There were initially some problems with Caixa TEM, which was used to disburse pandemic emergency aid. These problems were subsequently fixed, and the overall security of the application was improved (Reserve Bank of India 2021).

The Russian Federation’s approach to a safe environment involves consumer complaint redressal and improving information transparency. This approach includes the Bank of Russia’s initiatives such as consumer complaint applications and Bank of Russia Online Reception software. The PRC has also adopted an out-of-court financial consumer dispute third-party resolution mechanism. To ensure consumer protection, the Russian Federation, in its Unified Biometric System, has established a multimodal structure that applies different biometric parameters. At present, the Unified Biometric System uses face and voice recognition (Reserve Bank of India 2021).
India’s approach has both defensive consumer protection (a two-step authentication or multi-factor authentication or additional factor authentication) and a complaint redressal mechanism (the Ombudsman Scheme for Digital Transactions). South Africa has established the Financial Sector Conduct Authority for consumer protection as well as financial literacy and education (Reserve Bank of India 2021).

5. The G20, Digital Financial Inclusion, and Digital Financial Literacy

5.1 Contribution of the G20 to Digital Financial Inclusion

The G20’s activities in the realm of financial inclusion have been guided by the Global Partnership for Financial Inclusion (GPFI), which is a platform for G20 member countries, interested non-G20 countries, and relevant stakeholders such as the World Bank and the Organisation for Cooperation and Development (OECD). The GPFI was established in 2010 to implement the first G20 Financial Inclusion Action Plan (FIAP), which was endorsed at the G20 summit in Seoul that year (GPFI 2020). Since then, the FIAP has gone through revisions in 2014, 2017, and 2020.

The 2017 G20 FIAP guided the GPFI’s work to be in line with the 2030 Agenda for Sustainable Development, as financial inclusion can enable several of the United Nations Sustainable Development Goals. It is also identified with new opportunities and challenges for financial inclusion raised by the trend of digitalization. The GPFI also developed policy guidelines in the 2020 High-Level Policy Guidelines for Digital Financial Inclusion for Youth, Women and SMEs and the three related reports to promote the development of responsible and innovative digital technologies.

The 2020 FIAP is intended to cover the period 2021–23. In line with the Leaders’ mandate in the Buenos Aires Declaration for the GPFI to streamline its work program and structure, the 2020 G20 FIAP prioritizes digital financial inclusion and SME finance. In line with this, the 2020 G20 FIAP focuses on three issues that GPFI members believe to be of the highest priority: (i) GPFI overarching objectives; (ii) action areas under the two priority topics; and (iii) cross-cutting issues and topics that should be taken into account in all of the GPFI’s work.

Regarding digital financial inclusion, the 2020 FIAP defines it broadly as “…the use of digital financial services to advance financial inclusion. It 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” (GPFI 2020:12). It notes that digital financial services encompass a broad range of products and services, including payments, remittances, transfers, savings, credit, insurance, securities, financial planning, and account statements.

The 2020 FIAP focuses on two areas of action for digital financial inclusion:

- Encourage effective implementation of the 2016 G20 High-Level Principles for Digital Financial Inclusion (G20 2016), particularly with regard to underserved and vulnerable groups.
- Support the introduction of responsible and innovative payment systems that supply affordable, secure, interoperable, transparent, and inclusive payment solutions both nationally and internationally to lower the cost of remittances, while supporting consumer protection and necessary disclosures.

As of October 2021, the GPFI Implementing Partners had released six reports to promote the objectives set by the G20 Presidency and those contained in the G20 2020 FIAP. First, the G20 Menu of Policy Options for Digital Financial Literacy and Financial Consumer and MSME Protection “Enhancing Digital Financial Inclusion beyond the COVID-19 Crisis” was agreed on by the G20 Finance Ministers and Central Bank Governors, as well as by the G20 Leaders (GPFI 2021a). The report identifies measures carried out by countries that have been found to be successful in addressing the challenges raised by the pandemic and the rising digitalization of financial services. The aims are to present viable and operational solutions that effectively raise the awareness of individuals and MSMEs about the opportunities and risks of digital finance and to improve their protection. Other reports addressing the first area of digital financial inclusion included “The Impact of COVID-19 on Digital Financial Inclusion” (by the World Bank), “Supporting Financial Resilience and Transformation Through Digital Financial Literacy” (by the OECD/INFE), and “Lessons Learnt and Effective Approaches to Protect Consumers and Support Financial Inclusion in the Context of

Reports by GPFI addressing the issue of remittances included “2021 Update to Leaders on Progress Towards the G20 Remittance Target” and “2021 Biennial Update of the National Remittance Plans.” The GPFI also supported the recommendations of a report prepared by the World Bank and the International Fund for Agricultural Development entitled “Resilience in the Market for International Remittances During Covid-19 Crisis”, which analyzed the impacts of the pandemic on the remittances market as a result of an unprecedented switch to digital channels.

6. Suggestions and Recommendations

6.1 Recommendations for the G20

The G20 can support their further movement toward a financial and digitally literate population, particularly in emerging market economies. G20 leaders should state principles for promoting targeted approaches to improving the DFL of disadvantaged groups, such as women, rural residents, and small firms, rather than a one-size-fits-all approach. One promising approach is to increase the scope of private stakeholders in national digital financial education strategies to include fintech and bigtech companies. Such firms possess the necessary technology and experience as well as a large stock of customer data. Fintech and bigtech companies should be required to provide some degree of financial and digital literacy education to their customers. Using the broad networks developed through their platforms, fintech and bigtech companies can easily provide financial education to many people of different ages, backgrounds, locations, and levels of education. Since bigtech and fintech companies have detailed knowledge of their customers’ experiences, they can design attractive mobile apps that can enable users to gain digital and financial literacy in an easy, interesting, and interactive way. This is an important way that financial technology could potentially be leveraged to promote DFL (Morgan, Huang, and Trinh 2020).

However, relying on online training courses and apps alone may not be adequate. Because disadvantaged groups are frequently less educated, in-person training implemented by nongovernmental organizations and financial institutions in their neighborhood may also be needed to increase the effectiveness of such programs. The pairing of online and offline education models has great potential to reduce digital gaps. Therefore, G20 member countries should develop guidelines for including integrated online and offline models in national digital financial education strategies (Morgan, Huang, and Long 2020).

5.2 Fintech Borrowing, Crowdfunding, and Payments

Financial institutions are increasingly leveraging technology to provide new products and services to consumers. Fintech, which refers to digital technologies that “modify…existing business models, applications, processes and products” has made this possible (Ehrentraud, Ocampo, and Vega 2020). Examples include web, mobile, cloud services, machine learning, digital ID, and application programming interfaces. In practice, fintech has been used to characterize new digital financial services. For the same risks, the cost of operation of these new online channels is lower than traditional ones, thereby increasing financial inclusion by serving hitherto unserved customers (e.g., in rural areas). From the point of view of consumers, the choice of taking a loan can be from a traditional bank, a non-bank financial company, or through electronic channels or online. Such channels can also be used to raise funds either as loans in the form of equity, or crowd-sourced loans since borrowers and lenders are connected through crowdfunding platforms (Ehrentraud, Ocampo, and Vega 2020).

The risks of digital financial products apply to user privacy concerns as well as to the broader financial system. In the latter case, these are cybersecurity and other operational risks. These are apart from the risks of unequal access and the digital divide, discussed above. Hence, the regulation of new technology products and services also is different from traditional ones. Some emerging markets have good experience in addressing these risks and regulating digital financial services. There is scope for G20 countries to learn from the experience and best practices of member countries (World Bank 2020).
National surveys or coordinated international studies should be used to collect high-quality, comparable data on levels of digital financial literacy (OECD 2019). OECD, the World Bank, and others have developed standardized surveys of general financial literacy. However, these surveys do not necessarily cover needed aspects of DFL. A standardized set of questions should be developed to cover these dimensions, and these should be included in such questionnaires. Surveys including DFL-related questions should be implemented as soon as is practicable to acquire baseline data on the level of DFL in target countries (Morgan, Huang, and Long 2020).

The G20 can also continue to support digital financial inclusion penetration in its member nations. In particular, they should promote policies that reduce gender gaps and the gaps of other disadvantaged groups such as the poor, the elderly, and those in rural areas with regard to access to digital financial services. The G20, through its Digital Economy and Development Working Groups and in collaboration with the W20 and the B20 engagement groups, should develop frameworks for countries on how they can improve technological infrastructure and connectivity that make it easier to access digital platforms and digital financial services (Kuroda et al. 2019; OECD 2017). The G20 should encourage the adoption of government policies that eliminate the gaps between men and women in their ability to acquire an official ID, which typically is a necessary requirement for obtaining a mobile phone. Policies that lower the costs of obtaining and using mobile phones are also needed. Educational and training programs should be promoted to provide information to women, and women-run MSMEs specifically, about the benefits of using the internet and how to guard against risks of online harassment, bullying, privacy, and cybersecurity, as well as insufficient disclosure and fraud (Lyons, et al. 2022).

The G20 should encourage countries to upgrade their national financial inclusion strategies to include aspects related to digital financial inclusion and to take into account issues that are particularly relevant to women. Women typically have lower incomes than men and are more sensitive to prices. Women might find affordable financial products that cater to low and variable incomes and high-frequency, low-denomination transactions to be attractive. Also, women often have responsibilities to care for older relatives, raise children, look after family farms, run side businesses, and finance family events such as funerals and weddings. Having special products for such contingencies would be useful (Lyons, et al. 2022).

The G20 should also encourage public and private institutions to use social media platforms to raise awareness among women entrepreneurs and their customers about the availability of digital financial services, how to use them for online commerce, and how to protect against fraud and cybercrime. In some countries or regions, barriers to women’s usage of digital financial services result partly from restrictive social norms. The G20 should promote national strategies that encourage service providers to take a more gender-sensitive approach such as encouraging the employment of women agents to promote women’s use of digital financial services. These strategies should also include developing campaigns that influence gender roles and the acceptance of women’s entrepreneurship and financial decision-making. As women increasingly use digital financial services, they can make a larger impact in their communities and help shift gender norms (Koning, Ledgerwood, and Singh 2021; Lyons, et al. 2022).

The G20 should encourage national policies and strategies that promote access to and usage of alternative digital financing opportunities. This includes implementing incentives for digital financial service providers that aid women’s access to capital through crowdfunding and digital lending. It also should encourage efforts to identify and eliminate gender and other biases in algorithms used by platforms to make financing and employment decisions. The G20 should promote positive actions to reduce gender discrimination and national strategies that encourage the hiring and advancement of women in leadership and decision-making roles in the financial, fintech, and digital sectors (Kuroda et al., 2019). This includes increasing the share of women working in positions that are responsible for making credit and funding decisions, as well as in “frontline” positions such as payment agents (Lyons, et al., 2022). Member countries should collaborate and share experiences about best practices of digital financial inclusion.

6.2 Recommendations for the Indian Presidency

India has been progressing on the digital financial inclusion front in recent years with the steady development of its digital financial infrastructure and initiatives to enhance financial literacy. In this context, India can lead the way in the G20’s role in improving digital financial inclusion during its presidency (Ray, et al. forthcoming).
References


