



## DIGITAL FINANCIAL INCLUSION

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### **Abstract**

*Rapid advancement in technology over the past has made the financial services within the reach of the unserved sections of the population. The adoption of digital financial services and products has paved the progressive pace of financial inclusion. This unlocked multiple opportunities, especially for the vulnerable and disadvantaged section of population. The aim is to enhance income earning potential, boost savings and general welfare. Technology-driven financial inclusion is a key component in the effort to achieve the United Nations Sustainable Development Goals by 2030, especially goals like no poverty, gender equality, decent work, economic growth, innovation and reduced inequalities. A financially inclusive society will help the economies to reap benefits in terms of higher economic growth, which in turn will lead to lower poverty and reduction in inequality of opportunities.*

**Keywords:** *Financial Inclusion, Financial Education, Digital Financial Inclusion, Digital Financial Services (DFS), BRICS, UPI, E-RUPI, E-Shakti.*

### **Introduction**

Digital technology can change the challenging game of achieving universal financial inclusion. Since the past one and a half decade, the rapid adoption of digital technology in the BRICS (Brazil Russia India China South Africa) countries has been the foundation of various growth stories across the member nations. The BRICS economies have undertaken significant measures in strengthening digital financial inclusion in their jurisdictions with considerable success. Governments and Central banks of the BRICS countries have undertaken several initiatives to ensure access and affordability of financial services to all sections of the society, especially the weaker sections and low-income groups.

Digital technologies are increasingly integrated in the economy and are making a significant impact in the financial industry by introducing new products, services and providers. Digitalisation is affecting individuals and businesses globally, with mobile money services now available in 64% of developing countries (GSMA, 2016), and their spread is likely to increase hand-in-hand with the growing penetration rate of mobile connections (estimated to exceed 100% globally by 2020). These significant changes increase the need for effective financial education, financial consumer protection and financial inclusion policies that adapt rapidly to this changing environment.

### **Financial Literacy**

Financial literacy is defined by the Organisation for Economic Co-operation and Development (OECD) as a combination of financial awareness, knowledge, skills, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being (OECD, 2012). Financial education, on the other hand, is defined as the process by which financial consumers/investors



improve their understanding of financial products, concepts and risks 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 (OECD, 2005). The achievement of both financial literacy and education empowers the users to make sound financial decisions which results in financial well-being of the individual.

### **Digital Financial Inclusion**

The application of digital technologies to personal finance management is providing new tools to support consumers and entrepreneurs in improving their financial well-being. Digital financial services and related tools together, have the potential to bring sustainable benefits to consumers and entrepreneurs - extending the reach and access of financial services to potential investors/consumers; offering more convenient, faster and secure transactions; providing services that are tailored-made and facilitate their usage, thereby creating opportunities to develop financial literacy competencies, increasing opportunities for fruitful interactions between financial services providers and consumers through digital interfaces. The digital revolution goes hand-in-hand with new financial service products and providers entering the market offering services directly to individuals through digital channels.

Digital financial services also carry risks for consumers, in both existing and emerging markets. These risks may pose serious threats to the financial well-being of individuals and entrepreneurs. These can be categorised as follows:

1. Market driven which include misuse of unfamiliar (or new types of) products or to uninformed consumers; new types of fraud, uncertainty in the digital environment; a lack of privacy and security of data; excessive use of digital profiling in search of identifying potential customers.
2. Regulation and supervision driven encompasses lack of adequate disclosure and redressal mechanisms; data protection issues and lack of coordination among various authorities.
3. Consumer driven is the growing sues to lack of digital financial literacy and growing digitalisation of daily life transaction.
4. Technology driven implies the increasing use of algorithms, which can affect decisions about credit or insurance and can lead to denied access to certain services or inappropriate charges based on inaccurate or wrong correlations made without human interpretation.

These risks can have a negative impact on both consumers and entrepreneurs, and can result in a range of negative outcomes, such as lack of trust in DFS, the financial system and technological innovation; certain groups of the population (possibly including the elderly and those on low incomes) might not be able to afford the use of smart phones and computers to access DFS; exclusion due to low levels of financial and digital literacy may also occur as well as a lack of familiarity with the products available and new providers; a spurt in customer vulnerability to possible online frauds such as phishing, account hacking and data theft.



### **Financial Literacy core competencies for the safe use of DFS**

Policy makers must focus on developing core competencies frameworks for the target groups identified, and also focus on developing effective and appropriate financial education content in co-operation with relevant stakeholders. Financial education initiatives should take into account the increased access and use of digital financial services and consider the extent to which financial education has a role to play in enabling financial consumer protection measures. Such initiatives should be built upon the core competencies needed to improve financial well-being which is focused on the development of specific or new competencies related to the benefits and challenges created by the digitalisation of financial products.

Policy makers and programme designers can benefit from existing policy tools developed by the OECD/INFE in response to calls from G20 Leaders, and in particular the Core Competencies Frameworks on Financial Literacy for Adults and Youth (OECD, 2016a; OECD, 2015a). These outcome-based competencies frameworks include aspects of awareness, knowledge and behaviours that are considered important to achieve financial well-being. All core competencies included in the G20/OECD frameworks are considered to be important for financial consumers and entrepreneurs, and will support the safe and beneficial use of DFS.

In consideration of the possible new challenges and risks created by the digitalisation, policy makers and programme designers should pay particular attention to whether additional competencies may be required, depending on the need evolved over time. Building trust in DFS functions as a powerful tool in complex environments for reducing uncertainties and is particularly important in online environments. If individuals are concerned about factors such as privacy and security, some may refrain from using digital financial services altogether, resulting in lost opportunities and digital exclusion (OECD, 2017e). Unfamiliarity with the products and providers available may further reduce trust. Building trust through the dissemination of accurate and unbiased information about the existing regulations and systems in place to protect individuals, and the potential benefits of digital products as well as education to help them avoid falling victim of crimes.

#### **The relevant core competencies may include**

1. Awareness of the different types of financial products and services delivered through digital means for personal or business purposes, including their benefits and risks.
2. Awareness about the financial products and services that may be informal and unregulated and attention needed while using certain digital financial services for personal purposes or for raising funds for business.
3. Knowledge of consumer rights and obligations in the digital world offering financial services.
4. Knowledge and understanding of digitally signing a contract and accepting the terms thereto.

The DFS affects various aspects of everyday life and leads to mounting digital footprint of every single consumer and entrepreneur. Financial service providers (banks, credit card companies, etc.) also others such as online retailers, social network platforms, Internet Service Providers (ISPs), and governments



are increasingly collecting vast amounts of personal data. Policy makers should make sure that consumers and entrepreneurs are aware that they do have a digital identity and may have rights to data portability and to be digitally forgotten (i.e. erasure of their personal data as per the European Union's new General Data Protection Regulation), and understand that their digital footprint can be used to tailor the offer of certain products and services. Efforts should be made to increase consumers and entrepreneurs' awareness and understanding as to:

- appropriately manage their digital footprint to the extent possible, in order to avoid engaging in risky behaviours involving their personal data, and understand the consequences of sharing or disclosing personal identification numbers, account information, or other identity information;
- Assess the relevance of the kind of information that is requested by financial service providers and understand its usage.

Concrete efforts should be directed towards providing guidance to consumers and entrepreneurs on money management in a digital environment, importance of keeping track of financial services bought online and managing statements, and know how to compare and choose among various digital financial services. Credit may be an area of specific concern, due to the increasing availability of short-term credit provided digitally, and almost instantaneously. Such credit is expensive to consumers with limited means for repayment, posing greater risk to a certain group of the population, such as young people and students, and low-income consumers.

### **Digital Infrastructure**

Digital infrastructure is the essence and essential for expanding digital financial services in any country. In Emerging Market Economies (EMEs) the technological penetration and reach of financial networks remains limited, connectivity-related infrastructure remains crucial intake of digital financial services, especially in rural and remote areas. The evolving digital infrastructure must facilitate efficient, fast, affordable and secure transactions, while encouraging inter-operability of systems, digital ID-based authentication and robust security platforms ensuring inclusion of all the sections of the society in the digital financial services. The emergence of digital financial infrastructure has made it possible to offer tailor-made financial products focused upon improving overall accessibility and affordability. The rapid advancement in technology have lowered overall infrastructure cost, enhancing its accessibility by the disadvantaged sections and thus contributing to inclusive growth.

### **Unified Payments Interface in India**

Unified Payments Interface (UPI) is a mobile-based, 365x24x7 'fast payment' system launched in August 2016 which allows users to send and receive money instantly using a Virtual Payment Address (VPA) set by the user itself. The unique feature of VPA-based transaction is that it eliminates the need for sharing account or bank details to the sender. It supports person-to-person (P2P) and person-to-merchant (P2M) payments which can be used over a smart phone (app-based) and at merchant location/website. On-financial transactions, such as balance enquiry, can also be carried out using UPI. It powers multiple bank accounts into a single mobile application of any participating bank/non-bank



Third Party Application Provider (TPAP). Funds can also be transferred through UPI using account number with and IFSC (Indian Financial System Code) of the bank branch.

The UPI 2.0 was launched in August 2018, which enabled users to link their Overdraft accounts to UPI VPA. Users are also able to pre-authorise transactions by issuing a mandate for specific merchant for a one-time payment. There's also an added feature of Auto Pay facility for recurring payments. The framework of UPI comprises NPCI (National Payments Corporation of India) as switching and settlement service provider and banks as Payment System Providers (PSPs) – as issuer banks and beneficiary banks. Additionally, it can also have Third Party Application Providers (TPAP) such as Google Pay. Transactions are carried out through mobile devices with two-factor authentication using device binding and UPI PIN as security. Since its humble beginning in 2016, UPI has become one of the most popular payment products in India. Convenience of remembering and sharing a simple UPI VPA may have added to its popularity.

### **E-RUPI in India**

Indian government launched e-RUPI in 2021, the digital payment system through electronic vouchers. This seamless one-time payment mechanism enables users to redeem the electronic voucher without a card, digital payments app or internet banking access, at the merchants accepting UPI e-Prepaid Vouchers. The e-RUPI would be shared with the beneficiaries for a specific purpose or activity by organisations via SMS or QR code. It permits offline transactions which can be carried out even on feature phones, promoting its adoption in rural and remote areas as well. This is in addition to the already existing Unstructured Supplementary Service Data (USSD) based \*99# payment service. \*99# allows mobile banking transactions using basic feature mobile phone and it does not need any smart mobile phones or internet data facility. These services are envisioned to provide financial deepening and inclusion of under banked and unbanked society in the mainstream banking services.

### **Payments Infrastructure Development Fund in India**

The RBI has set up a Payments Infrastructure Development Fund (PIDF) to encourage acquirers to deploy Points of Sale (PoS) infrastructure (both physical and digital modes). Over the years, the payments ecosystem in the country has evolved with a wide range of options which include inter alia bank accounts, mobile phones and cards. The RBI has made an initial contribution of INR 2.5 billion to the PIDF covering half the fund and the remaining contribution is from card-issuing banks and card networks operating in the country. The PIDF also receives recurring contributions to cover operational expenses from card-issuing banks and card networks. The PIDF is governed through an Advisory Council and managed and administered by the RBI.

### **Aadhaar Enabled Payment Systems in India**

Since its launch in 2009, Aadhaar, a unique biometric-based identification number, has been issued to over 1.29 billion individuals across the country (March 31, 2021). Aadhaar has been leveraged in authenticating payments to merchants as well as for transactions made through Business Correspondents (BCs). The JAM trinity – Jan Dhan19, Aadhaar and Mobile phone – have gradually evolved as the





pillars of the financial inclusion efforts in India. Lately, Aadhaar enabled e-KYC (electronic-Know Your Customer) has resulted in an exponential growth of digitisation in India. Aadhaar enabled Payment System (AePS), operational since January 2011, allows online interoperable transactions at micro-ATMs through the BCs of any bank using Aadhaar authentication. Under this system, Aadhaar number is used to identify the beneficiary while biometric data is used to authenticate transactions. The biometric based authentication is done by Unique Identification Authority of India (UIDAI), while NPCI does the switching, clearing and settlement of financial transactions. Aadhaar Payment Bridge System (APBS), a component of National Automated Clearing House (NACH), uses Aadhaar number for crediting government subsidies and benefits directly in Aadhaar-linked bank accounts. The system has led to electronification of large number of government payment transactions which were predominantly done either in cash or by cheque.

### **Differentiated Banks in India**

Keeping in consideration the need to engage extensively the low-income households, Small Finance Banks (SFBs) and Payments Banks were set up with the objective of deepening the reach of financial inclusion to financially excluded sections of the population in the financial system by providing instruments of savings, remittances and supply of small credit products through high technology and low-cost operations. SFBs have been set up to primarily undertake basic banking activities of acceptance of deposits and lending to unserved and underserved sections including small business units, small and marginal farmers, micro and small industries and unorganised sector entities. As on March 31, 2021, there are 10 SFBs operational in the country which is providing banking services across the country with 4,962 bank branches and 918 Fixed Point Banking Outlets manned by Business Correspondents.

Payments Banks have been set up to cater to the financial needs of the underserved population and further financial inclusion by providing small savings accounts and payments/remittance services in a secured technology-driven environment. The core objective of setting up Payments Banks is to utilize the potential of domestic remittances. Payments Banks are not allowed to undertake lending activities and it is required that the operations of the bank should be fully networked, and technology-driven from the beginning, conforming to generally accepted standards and norms.

### **E-SHAKTI Project in India**

The E-Shakti Project, a web based electronic platform, was launched by National Bank for Agriculture and Rural Development (NABARD) in the year 2015 in line with Government of India's mission of "Digital India". The project aims at digitisation of all the Self-Help Group (SHG) to bring the members of SHG members under the umbrella of Financial Inclusion agenda, which aims at helping them access a wider range of financial services and helping in increasing the comfort of the bankers in credit appraisal and linkage. It also aims at bring in ease in book-keeping and increase credibility of the SHG data which can be used in improving the quality of interface between SHG and banks. The E-Shakti Project was launched initially in two districts. It has now been expanded to 254 districts covering 1,68,791 villages across India, as of June 2021. One of the major objectives of the project is financially empowering the women. The project is moving forward in the right direction with 97.89 percent of its 14.24 million



members being women. The E-Shakti led digitisation has covered cumulative savings worth INR 83.43 billion involving 30,271 branches partnering with 457 implementing agencies, till June 2021.

### **National Centre for Financial Education in India**

The National Strategy for Financial Inclusion (NSFI): 2019- 2024 recommends convergence of action involving all the stakeholders in the financial sector. The NSFI contemplates leveraging technology focused on strengthening environment for digital financial services, creating innovative ways to expand its reach through virtual modes, strengthening consumer protection measures and developing target oriented financial literacy modules, keeping in consideration the growing digitalisation.

With a diverse range of financial services, including banking, insurance, pension and investment, it becomes crucial that consumers, in order to make informed choices among these services, are provided with appropriate knowledge, skills and awareness. Hence NSFE envisages with an ambitious vision of creating a financially aware and empowered India. Under the NSFE, the National Centre for Financial Education (NCFE) was set up as a Not-for-Profit company by all the financial sector regulators to promote financial education across India for all sections of the population. The mission of NCFE is to undertake financial education campaigns to help people manage money more effectively, achieve financial well-being by accessing appropriate financial products and services through regulated entities and provide fair and transparent machinery for consumer protection and grievance redressal.

NCFE has been undertaking various financial literacy programmes, viz., a) Financial Education Programme for Adults (FEPA), b) Financial Education Training Programme (FETP), c) Financial Awareness and Consumer Training (FACT) and d) Money Smart School Programmes (MSSP), to reach out to a wide range of audience.

With a shift towards digital channels for accessing financial services in the times of pandemic, the NCFE continued with their financial literacy programs through digital mode and conducted more than 5,000 programs, sensitising more than 175 thousand participants in 2020-21.

### **Mitigating Risk in Digital Financial Inclusion**

Since the digital financial inclusion continues at a rapid pace, there is a need to focus on the related challenges such as, customer protection, data protection, data privacy and cyber-threats. A robust framework for consumer and data protection is the foundation to build their confidence and trust in the DFS, specifically the consumers with limited financial literacy. Well defined rules of conduct for financial entities along with efforts directed towards financial education for consumers, strengthen their confidence in financial services and products. Safe, secure and efficient payment systems are crucial to the effective and efficient functioning of the DFS. The national authorities have prioritised mitigating(reducing the impact of loss) risk and protecting privacy of customer in order to build trust and confidence, which can accelerate the adoption of these systems as well as the financial inclusion drive.



### **Multi-Factor Authentication or Additional Factor Authentication in India**

A two-step authentication, also known as multi-factor authentication or additional factor authentication (AFA), ensures that at least one of the authentication methods is generally dynamic or non-replicable. The RBI has mandated the use of AFA for payments through electronic modes and fund transfers, including through digital payment applications, cards, or online banking and cash withdrawals from ATMs/micro-ATMs/business correspondents/Point of Sale (PoS) terminals. The dynamic two-step authentication decreases the possibility of unauthorised transactions as they are authenticated by genuine/authorised source/process. For example, in case of online banking, this mechanism works through user-id and password combination and second factor like a digital signature or One Time Password (OTP) sent through various modes (like SMS over mobile phones or hardware token). Similarly, for a card transaction, the additional authentication/validation is based on information not visible on the card. AFA helps to safeguard the customer confidentiality of payment data as well as implementation of cyber-attack protection mechanisms and other internet-based frauds targeted at the customers.

### **Ombudsman Scheme for Digital Transactions in India**

The Ombudsman Scheme for Digital Transactions was introduced by the Central Bank(RBI) in January 2019. It is a fastest and cost-free apex level complaint redressal mechanism for resolving complaints related to deficiency in digital transactions services undertaken by customers through the System Participants. Under the scheme, first the complainant has to lodge the complaint with the concerned system participant. If the complainant does not receive a response within one month or is not satisfied with the reply, he can file a complaint with the Ombudsman for Digital Transactions. The Ombudsman has the power to award compensation under the scheme limited to the amount involved, or two million rupees, whichever is lower. In 2019-20, 2,481 complaints were handled by the Ombudsman for digital transactions, with 91 percent complaints getting resolved.

### **India Journey of Financial Inclusion**

India began its financial inclusion journey as early as in 1956 with the nationalisation of Life Insurance companies. This was followed by nationalisation of banks in 1969 and 1980. The general insurance companies were nationalised in 1972. A review of the status of financial inclusion in India indicates that a host of initiatives have been undertaken over the years in the financial inclusion domain.

- India has also been actively engaged with other countries and multilateral forum viz. Global Partnership for Financial Inclusion (GPII) and Organization for Economic Co-operation and Development (OECD). India is one of the co-chairs along with Indonesia and United Kingdom in the GPII Subgroup on Regulation and Standard Setting Bodies. India has been actively involved in preparation of relevant research and policy guides in Digitalisation, Regulation and Financial Inclusion that are published by GPII from time to time. Further, the Reserve Bank of India is currently a member of four working groups viz. Standards, Implementation and Evaluation, Digital Financial Literacy, Financial Education for MSMEs and Core Competencies for Financial Literacy under the International Network for Financial Education (INFE), set up under OECD. Keeping in view the various developments in the global front, India has also initiated the process of preparing its National Strategy for Financial Inclusion (NSFI) in June





2017 under the aegis of Financial Inclusion Advisory Committee (FIAC). The document has been formulated, based on the feedback received from various stakeholders viz., Department of Financial Services (DFS), and Department of Economic Affairs (DEA), Ministry of Finance (MoF), Govt of India, RBI, SEBI, IRDAI, PFRDA, NABARD and NPCI.

- A strong leadership (either a visionary or charismatic) is a prerequisite to drive financial inclusion in a mission mode. Indian policy making has shown unswerving resolve for inclusive growth which culminated in the National Mission for Financial Inclusion, namely the Pradhan Mantri Jan Dhan Yojana (PMJDY). Launched in August 2014, it was a watershed in the financial inclusion movement in the country. The programme leverages on the existing large banking network and technological innovations to provide every household with access to basic financial services, thereby bridging the gap in the coverage of banking facilities.
- Under PMJDY, 34.01 crore accounts have been opened with deposits amounting to ₹89257 crore till January 30, 2019 within a short span of five years. The achievement of opening the largest number of accounts (1,80,96,130 nos.) under PMJDY, in one week has found a place in the Guinness Book of World Records. A bouquet of products viz., overdraft of ₹10,000, accidental death cum disability insurance cover, term-life cover and old age pension have been made available under PMJDY to the account holders. The focus has also shifted from opening account for “every household to every adult”.
- Under Pradhan Mantri Suraksha Bima Yojana (PMSBY) a renewable one- year accidental death cum disability cover of ₹2 lakhs is offered to all subscribing bank account holders in the age group of 18 to 70 years for a premium as low as ₹12/- per annum per subscriber. Another insurance product with one-year term life cover of ₹2 lakhs under Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) is made available to all subscribing bank account holders in the age group of 18 to 50 years, for a premium of ₹330/- per annum per subscriber.
- To take care of the financial needs in old age, a pension product named Atal Pension Yojana (APY) guaranteed by the Government of India has also been made available to the newly included bank account holders. Under APY, a subscriber (in the age group of 18 to 40 years) will receive fixed monthly pension in the range of ₹1,000 to ₹5,000 after completing 60 years of age, depending on the contributions made by the subscriber.

## Conclusion

Digital Financial Inclusion in India is viewed as a multi-stakeholder responsibility necessitating coordinated efforts of all financial sector regulators including the Government. With great opportunities associated with digital financial inclusion comes potential risks and challenges. Technology-led initiatives may lead to significant exclusion at multiple levels, worsening the existing digital divide especially in the Emerging Market Economies; raise issues of consumer data privacy and increase occurrence of cyber security incidents. If unaddressed, these challenges could limit the benefits of digitalisation. Some of the digital challenges and solutions may be common to all the BRICS countries, while others demand policies geared towards their specific needs, based on the underlying heterogeneity which pose unique problems. However, guided by prudent policies addressing the associated risks, the ultimate benefits of efforts towards universal digital financial inclusion far outweigh any possible pitfalls, thus empowering millions of people and thousands of businesses to be a part of the formal financial system.



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