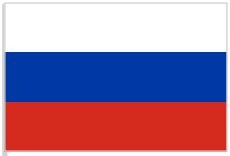
BRICS
Digital Financial Inclusion Report
INDIA | 2021



BANCO CENTRAL DO BRASIL

भारतीय रिज़र्व बैंक
Reserve Bank of India

South African Reserve Bank

中国人民银行
THE PEOPLE'S BANK OF CHINA

Contents

Foreword

The year 2021 marks the 15th anniversary of the BRICS[1]. Over the last decade, it has emerged as a beacon of cooperation and collective endeavor and a voice of emerging market economies (EMEs). To mark these 15 years, the BRICS has chosen **'BRICS @ 15: Intra-BRICS Cooperation for Continuity, Consolidation and Consensus'** as the theme for 2021. This slogan encapsulates the essence of cooperation among the BRICS, and their contributions to the global agenda.

Rapid technological advancements over the past decade have brought formal financial services within the reach of the hitherto un-served and under-served sections of the population. The adoption of digitisation and financial technology (FinTech) has transformed the delivery of various financial services and products and quickened the pace of financial inclusion. This has helped to unlock a multitude of opportunities, especially for the vulnerable and disadvantaged, translating into enhanced income earning potential, increased savings, poverty alleviation and general welfare.

Among the BRICS, the widening adoption of digital technologies has spurred the unlocking of its immense potential in the space of digital financial inclusion. Our societies can gain even more by leveraging technological innovations, global research and shared policy experiences.

Under the aegis of India's Chair, the Reserve Bank of India (RBI) had proposed a report to highlight policy initiatives undertaken by the BRICS in the area of digital financial inclusion in order to build on shared knowledge and experiences. The proposal was approved at the BRICS Deputies and the BRICS Finance Ministers and Central Bank Governors meetings held in February 2021 and April 2021, respectively.

The Report on Digital Financial Inclusion in BRICS has been produced by the RBI with collaboration and inputs from other BRICS central banks, *i.e.*, Central Bank of Brazil (BCB), Central Bank of the Russian Federation (Bank of Russia, BoR), People's Bank of China (PBoC) and South African Reserve Bank (SARB). Our teams have risen to the occasion and produced the Report amidst tight deadlines and pandemic-linked constraints.

The G20 High-Level Policy Guidelines (HLPGs) on Digital Financial Inclusion for Youth, Women and SMEs represent internationally accepted principles

1. The leaders of BRIC (Brazil, Russia, India and China) countries met for the first time in St. Petersburg, Russia, on the margins of G8 Outreach Summit in July 2006. Shortly afterwards, in September 2006, the group was formalised as BRIC during the 1st BRIC Foreign Ministers' Meeting, which met on the sidelines of the General Debate of the UN Assembly in New York City. South Africa joined the BRICS in 2010 and completed the BRICS identity. Details available at *https://brics2021.gov.in/*

regarding digital financial inclusion. These Guidelines are centered around four key policy areas: promoting an enabling, resilient and responsible digital financial infrastructure and ecosystem; promoting responsible and inclusive policy making; promoting inclusive growth through an enabling regulatory framework for responsible digital financial services; and promoting digital and financial literacy and capability and supporting financial consumer and data protection against potential risks[2]. This Report is structured to map various policy initiatives by the BRICS against select HLPGs and reflect on their implementation. It will help identify challenges, fill knowledge gaps, and promote creativity and innovation while learning from each other's experiences. It is hoped that the Report will serve as a starting point for dialogue and cooperation amongst the BRICS in this area.

Michael D. Patra
Deputy Governor
Reserve Bank of India
August 2021

2. *https://www.gpfi.org/sites/gpfi/files/saudiG20_youth_women_SME.pdf*

Abbreviations and Acronyms

ADFI	Advancing the Development of Financial Inclusion
AePS	Aadhaar Enabled Payment System
AFA	Additional Factor Authentication
AML/CFT	Anti-Money Laundering/Combating the Financing of Terrorism
ANBC	Adjusted Net Bank Credit
APBS	Aadhaar Payment Bridge System
API	Application Programming Interfaces
APV	Aprender Valor Program
ATM	Automated Teller Machine
B2P	Business to Person
BASA	Banking Association South Africa
BBPS	Bharat Bill Payment System
BC	Business Correspondents
BCB	**Central Bank of Brazil**
BOBP	Brazilian Open Banking Project
BoR	**Central Bank of the Russian Federation (Bank of Russia)**
CAIXA	Caixa Economica Federal
CBIRC	China Banking and Insurance Regulatory Commission
CDD	Customer Due Diligence
CDFCPS	China Domestic Foreign Currency Payment System
CFL	Centre for Financial Literacy
CFSTC	China Financial Standardisation Technical Committee
CLS	Continuous Linked Settlement
CMTPL	Compulsory Motor Third-Party Liability
CNAPS	China National Advanced Payment System
CPF	Cadastro de Pessoa Física (Individual Taxpayer Identification)
CSRC	China Securities Regulatory Commission
DBT	Direct Benefit Transfer
DSMI	Data Services Market Inquiry
e-BAAT	electronic-Banking Awareness and Training
e-KYC	electronic-Know Your Customer
EMEs	Emerging Market Economies
FACT	Financial Awareness and Consumer Training
FAQ	Frequently Asked Questions

FATF	Financial Action Task Force
FEBRABAN	Brazilian Federation of Banks
FEPA	Financial Education Programme for Adults
FETP	Financial Education Training Programme
FIC	Financial Intelligence Centre
FICA	Financial Intelligence Centre Act
FinTech	Financial Technology
FIP	Financial Inclusion Plan
FIP	Plan for Advancing the Development of Financial Inclusion (2016-2020) (China)
FPS	Faster Payments System
FSB	Financial Services Board
FSCA	Financial Sector Conduct Authority
FSR	Financial Sector Regulation
G20	Group of Twenty
G20 FMCBG	G20 Finance Ministers and Central Bank Governors
G2P	Government to Person
GDP	Gross Domestic Product
GOST R	Gosudarstvennyy Standart (Governmental Standard Russia)
HLPG	G20 High-Level Policy Guidelines on Digital Financial Inclusion
IBPS	Internet Banking Payment System
IFSC	Indian Financial System Code
IMF	International Monetary Fund
INR	Indian Rupee
ISO	International Organisation for Standardisation
JAM	Jan Dhan, Aadhaar and Mobile
LMG	Low Mobile Groups
MIS	Management Information System
MSEs	Micro and Small Enterprises
MSME	Micro, Small & Medium Enterprises
MSSP	Money Smart School Programmes
MTSS	Money Transfer Service Scheme
NABARD	National Bank for Agriculture and Rural Development
NACH	National Automated Clearing House
NCFE	National Centre for Financial Education
NEFT	National Electronic Funds Transfer
NGO	Non-Governmental Organisation
NPCI	National Payments Corporation of India
NPS	National Payment System
NSFE	National Strategy for Financial Education
NSFI	National Strategy for Financial Inclusion

OBP	Open Banking Project
OECD	Organisation for Economic Cooperation and Development
OTP	One Time Password
P2B	Person to Business
P2M	Person to Merchant
P2P	Person to Person
PBoC	**People's Bank of China**
PBoC-CRC	Credit Reference Center
PIDF	Payments Infrastructure Development Fund
Pix	Instant Payments System
PoS	Point of Sale
PPIs	Pre-paid Payment Instruments
PSL	Priority Sector Lending
PSOs	Payment System Operators
PSPs	Payment System Providers
PwD	Persons with Disabilities
QR Code	Quick Response Code
RBI	**Reserve Bank of India**
RMB	Renminbi
RSFN	Rede do Sistema Financeiro Nacional (National Financial System Network)
RTGS	Real Time Gross Settlement
SADC	Southern African Development Community
SAMOS	South African Multiple Option Settlement
SARB	**South African Reserve Bank**
SDG	Sustainable Development Goals
SFB	Small Finance Banks
SHG	Self-Help Group
SME	Small and Medium Enterprise
SMS	Short Message Service
TPAP	Third Party Application Provider
UBS	Unified Biometric System
UIDAI	Unique Identification Authority of India
UPI	Unified Payments Interface
USIA	Unified System of Identification and Authentication
USSD	Unstructured Supplementary Service Data
V-CIP	Video based Customer Identification Process
VPA	Virtual Payment Address

Section 1: Introduction

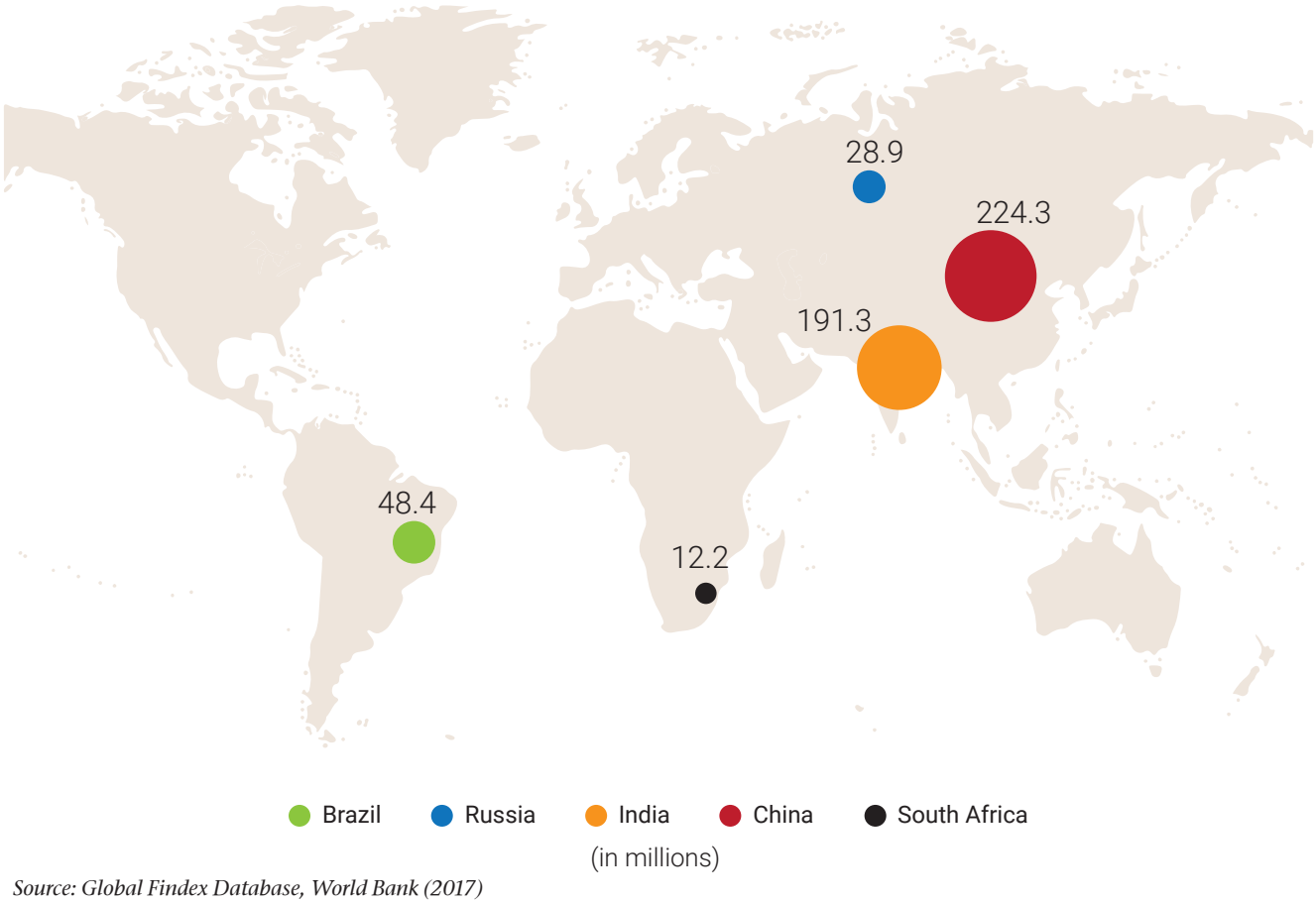
Universal financial inclusion has been one of the major developmental priorities for the BRICS countries over the last few decades. Governments and central banks of the BRICS countries have undertaken several initiatives to ensure access and affordability of financial services to all sections of the society, especially the weaker sections and low-income groups.

Digital technology can be a game changer in tackling the multi-decadal challenge of achieving universal financial inclusion. Over the last 15 years, the rapid adoption of digital technology in the BRICS countries has been the foundation of various growth stories across the member nations. The BRICS economies have undertaken significant measures in furthering digital financial inclusion in their jurisdictions with considerable success.

Banking Access in BRICS

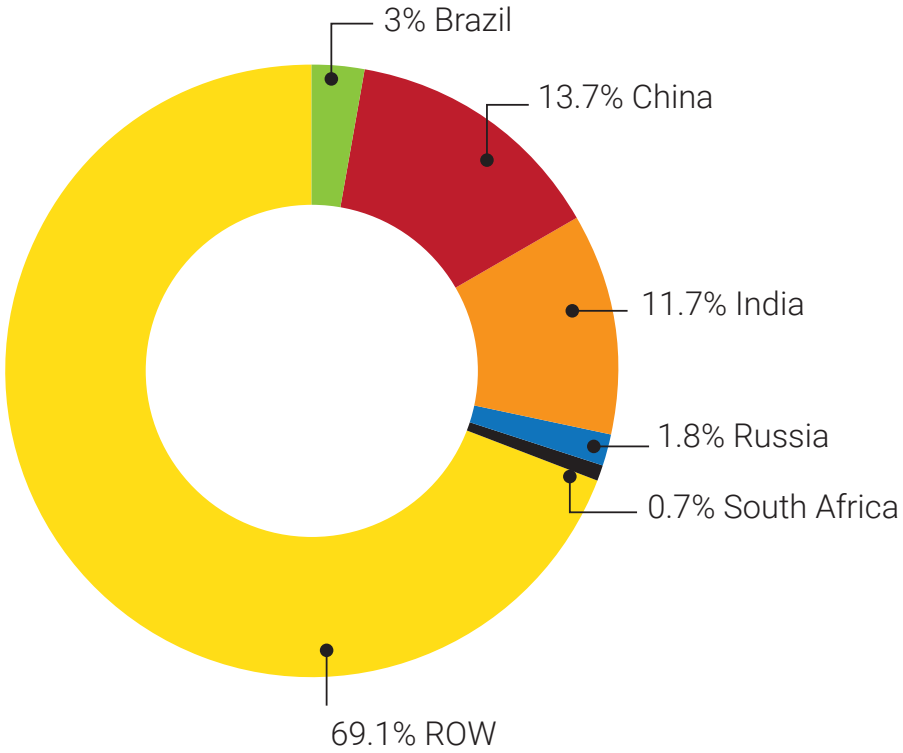
About 30 percent of the unbanked adults (1.7 billion globally) are in the BRICS countries as per the World Bank's Global Findex Report 2017 (Figures 1 and 2).

Figure 1: Adults without an account in BRICS



Source: Global Findex Database, World Bank (2017)

Figure 2: Adults without an account by country (%)



Source: Global Findex Database, World Bank (2017)

Other indicators of financial inclusion from the Financial Access Survey of the IMF including *inter alia* the number of commercial bank branches and ATMs per 100,000 adults and the number of credit and debit cards per 1,000 adults in the BRICS countries (Figures 3-6) bring forth the diversity within these countries.

Figure 3: Number of commercial bank branches per 100,000 adults

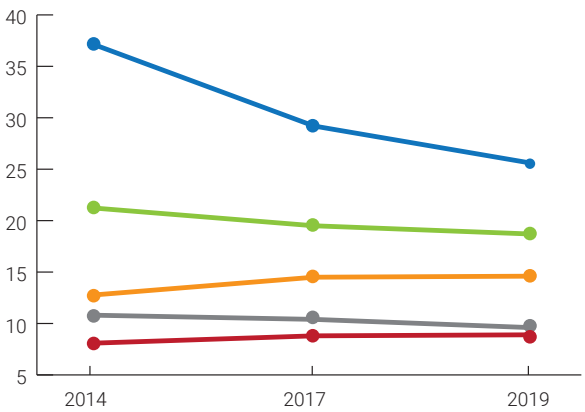
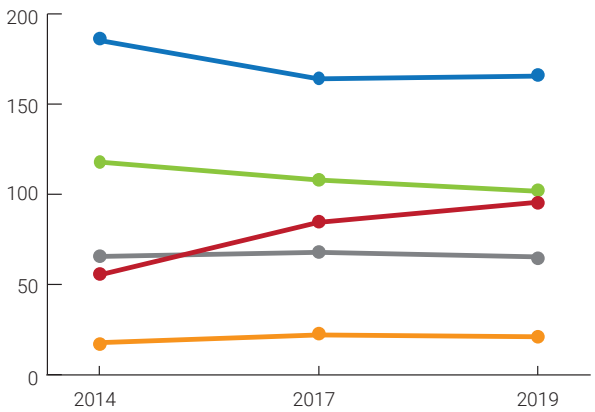


Figure 4: Number of ATMs per 100,000 adults



Source: Financial Access Survey, International Monetary Fund (2020)

Figure 5: Number of credit cards per 1,000 adults

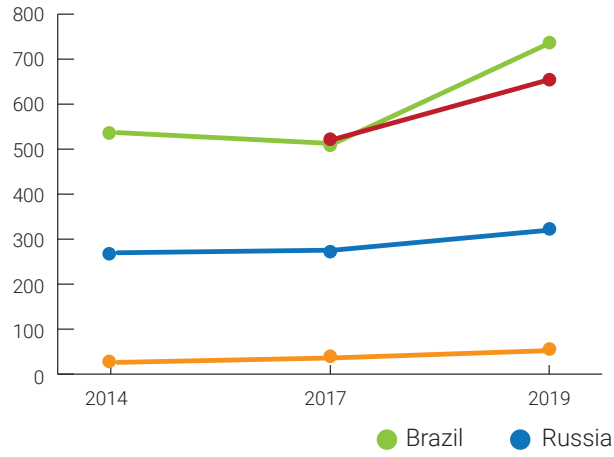
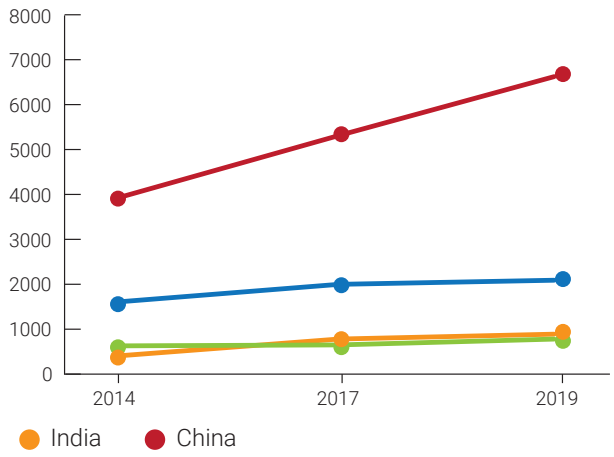


Figure 6: Number of debit cards per 1,000 adults



Note: Data for South Africa not available; Data for China in Figure 5 for 2014 not available

Source: Financial Access Survey, International Monetary Fund (2020)

The Findex Report also observed that women continue to lag well behind men in most of the world, with globally 65 percent of women having an account compared with 72 percent of men, a gap of seven percentage points. Within BRICS, Russia and South Africa have more women having accounts than men, while Brazil, China and India have a gender gap of 5 percent, 8 percent and 6 percent, respectively (Figures 7).

Figure 7: Gender Gap (Adults with an account (%)

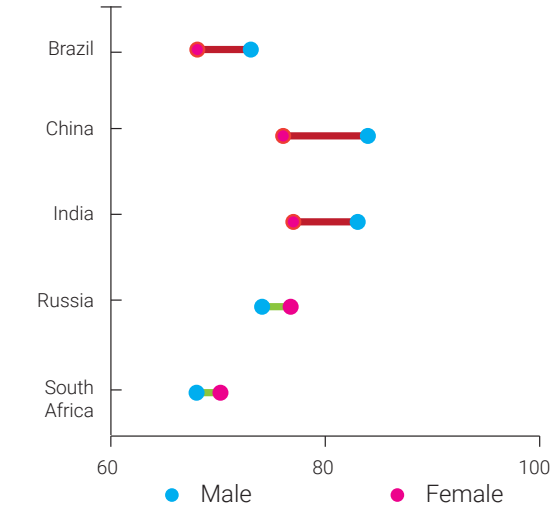
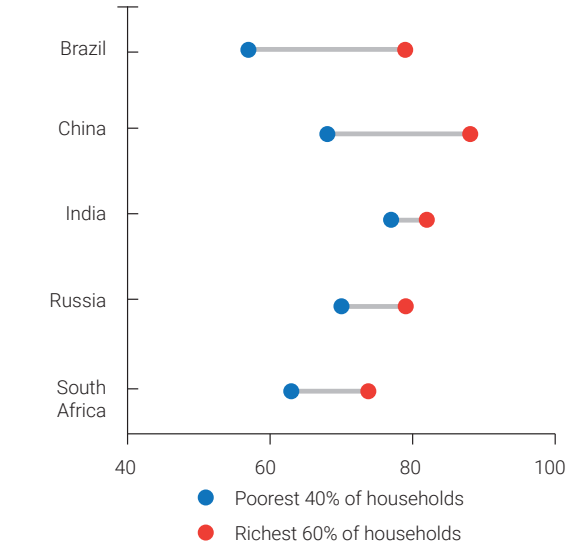


Figure 8: Income Gap (Adults with an account (%)



Source: Global Findex Database, World Bank (2017)

Poor people account for a disproportionate share of the unbanked and account ownership is much higher among adults falling in the wealthiest 60 percent of the households (Figure 8). Of the poorest 40 percent of households, in Brazil and South Africa, only 57 percent and 63 percent, respectively, have bank accounts. India stands apart in this with 77 percent of the poorer households having bank accounts mainly due to the massive financial inclusion drive undertaken by the government and the central bank in the past decade. There is a considerable gap across generations and between the

employed and unemployed sections of the population as well (Figures 9 and 10), with the younger generation (ages 15-24) and the population out of labour force having lower account ownership.

Figure 9: Cross Generation Gap [Adults with an account (%)]

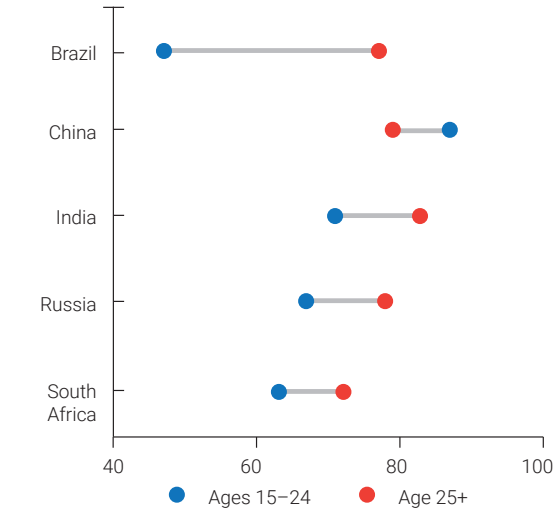
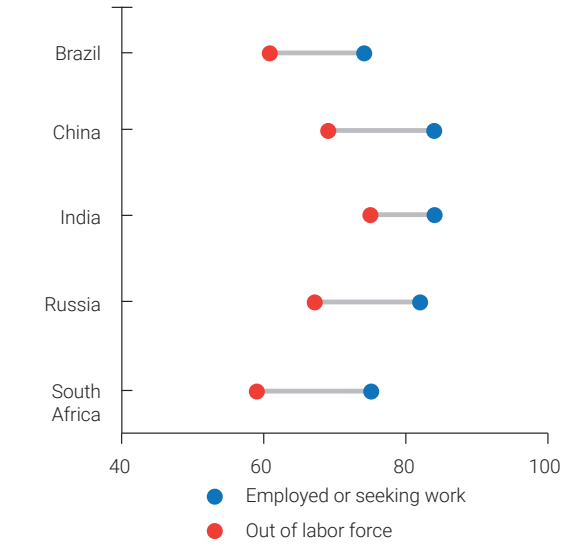


Figure 10: Employed-Unemployed Gap [Adults with an account (%)]



Source: Global Findex Database, World Bank (2017)

Urban populations continue to benefit from wider access to financial services than rural communities. In the developing world, including BRICS, adults having primary education or less account for two-third of the total unbanked adults.

Leveraging digital tools can accelerate the reach and pace of financial inclusion. While the BRICS are rapidly employing digital technology, there still remains immense potential in furthering financial access through digital financial inclusion.

Digital Financial Inclusion

In a broad sense, digital financial inclusion refers to the use of digital financial services to further the goal of financial inclusion. It aims to leverage digital means to reach out to the financially unserved as well as underserved populations with a basket of formal financial services and products suited to their needs in an affordable, safe and transparent manner. At the same time, it promotes efficient and effective networking among participants. Any digital financial service is based primarily on three components, *viz.*, digital transactional platforms, devices and retail agents[3]. The rapid and widespread availability of all these components have prepared a fertile ground for exponential growth in digital finance access (Figures 11 and 12).

Among others, the benefits of digital financial inclusion include: faster and wide-spread dissemination of formal financial services; equality of access to all; relatively lower costs of digital platforms as against physical 'brick and mortar' models; availability of need-based, customised and better-priced products/services for diverse customers; convenience to the customers; lesser

3. Lauer, K. and Lyman, T., (2015) "Digital Financial Inclusion: Implications for Customers, Regulators, Supervisors, and Standard-Setting Bodies", Consultative Group to Assist the Poor (CGAP), February.

Figure 11: Mobile-cellular telephone connections (per 1,000 persons)

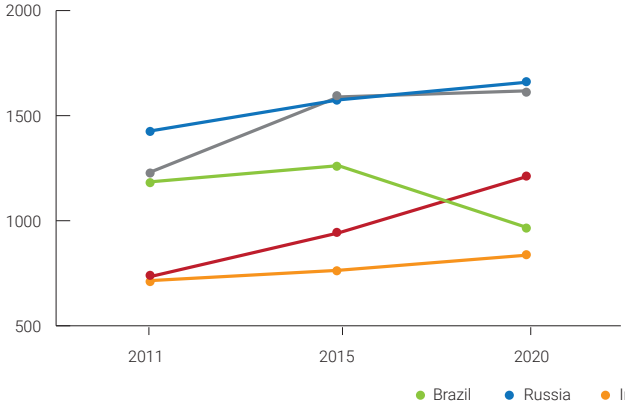
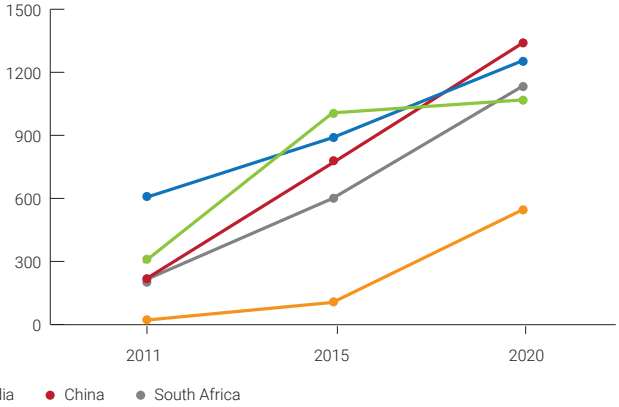


Figure 12: Internet Connections (per 1,000 persons)



Source: Agência Nacional de Telecomunicações, Brazil; Ministry of Industry and Information Technology, China; Department of Telecommunications, India; Ministry of Digital Development, Communictions and Mass Media of the Russian Federation; Independent Communications Authority of South Africa; Population data from World Bank.

risks and costs associated with handling of cash; and lastly, opportunity for economic empowerment of women, youth and vulnerable sections of the society including small businesses.

Technology-driven financial inclusion is a key component in the effort to achieve the United Nations Sustainable Development Goals (SDGs) by 2030, especially goals like *no poverty, gender equality, decent work and 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 reduce inequality of opportunity.

With great opportunities associated with digital financial inclusion comes potential risks and challenges. Technology-led initiatives may lead to significant exclusion at multiple levels, exacerbating the existing digital divide especially in the EMEs; raise issues of consumer data privacy and increase occurrence of cybersecurity 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.

Evolution of 2020 G20 High-Level Policy Guidelines (HLPG)

At global fora for international economic cooperation, the focus on digital financial inclusion as a policy prescription has gained traction, especially in the last decade. The Group of 20 (G20) has spearheaded the focus on adoption of digital technology and financial inclusion and facilitated the synergetic convergence of the two, in the last few years, through research, reports and comprehensive policy guidelines. It has continued to encourage nations to

commit and take concrete and desirable actions to facilitate digital financial inclusion while mitigating the associated risks for economies.

In 2016, the G20 developed a set of eight High-Level Principles that encourage governments to take a digital approach to financial inclusion. These principles were intended to catalyse country-level actions by G20 governments to drive financial inclusion using digital technologies.

G20-led initiatives categorised the Principles based on excluded groups and focused separately on target groups such as Small and Medium Enterprises (SMEs), youth and women with detailed analysis and policy options for the challenges faced by each group. Ultimately, knitting these sectoral reports together and building on the 2016 Principles, the G20 High-level Policy Guidelines on Digital Financial Inclusion for Youth, Women, and SMEs[4] were endorsed by the G20 Leaders in the Riyadh Summit[5] held during November 21-22, 2020. These HLPGs, based on best global practices, are a robust set of recommendations for various stakeholders to spur innovation and set targets towards digital financial inclusion. There are eight HLPGs centered around four policy areas:

- promoting an enabling, resilient and responsible digital financial infrastructure and ecosystem;
- promoting responsible and inclusive policy making;
- promoting inclusive growth through an enabling regulatory framework for responsible digital financial services; and
- promoting digital and financial literacy and capability and supporting financial consumer and data protection against potential risks.

The BRICS and Digital Financial Inclusion

Technology-driven financial inclusion has been a priority for the BRICS countries. The deeper penetration of internet and mobile technologies provided a conducive environment for this shift of focus in the BRICS countries. The government and regulatory bodies in the BRICS countries have undertaken various initiatives to enhance the adoption of FinTech and develop a resilient, responsible and facilitating digital financial infrastructure and ecosystem, to create an enabling regulatory framework to promote digital and financial literacy and support consumer and data protection. On account of all these efforts, digitalisation has progressed significantly in all the BRICS countries. For example, in India, the digital retail payment transactions have witnessed paradigm shift with introduction of Unified Payment Interface (UPI). LIFT INNOVATION LAB in Brazil, Faster Payments System in Russia, P2P/Marketplace lending firms in China and connectivity of non-banks in the national payment system of South Africa are some of the other success stories.

Over the past 15 years, the BRICS have acquired a unique place in the global

4. *https://www.gpfi.org/sites/gpfi/files/saudiG20_youth_women_SME.pdf*
5. *https://www.gpfi.org/sites/gpfi/files/sites/default/files/G20%20Riyadh%20Summit%20Leaders%20Declaration_EN.pdf*

governance structure. Owing to its inherent characteristics – smaller number of countries, similar developmental status, common global challenges and south-south cooperation — BRICS has evolved to be a more outcome-focused and effective platform to take forward the policy guidance formulated at G20 and assess and aid its implementation in their jurisdiction.

Against the above backdrop, this Report focuses on the experience and performance of BRICS countries in the area of digital financial inclusion. The Report highlights the major success stories, innovations, lessons learnt and unique initiatives in the form of case studies which are in line with the HLPGs. Although HLPGs had eight guidelines on Digital Financial Inclusion, this Report covers the following four HPLGs:

- HLPG 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.
- HLPG 5: Support regulatory and legal reforms that reduce unequal access to responsible digital financial services, which results from social, economic, and cultural inequalities.
- HLPG 7: Enhance financial, business and digital literacy and capabilities through targeted interventions and by leveraging technology.
- HLPG 8: Support financial consumer protection measures, including data protection, that address the needs of youth, women and SMEs.

This report would help the BRICS countries to assess their performance and provide them an opportunity to learn from each other's experiences with respect to digital financial inclusion. The next four Sections of the Report cover BRICS member countries, case studies pertaining to each of the above-mentioned four HLPGS. Many of the case studies, though listed under a particular HLPG, cover aspects of and have implications for other HLPGs as well. The final Section 6 draws conclusions from the foregoing sections and indicates the way forward in the field of digital financial inclusion.

Section 2: Transforming the Digital Financial Ecosystem

G20 High-Level Policy Guideline 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.

Digital infrastructure is a crucial precondition for expanding digital financial services in any country. In EMEs, where the technological penetration and reach of financial networks remains limited, connectivity-related infrastructure remains the key towards widespread uptake of digital financial services, especially in rural and remote areas. The evolving digital infrastructure must facilitate efficient, fast, affordable and secure transactions, while encouraging interoperability 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 changed the landscape of financial delivery by offering tailor-made financial products and improving overall accessibility and affordability. The innovations in digital financial infrastructure space have lowered overall infrastructure cost, enhancing its accessibility by the disadvantaged sections and thus contributing to inclusive growth.

The BRICS countries have made significant progress towards the development and transformation of their digital economies. Sophisticated digital infrastructure has helped in catering to the financial needs of the unserved and underserved segments of the population. This section highlights some important systems developed and initiatives implemented in the BRICS countries which address the HLPG 1. The case studies which follow reflect the BRICS endeavours in this policy area and hold important policy lessons for the global community at large.

2.1 Pix: New Brazilian Instant Payments Scheme

Pix[6] is an instant payment scheme launched by the Central Bank of Brazil (BCB), in November 2020, which sets the rules and procedures related to the provision of instant payment services. It has become a new alternative for payments and financial transfers for Brazilian citizens, businesses, and government entities. Pix is a digital means of payment that allows the transfer of funds among different participant institutions from one account to another account. It has the following eight main features:

6. https://www.bcb.gov.br/en/financialstability/pix_en

i. **Instant funds availability for the beneficiary:** funds are credited within 10 seconds in 99 percent of transactions and within 6 seconds in 50 percent;

ii. **Full-time availability:** Pix is available 24 hours every day, all year long, including non-business days;

iii. **Multiplicity of use cases**: Pix potentially meets any payment or transfer made in Brazil, including transfers between persons, purchases of goods and services in stores and in the e-commerce/m-commerce, transfers between businesses, payments of invoices, including those related to public services, and payments involving government entities, both for the purpose of fulfilling their obligations and for the collection of taxes and fees;

iv. **Convenience:** for citizens, a Pix transaction may be initiated on smartphones, making it easy, simple, and intuitive, either by using an alias (mobile phone number, e-mail, social security number or a random number) or by scanning a QR (Quick Response) Code;

v. **Easy conciliation and automation of processes for payees:** Pix allows relevant transaction information to run along with the payment order (through ISO 20022 standardised messages), enabling increased efficiency in internal procedures for businesses that need to reconcile their payments;

vi. **Open and competitive environment:** participant institutions representing a multiplicity of players have made it very competitive, such as traditional banks, digital banks, credit unions, other financial institutions, and FinTechs, including non-banks that do not require the BCB authorisation to operate;

vii. **Safe environment:** Pix has three safety dimensions — user digital authentication, encryption and Pix operating rules. These are detailed in Section 5.

viii. **Low cost:** Pix initiation for households is free. Although charging is allowed for both initiating and receiving a Pix for businesses, fees are lower than those observed on payment cards schemes, due to the competitive environment and few intermediaries in the payment chain.

The noteworthy aspect of Pix for payers is that it is the closest digital payment to cash, and for payees, the speed with which the payments are made available to them is commendable. This speed allows improvement of cash management, decreasing the need for credit. Additionally, there are efficiency gains by facilitating the reconciliation of payments, process automation and system integration. Finally, Pix tends to have a lower acceptance cost than other electronic payment systems.

Over the few months since its launch, Pix has seen a huge adoption. By the end of May 2021, 755 participant institutions had successfully joined Pix and there were more than 10 Pix transactions per capita from November 2020 until May 2021. As to the age of Pix users, 39 percent of all users are below

29 years old. Person-to-Person (P2P) transactions account for around 73 percent of the transactions. Usage has been increasing for different use cases and in different segments, with P2B increasing the fastest from 5 percent in November 2020 to 13 percent in June 2021[7].

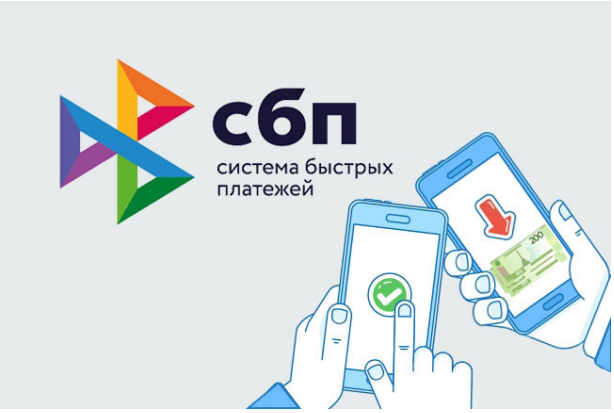
> *"The BCB has placed itself as the builder, manager, and operator of the Pix infrastructure to enable digital payments to be increasingly simple, fast, safe and accessible. Pix is likely to be a game changer in the Brazilian retail payments system with attributes of higher efficiency, safety, and competitiveness, thus contributing to financial inclusion."*

2.2 Faster Payments System in Russia

Accessibility and effectiveness of payment services is important both for businesses and households. The National Payment System Development Strategy for 2021–2023 of Russia, which is currently being implemented, aims to establish conditions for providing consumers with convenient, safe and accessible payment services, shaping a competitive and innovative payment market, and constantly improving the payment infrastructure.

The Faster Payments System (FPS) is an infrastructural project of national importance aimed to promote competition, raise the quality of payment services, enhance financial inclusion and make payments cheaper for households. FPS was jointly developed by the BoR and the National Payment Card System permitting instant (24/7) interbank transfers via a mobile phone number.

The launch of the FPS has expanded consumers' access to financial services by allowing individuals to instantly make interbank transfers using just mobile phone numbers, as long as their banks are connected to the system. In addition to P2P transfers, the FPS enables payments for goods, works and services, applying QR codes, and allows for B2P transfers. To reduce the cost of payments for individuals as well as the expenses of businesses receiving cashless payments, the FPS stipulates a ceiling for the fees charged by banks to their customers.



During 2019–2020, about 1 trillion roubles were transferred via the FPS. In 2020, the number of banks participating in the FPS increased almost six-fold. Over 22 million clients of banks used the FPS services, with more than 100,000 trade and service companies connected to the service. Besides, in

7. https://www.bcb.gov.br/en/financialstability/pixstatistics

2020 the number of operations within the FPS increased by a factor of 16, and their total volume increased by a factor of 13. The numbers testify to the dynamic nature and increasing popularity of the FPS.

2.3 Unified Biometric System in Russia

The Unified Biometric System (UBS) launched in June 2018, is a national digital platform of Russia that allows individuals to open deposit accounts and receive loans remotely by means of remote identification using biometric personal data (through face and voice recognition). To join the UBS, a person needs to have their biometric data recorded, just once, with any of the identified 13 thousand offices of more than 200 banks across the country. The creation and development of the digital biometric identification platform enables faster digitalisation of financial services, increases competition in financial markets, and quickens the pace of financial inclusion, making financial services accessible to, among others, disabled, elderly and citizens living in hard-to-reach areas.

To ensure maximum protection and reliability, UBS has a multimodal structure that allows application of different biometric parameters. There are two types of modalities that are currently used—voice identification and digital impression of a person's face footage. In future, other elements of biometric identification might be introduced in the system which will make it possible to expand its application and increase the degree of protection. At the initial stage, only banks could provide services using the UBS, though with the regulation adopted in the end of 2020, the UBS will be used in *inter alia* healthcare (telemedicine), distance education, e-commerce, retailing, and for receipt of state and municipal services. Full-scale implementation of the Biometric System will make it possible to establish a critical infrastructure for development of the country's digital economy.

"FPS is a nationally important infrastructural project and is among the BoR's key initiatives aimed at developing the digital payment environment in the Russian market. A remote biometric identification with the aid of the Unified Biometric System provides a safe opportunity to all citizens of the country to gain secure access to any digital services that require legally binding actions".

2.4 Unified Payments Interface in India

Interoperability among payment systems in India has facilitated unparalleled ease of transactions while robust customer protection measures have made India's retail payment system one of the safest in the world.

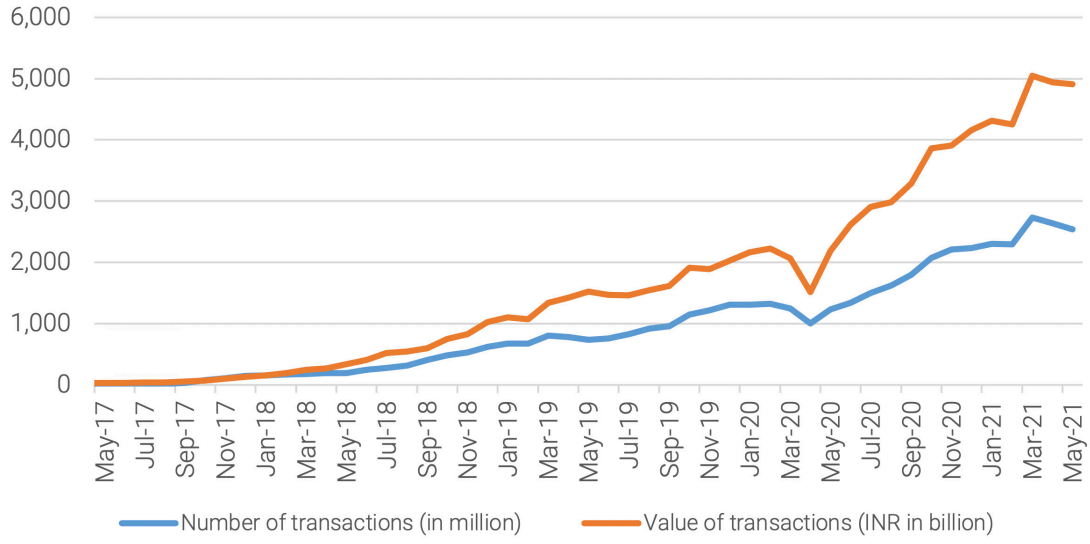
Unified Payments Interface (UPI) is a mobile-based, 365x24x7 'fast payment' system launched in August 2016 which allows users to send and receive money instantly using a Virtual Payment Address (VPA) set by the user itself. The unique feature of VPA-based transaction is that it obviates the need for sharing account or bank details to the remitter. It supports person-to-person (P2P) and person-to-merchant (P2M) payments which can be used over a smart phone (app-based) or a feature phone (USSD[8]-based), and at merchant location/website. It facilitates immediate money transfer through both 'pull' and 'push' payments.

Non-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 AutoPay facility for recurring payments.

The framework of UPI comprises NPCI 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

Figure 13: UPI - Trend in number and value of transactions



Source: NPCI

mobile devices with two-factor authentication using device binding and UPI PIN as security. Currently, the per transaction limit is INR 0.2 million.

8. Unstructured Supplementary Service Data

UPI has attracted participation from a number of FinTech players. As against banks, it is the non-bank players who have made good use of the openness of UPI architecture, which allows any entity's mobile application to be used for doing UPI transactions. 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. As can be observed from Figure 13, more than 2.5 billion transactions worth approximately INR 5,000 billion (USD 67 billion[9]) were processed in UPI[10] during the month of May 2021 alone.

Box 1: e-RUPI in India

Indian government launched e-RUPI in 2021, the digital payment system through electronic vouchers, as an initiative to seamlessly pass on welfare benefits to eligible beneficiaries. 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 underbanked and unbanked society in the mainstream banking services.

2.5 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) in tier-3 to tier-6 centres and north-eastern states. 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. To provide further fillip to digitisation of payment systems, it is necessary to give impetus to acceptance infrastructure across the country, more so in underserved areas.

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.

9. As per prevailing currency exchange rate of USD 1 = INR 74 (approximately).

10. Data on UPI transactions, wherever mentioned in this case study, include both P2P and P2M transactions. It also does not factor in non-financial transactions over UPI, which incidentally are almost equal to the number of financial transactions.

"UPI has truly revolutionised the efforts towards financial inclusion of hitherto excluded sections of the Indian populace by way of a simple, safe, accessible and convenient payment offering. The Payments Infrastructure Development Fund (PIDF) encourages acquirers to deploy Points of Sale (PoS) infrastructure and thus gives impetus to acceptance infrastructure across the country, more so in underserved areas."

2.6 Payments Infrastructure and Credit Reporting Systems in China

The PBoC in collaboration with other stakeholders established a comprehensive and robust national payments system infrastructure in China. The government authorities prioritised the development and maintenance of a sound payments infrastructure in rural areas, which facilitated growth in physical access networks, improved diversity and efficiency of payment products and allowed for the digitalisation of Government-to-Person (G2P) transfers. The key elements of the program include the following:

- Starting in 2002, the PBoC developed a number of inter-bank clearing systems, including the China National Advanced Payment System (CNAPS), China Domestic Foreign Currency Payment System, and local clearing systems, to support the application of negotiable instruments, payment cards, and other payment instruments.
- China UnionPay was established in 2002 to develop and operate the inter-bank card information exchange system and to promote the interoperability of bank cards. UnionPay now forms the backbone for the interoperability for agents and payment cards, and also provides the rails on which Alipay and other online payment platforms operate.

- The PBoC operates the Internet Banking Payment System (IBPS) which offers near real-time inter-bank direct credit and debit transfers for internet banking initiated transactions. Rural credit cooperatives (and other rural financial institutions) and city commercial banks have created systems for their respective members and these are connected to the PBoC's systems which thereby enables transactions between the rural banks and the other nationwide banks.

Coordination of China's payment systems infrastructure has been strengthened through the establishment of the China Payment and Clearing Association in 2011.

In August 2014, the PBoC formally issued *Guidelines on Comprehensively Promoting and Deepening the Development of Payment Service Environment in Rural Areas*, to further expand coverage of payment services systems.

The PBoC also established the Fundamental Database for Financial Credit Information and set up the Credit Reference Center (PBoC-CRC), a public credit registry that collects data from a wide range of financial institutions, including banks, rural credit cooperatives, trust companies, consumer finance companies, auto finance companies, micro-finance institutions, financing guarantee companies, financial leasing companies, insurance companies and securities companies.

2.7 Lankao Pilot Zone Model for Digital Financial Inclusion Reform

In December 2016, with the approval of the State Council, the PBoC, together with relevant ministries, formulated and released the overall program of Pilot Zone for financial inclusion reform in Lankao County of Henan Province to carry out financial inclusion pilot reform in the county. Under the guiding principle of poverty alleviation in counties through financial inclusion, the pilot zone focused on strengthening financial inclusion infrastructure and used digital technologies for online-offline integration. As a result, the Lankao Model featured one-stop digital service platform, having financial inclusion at its core. The model also consists of financial service system, the financial inclusion credit system, credit information system and the risk control system. This pilot reform has proved impactful. With traditional finance and digital finance integration, the difficulty confronting SMEs and farmers in accessing loans, and the difficulty in collecting their information and control risks were addressed.

Below are the approaches and experience of the Lankao Pilot Zone experiment that has fully harnessed digital technologies.

- Given the constraints of traditional financial services such as high costs and limited fixed outlets, the Lankao Pilot Zone built Pu Hui Tong, a one-stop digital service platform for financial inclusion, and launched online the businesses that are closely related to people's daily lives, such as account management, micro finance, agriculture-related insurance, savings and wealth management, payments and agricultural subsidies, making financial inclusion services easily accessible to people.

- The digital financial inclusion platform has reduced the cost of financial inclusion, increased its accessibility and expanded its service scope. Estimates by a financial institution outlet in the Lankao Pilot Zone show that the time needed to handle a loan application online is 28 percent faster than offline and the management cost is down by 20 percent. As of end-2019, more than 900 financial inclusion products of over 180 banks (including branches) were launched in the Pu Hui Tong App, covering credit, wealth management and payments. Across Henan province, 2.47 million users downloaded and subscribed to the app, including more than 500,000 real-name users, and a total amount of RMB690 million was loaned. Thus, equal and fair opportunities are presented by financial institutions at low cost and low risk.

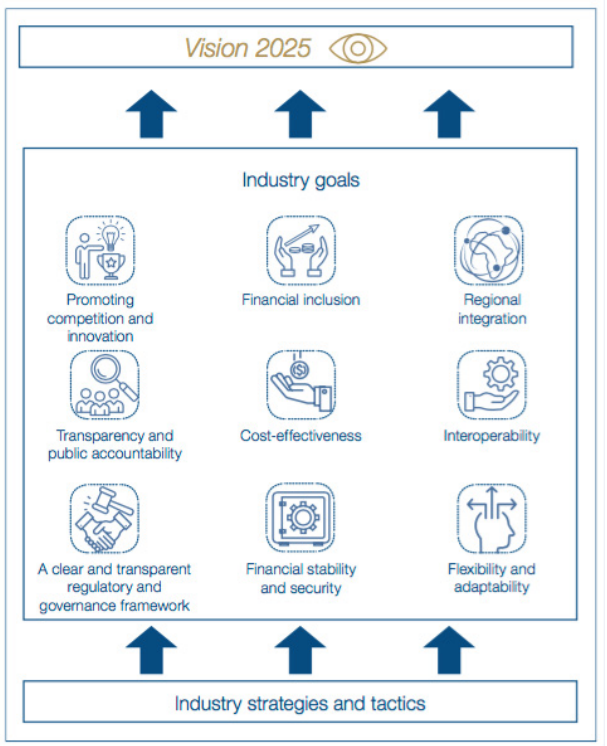
- To address the digital divide that is prevalent among the mid-aged and

the elderly in rural areas, the Lankao Pilot Zone embedded financial inclusion in the county, township and village-level convenience service system. This gives people access to convenience services in their village. In addition, it also launched the risk sharing mechanism along with incentives, clearly defining the roles and responsibilities of the local government, financial institutions and borrowers, in a bid to improve the sustainability of financial inclusion. Thus, the Lankao Model has been successful in online-offline integration.

> *"Much of China's progress in advancing digital financial inclusion can be attributed to the efforts undertaken in recent years to strengthen the country's financial infrastructure through an integrated city and rural approach. With traditional finance and digital finance integrated under the Lankao Model, the difficulty confronting SME and farmers in accessing loans, and to collect their information and control risks were addressed".*

2.8 National Payment System Framework and Strategy in South Africa

In March 2018, the SARB published the National Payment System Framework and Strategy — Vision 2025[11], with the overarching vision to "enhance the safety, efficiency and accessibility of the national payment system in a manner that promotes competition and minimises risk to the payments ecosystem by leveraging technological developments to extend the availability of digital payments to all sectors of society while meeting domestic, regional and international requirements for the benefit of all members of South African society." Vision 2025 is comprised of the nine goals given in the adjacent pictorial.



The various payment systems in South Africa are:

- South African Multiple Option Settlement (SAMOS) system is a high value real-time gross settlement (RTGS) system for domestic transactions – owned and operated by the SARB.
- BankservAfrica is a retail payment system that clears retail transactions and operates both nationally and within Africa.

11. *https://www.resbank.co.za/en/home/what-we-do/payments-and-settlements*

- Strate (Pty) Limited as a Payment Clearing House System Operator, operates the large value payment system that clears the delivery and payment legs of equities, bonds, and money market transactions.
- The Southern African Development Community (SADC) Real-time Gross Settlement System (SADC-RTGS) is a large value payment system that settles cross-border transfers that require immediate settlement within SADC. It is owned by SADC central banks and operated by the SARB.
- Continuous Linked Settlement (CLS) system is a large value payment system that settles foreign exchange transactions in designated currencies, including the South African rand.

"Payment System Framework and Strategy - Vision 2025 provides an overarching vision to enhance the safety, efficiency and accessibility of the national payment system in a manner that promotes competition and minimises risk to the payments ecosystem by leveraging technological developments to extend the availability of digital payments to all sectors of society"

Section 3: Universalising the Digital Financial Ecosystem

High-Level Policy Guideline 5: "Support regulatory and legal reforms that reduce unequal access to responsible digital financial services, which results from social, economic, and cultural inequalities"

Globally, about 1.7 billion adults remain unbanked — without an account at a financial institution (Global Findex Report 2017). The reasons for this financial exclusion can be broadly categorised into geographic, social, economic, and cultural factors. Within these factors, income, education, gender and rural-urban differences primarily account for this unequal access.

Digital technology offers various benefits, *viz.*, convenience, cost optimisation, fast delivery and choices/alternatives. The use of consumers' and entrepreneurs' data, potentially including big data, by financial service providers can provide insights into individuals' spending habits, barriers and enablers. The data also helps in facilitating tailor-made and targeted products and supporting fraud detection and enhancing the overall trust in the system, thereby increasing the access to responsible financial services. The adoption of digital technology would help transcend the existing barriers and bring millions facing varying inequalities into the financial sector fold.

The BRICS countries have undertaken several regulatory and legal measures with a view to reducing this unequal access to financial services, including digital financial services. This report concentrates more on the targeted interventions and policy initiatives leveraging digital tools to deepen the reach of financial services, while overcoming the constraints and inequalities imposed by the social, economic, and cultural realities. This section highlights major success stories/learnings, and unique aspects of policy interventions and initiatives of the BRICS countries in the form of case studies addressing the inequalities.

3.1 Open Banking in Brazil

Aligned with the principle that consumers are the true owners of their data, and, therefore, should be able to use it to their advantage, Brazil has started implementing its own Brazilian Open Banking Project (BOBP) in February 2021. Under the project, use of open application programming interfaces (APIs) enables, third-party developers to build applications and services around the participating financial institutions, with consumer data shared with their consent. The BOBP encompasses not only registration and transactional data sharing, but also, services such as payment transaction initiation and credit proposal submission. In later stages, it also intends to

cover data on investment, foreign exchange, insurance, open-pension funds, and other financial products.

Participants' often-conflicting interests has made it unlikely that such initiative could arise through a market-led process, necessitating central bank leadership. In line with its objectives and in order to guarantee non-discriminatory access and compliance with regulations, a governance structure was built in which the participating segments have equal status. The project aims to reduce information asymmetry, which is recognised as one of the main hurdles in financial service costs. Improving information availability is expected to help, as more accurate credit risk assessments and the standardisation brought by the BOBP in data sharing is expected to enhance transparency. Increased competition and the resultant cheaper and better financial products for consumers are expected to follow.

"In a nutshell, beyond fostering digitalisation and competitiveness, the BOBP is seen as a paradigm shift towards a consumer-centric model. A wider array of financial services leads to consumer empowerment and increases suitability of financial services. Moreover, new business models should serve different segments of society, reaching those that are currently neglected or underserved by traditional financial system and consequently improving financial inclusion".

Box 2: Access to Digital Tech in Brazil

The level of digital access has grown in recent years in Brazil. However, there are differences when analysing this access by social class. Between 2017 and 2019, the share of lower social class households with internet access rose from 30 percent to 50 percent. The higher social classes, on the other hand, remained stable with 99 percent of households accessing the internet throughout the same period[12]. Geographical differences are also reflected in the Brazilian digital access. Among non-internet users, only 0.6 percent claimed that the service was not available in urban areas, as compared to 19.2 percent of respondents in rural areas[13]. Even though every municipality in the country has at least one financial service point, the importance of digital access to such services grow when not every municipality has a bank branch (with its wide range of services offered) to serve its residents.

Although there is certainly a geographic issue, the main obstacle to digital access is related to income. It is not surprising that in 2019, a survey carried out by the BCB[14] showed that cash is the

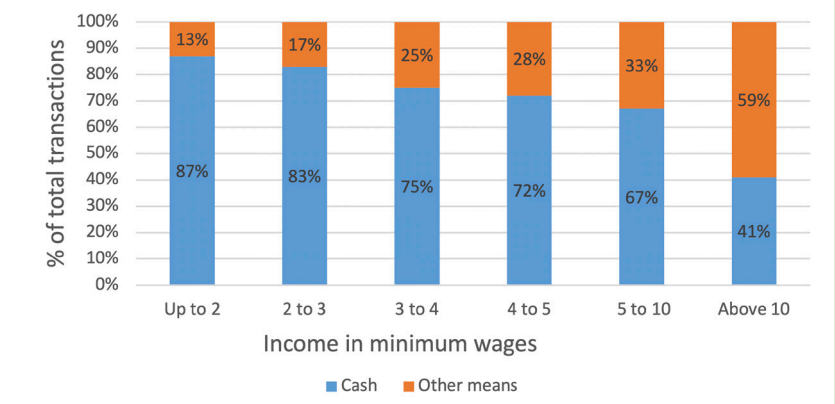
12. The Brazilian Center of Studies on Information and Communication Technologies (2019), "Households Survey on the Use of Information and Communication Technologies in Brazilian Households", available at *https://www.cetic.br/media/docs/publicacoes/2/20201123121817/tic_dom_2019_livro_eletronico.pdf*

13. Instituto Brasileiro de Geografia e Estatística (2019), "National Survey for Continuous Residency Proof: Internet and television access and cellular mobile phone", available at *https://biblioteca.ibge.gov.br/visualizacao/livros/liv101794_informativo.pdf*

14. BCB (2021), Survey on "Brazilians and the habits of payment methods usage", available at *https://www.bcb.gov.br/content/estabilidadefinanceira/Publicacoes_SPB/Relatorio_Decem_2157_2021.pdf*

main means of payment for citizens with income of up to twice the Brazilian minimum wage, totalling 87 percent of financial transactions executed by this income bracket. This number drops to 41 percent for income above 10 times the minimum wage (Figure 14).

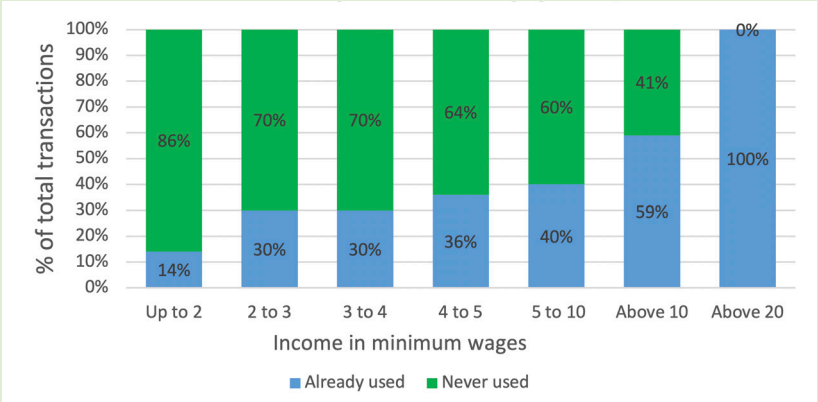
Figure 14: Use of means of payment according to income, 2017



Source: Central Bank of Brazil

Cellphones are a great booster of internet access for the lower income brackets of the Brazilian population. In 2019, 85 percent of internet users from the lower income brackets exclusively used their cellphones to access the network. Despite the growing use of smartphones for internet access, the use of cellphones to make payments diminishes as the income decreases[15] (Figure 15).

Figure 15: Use of cell phones to make payments, 2017



Source: Central Bank of Brazil

3.2 Pix: Digital Delivery of Financial Services to Low-income Population in Brazil

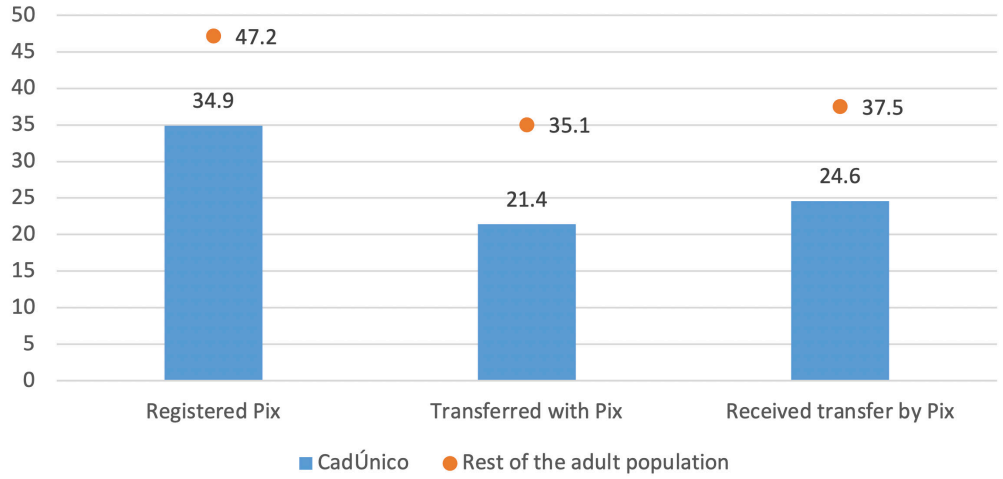
The instant payment system, Pix[16] has been able to democratise access to electronic payment services in Brazil and further encourage the digital delivery of financial services to low-income population. Data on the use of Pix by the low-income population, within a few months after its implementation, demonstrates its potential for significant change. By March 2021, registration at Pix was 34.9 percent of the adult population registered

15. BCB Survey (2021), Brazilians and the habits of payment methods usage, available at *https://www.bcb.gov.br/content/estabilidadefinanceira/Publicacoes_SPB/Relatorio_Decem_2157_2021.pdf*

16. Means of payments where resources are transferred between accounts in a few seconds, anytime and any day of the week. Details given in Section 2.1 of this Report.

in CadÚnico[17], which identifies low-income families; and while 21.4 percent has already transferred money using Pix, 24.6 percent has received a money transfer by Pix (Figure 16).

Figure 16: Share of low-income Pix users (Value in %)



Source: Ministry of Citizenship and Central Bank of Brazil

"The Pix has made considerable headway within a short period since its implementation. There is enormous potential for digital financial inclusion through the Pix by offering fast, secure, convenient and low-cost financial transactions".

Box 3: *Bolsa Familia* Program in Brazil

The *Bolsa Familia*, a conditional cash transfer program, initiated in 2003, is a powerful tool that looks at empowering the women with financial decision. Under the program, the qualifying families receive a monthly cash transfer through an electronic benefit card, preferably paid directly to the female head of household. This is conditional on keeping children in the family enrolled in school and taking them to regular health checks. The card can be used at PoS and to transfer money digitally, thus bringing the women of low-income families in the ambit of financial inclusion. The *Bolsa Família* has benefited 14.7 million families (till July 2021) with transfers of R$ 12.9 billion from January 2021 to July 2021. Till 2020, 88 percent of *Bolsa Família* payments were directed to women.

17. *CadÚnico* is the federal registry of social programs beneficiaries that identifies and characterises low-income families. It has become the main instrument of the Brazilian State for the selection and inclusion of low-income families in federal programs, being used obligatorily for the granting of social benefits.

3.3 Russia's Focus on persons with disabilities, elderly and other low-mobile groups of the population

The goals to eliminate inequality between the financial inclusion levels of different social groups, including people with special needs, requires increased attention on protection of financial service consumers' rights and addressing of the barriers in accessing financial services. Improving financial inclusion for persons with disabilities, elderly and other low-mobile groups of the population (PwD/LMG) is one of the priorities of Russia's Financial Inclusion Strategy for 2018-2021[18].

The BoR established the Working Group for Promoting Financial Inclusion of PwD/LMG (Working Group) in 2017. The Working Group's roadmaps for 2017–2019 and 2020–2021 included a range of policies aimed at making remote channels of providing financial services more accessible for PwD/LMG.

The BoR has also contributed to updating National Standard GOST R 52872-2019 internet resources and other information presented in electronic and digital formats. The update is aimed at making it easier for PwD/LMG to use financial institutions' websites and mobile applications. Since 2018, the BoR has been conducting annual monitoring of credit institutions' compliance with its recommendations on removing barriers for PwD/LMG, including recommendations on the accessibility of remote servicing channels. The third stage of the monitoring has shown that 65 percent of credit institutions have fully or mostly implemented the recommendations on eliminating barriers for PwD/LMG and 64 percent of credit institutions have fully or mostly implemented the recommendations on the accessibility of remote servicing channels in 2020. A three-stage survey conducted to evaluate the level of financial inclusion of PwD observed that the use of remote channels by PwD increased in 2020 due to the COVID-19 pandemic.

The Working Group has developed several initiative rankings for credit institutions, assessing the accessibility of various servicing channels for PwD, including remote channels (website and the personal account in the online banking system, mobile app, and call centre). The BoR would address the accessibility of the Unified Biometric System for PwD/LMG by introducing additional biometric modalities for the remote identification and authentication by using the modalities like face and voice recognition. Besides, it is planned to create legislative framework for enabling the use of alternatives to handwritten signature (including biometric personal data) by PwD/LMG that face difficulties putting a signature when entering transactions and performing other legally binding acts as part of their interaction with financial institutions.

18. The Strategy was initially for the period of 2018-2020. It was extended to 2021 by the Bank of Russia's Board of Directors on 23.10.2020.

"Russia has made concerted efforts to ensure the financial inclusion of PwD/LMG in recent years. It mainly focussed on technology-based solutions to address the various constraints faced by PwD/LMG in accessing various financial products. There is convincing evidence for the effectiveness of these initiatives".

3.4 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 – **J**an Dhan[19], **A**adhaar and **M**obile phone – have gradually evolved as the pillars of the financial inclusion efforts in India. Of late, 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. Besides transferring the benefits and subsidies under the Direct Benefit Transfer schemes[20], it also serves the goal of reducing unequal access by making opening of accounts and, receiving and transferring funds, fast and convenient.

AADHAAR ENABLED PAYMENT SYSTEM

The digital identification through Aadhaar in the Indian payment systems and the widespread use of mobile phones have been able to universalise and democratise the access and usage of financial services.

19. *Jan Dhan* or the Pradhan Mantri Jan-Dhan Yojana (PMJDY), launched in August 2014, is a National Mission for Financial Inclusion to ensure access to financial services, namely, a basic savings & deposit account, remittance, credit, insurance and pension in an affordable manner. Under the scheme, a basic savings bank deposit (BSBD) account can be opened in any bank branch or Business Correspondent (Bank Mitra) outlet, by persons not having any other account. Details available at *https://pmjdy.gov.in/scheme*

20. Direct Benefit Transfer schemes are government schemes wherein funds are transferred electronically directly to the authenticated beneficiaries' bank accounts. Details available at *https://www.dbtbharat.gov.in*

Box 4: Digital Identification (ID)

Digital ID provides remote online authentication of identification. A good digital ID is unique, authenticated and protects privacy and personal data. The digital ID facilitates interactions and delivery between individuals, corporates and governments, through the web or mobile applications that require proof of identity. Research by the McKinsey Global Institute[21] has found that a good digital ID could unlock economic value in EMEs up to 6 percent of GDP on average by 2030, of which China would account for 4 percent; India 6 percent and Brazil 13 percent of GDP.

The Declaration of G20 Digital Ministers[22] in August 2021 acknowledges that easily usable, reliable, secure, trusted, and portable digital identity solutions that guarantee privacy and the protection of personal data, could enable G20 Member States to meet the needs and expectations of public and private sector users and improve accessibility to social benefits.

The issue of identification, especially digital ID, is a challenging one in EMEs. Recognising the importance of the digital ID, the BRICS countries have taken significant steps in this direction.

Brazil launched an app in 2020 that combines the social security card *(Cadastro de Pessoas Físicas)* and driving license as part of its digital identification and citizen service delivery plan. The digital versions of the documents available through the new app are validated through a QR Code.

Russia launched the Digital Profile project in 2020, as a part of the Unified System of Identification and Authentication (USIA) which allows citizens to manage their digital consents for providing their personal data to companies in real time, simplifying access to data, making their provision faster and more transparent, as well as improving the quality and lowering the costs of services. It is used for issuing loans, signing car insurance agreements (CMTPL and Casco[23]), and was expanded to cover microfinance institutions and financial platform/marketplace operators. Along with the Unified biometric system it provides for the secure identification and authentication of citizens and exchange of reliable customers' data from government sources.

India's Aadhaar platform is the world's largest digital identity platform with more than one billion enrolments[24]. It is linked to services such as UPI, e-Sign, and e-KYC; and is used to verify identity anywhere, helping in seamlessly accessing payments and Government services. Additionally, "Digital KYC" and "Equivalent e-Documents", were included through amendment of Prevention of Money-laundering Rules[25] and RBI's Know Your Customer (KYC) Directions.

As part of China's digital ID system, a peer-to-peer facial recognition app called Zhen Ni (The Real You) was launched in 2019. The country's digital ID was also integrated with online platform WeChat, in a bid to allow users to sync their national ID cards with the app and use their phones as IDs to buy train tickets or book hotels.

South Africa plans to integrate its biometric database to boost digital ID, and the government has put out the new draft Official Identity Management Policy for public comments in December 2020[26].

The BRICS authorities have to ensure the security, data protection and transparency of the system and link to various payment platforms with negligible rejection rate.

21. McKinsey Global Institute Report (2019), Digital Identification - A key to inclusive growth, available at *https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/digital-identification-a-key-to-inclusive-growth*

22. *https://www.g20.org/the-digital-ministers-approves-a-declaration-identifying-12-actions-to-accelerate-the-digital-transition-of-the-economy-and-governments.html*

23. CMTPL - Compulsory Motor Third Party Liability and Casco - Comprehensive and Collision car insurance.

24. *https://www.digitalindia.gov.in/ebook/deity/page4.php*

25. Prevention of Money-laundering (Maintenance of Records) Amendment Rules, 2015

26. *https://www.gov.za/sites/default/files/gcis_document/202101/44048gon1425.pdf*

3.5 Differentiated Banks in India

With a view to deepening the engagement of formal banking with low-income households and providing access to the under-banked and unbanked regions as well as households, it was felt that innovative approaches (including *inter alia* channels, products and interface) are required to bridge the gap in financial inclusion. Keeping the above in consideration, Small Finance Banks (SFBs) and Payments Banks were set up with the objective of deepening the reach of financial inclusion by bringing hitherto financially excluded sections of the populace into the fold of formal 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. In order to channelise credit to the disadvantaged sectors/segments of the economy, SFBs are, *inter alia*, required to:

a. extend 75 percent of Adjusted Net Bank Credit (ANBC) to the sectors eligible for classification as priority sector lending (PSL) by the RBI.

b. ensure that 50 percent of its loan portfolio should constitute loans and advances of up to INR 2.5 million.

As on March 31, 2021, there are 10 SFBs operational in the country which are 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 (i) small savings accounts and (ii) payments/remittance services to migrant labour workforce, low-income households, small businesses, informal sector entities and other users, by enabling high-volume, low-value transactions in deposits and payments/remittance services in a secured technology-driven environment. The core objective of setting up Payments Banks is to unlock the potential of domestic remittances which has benefits at the macro-economic level for the region receiving them as well as benefits to the recipients.

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. Payments Banks were mandated to accept only demand deposits with maximum daily balance of INR 0.1 million, which has now been increased to INR 0.2 million.

"The implementation of AePS through the BCs has helped to provide payment facilities to rural areas. The increased use of the Aadhaar identification in Government-to-Person (G2P) payments has helped reduce leakages from the system. It is expected that Small Finance Banks and Payments Banks will transcend the existing inequalities and enhance access to banking facilities and also encourage competition among market players".

Box 5: E-SHAKTI Project in India

The E-Shakti Project was launched by National Bank for Agriculture and Rural Development (NABARD)[27] 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) [28] accounts to bring the SHG members under the fold of Financial Inclusion agenda, thereby helping them access a wider range of financial services and at the same time increasing the bankers' comfort in credit appraisal and linkage. 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 financial empowerment of 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.

The E-Shakti is a web-based electronic platform which incorporates, *inter alia,* e-book-keeping for the SHGs; regular updates of transactional data; system generated reports as required by stakeholders like bankers; inbuilt automatic grading of SHGs based on norms; and auto generation of loan application for the bankers. It provides 'single-click' availability of social and financial information of members of the SHGs. It also aims at making book-keeping easy for low literacy clients and increase credibility of the SHG data which can be used by credit bureaus and banks. It helps in improving the quality of interface between SHG and banks for efficient delivery of banking services and ensuring data authenticity through sample audits. The Management Information System (MIS) reports of groups are generated, and the progress is tracked on real time basis. It is, therefore, imperative to strengthen this mechanism so that a comprehensive and authentic information base and robust MIS can leverage data analytics for effective credit delivery and targeted public welfare schemes.

Source: NABARD

27. NABARD is a Development Bank providing and regulating credit and other facilities for agriculture, small-scale industries, cottage and village industries, handicrafts and other rural crafts and other allied economic activities in rural areas in India.

28. SHGs are small voluntary associations of poor people, preferably from the same socio-economic background. They come together for the purpose of solving their common problems through self-help and mutual help. The SHG promotes small savings among its members, which are kept with a bank.

3.6 Guidelines on Promoting Sound Development of Internet Finance in China

China issued the *Guidelines on Promoting Sound Development of Internet Finance* (the Guidelines) in July 2015. It was jointly issued by the PBoC and nine other ministries and commissions as a guiding document on internet finance regulation and supervision. The Guidelines defines major internet finance business models and proposes a series of measures and objectives, which include (i) promoting innovation of internet finance platforms, products, and services; (ii) encouraging cooperation between financial institutions and internet finance companies; (iii) improving access to capital for internet finance companies; (iv) streamlining administrative approvals and other procedures to better service the industry; (v) implementing appropriate favourable fiscal and tax policies; and (vi) fostering the development of credit infrastructure and cultivation of supporting intermediary services.

The Guidelines clarify the regulatory mandates of different authorities with respect to internet finance. The PBoC is responsible for the regulation of internet-based payments; China Banking and Insurance Regulatory Commission (CBIRC) is responsible for the regulation of internet-based lending, internet-based trusts, internet-based consumer finance, internet-based insurance; and China Securities Regulatory Commission (CSRC) is responsible for oversight of internet equity-based crowd-funding and internet-based fund sales.

The Guidelines note areas where additional regulation is required, including: safeguarding of customer funds, information disclosure and transparency, consumer protection, and information security, as well as anti-money laundering and preventing financial crimes. They also call for the strengthening of the industry's self-regulatory capacity, regulatory and supervisory coordination among financial sector authorities, and data and statistical monitoring.

Following the issuance of the Guidelines, the PBoC issued new rules for the non-bank digital payment sector (*Administrative Rules on Network Payment of Non-bank Payment Institutions*). CBIRC took the lead in drafting rules on internet lending (*Interim Rules for the Administration of the Business Activities of Internet-Based Lending Information Intermediary Institutions*). CSRC is currently in the process of formulating relevant rules within its mandate.

3.7 China's Plan for Advancing the Development of Financial Inclusion (2016-2020)

The State Council issued China's Plan for Advancing the Development of Financial Inclusion (2016-2020) (FIP) on December 31, 2015. The FIP defines financial inclusion as 'providing appropriate and valid financial services to all social strata and groups with demands for financial services, at affordable costs, based on the principles of opportunity, equality, and commercial sustainability'. It further notes that MSEs, farmers, urban low-income groups, impoverished groups, the disabled, the aged, and other special groups are the targeted customers of financial inclusion in China.

The FIP notes that financial inclusion in China still faces several issues and challenges, including 'imbalanced' financial services (lack of appropriate products for the underserved). The FIP establishes the following financial inclusion policy objectives for China:

- Establish a servicing and supporting system of financial inclusion that corresponds to completing a moderately prosperous society in all respects;
- Effectively improve the availability of financial services, significantly increase the sense of fulfillment of the people for financial services;
- Significantly improve the people's satisfaction with financial services;
- Satisfy the people's increasing demands for financial services, especially enabling MSEs, farmers, urban low-income groups, impoverished groups, the disabled, the aged, and other special groups to obtain financial services at a reasonable price in a convenient and safe manner.

Technology is key to improve access to financial services. According to the FIP, financial institutions are encouraged to use emerging information technologies, such as big data and cloud computing, to build online financial service platforms capable of providing a full range of financial services like information, funding, and products. Banking and financial institutions are encouraged to set up internet finance business units or independent legal entities. Moreover, efforts will be made to promote mobile insurance, with a view to improve the availability of financial services for underserved groups.

> *"The FIP outlines pathways to achieve financial inclusion objectives, including through increasing the diversity and coverage of financial services provided within the financial system, innovating in the design of financial products and services, accelerating construction of financial infrastructure, improving laws and regulations, enabling role of policy guidance and bolstering financial education and financial consumer protection."*

3.8 Risk-based KYC as an enabler for financial inclusion in South Africa

The Financial Action Task Force (FATF) adopted a risk-based approach to AML/CFT in 2012 as one of its 40 recommendations (Recommendations). The Financial Intelligence Centre Act (FICA), which is the main AML legislation in South Africa, enforces customer due diligence (CDD) requirements. In terms of these requirements, a financial institution must establish and verify the identity and residential particulars of the person, before an account may be opened or a single transaction may be conducted. However, in the

South African context, verification of client identity and residence 'proved extremely difficult, particularly in the low-income market'. South Africa amended its FICA to give effect to the FATF recommendations.

The risk-based approach moves away from the rigid, 'tick-box' mentality of the exemptions-approach of an institution to fashion its own approaches to identify and manage AML/CFT risks and ensure it has implemented appropriate measures to prevent or mitigate such risks. The risk-based approach introduces a completely new system, which requires a mind-shift from the rules-based approach and requires accountable institutions on an ongoing basis to develop their expertise in assessing and understanding their exposure to AML/CFT.

According to Guidance Note 7 issued by the Financial Intelligence Centre (FIC) in 2017, the new approach affords accountable institutions the flexibility to use a range of mechanisms to establish and verify the identities of their client. In the process, opportunities are created for accountable institutions to grow their markets, exploring more innovative ways of offering financial services to a broader range of clients and bringing previously excluded sectors of society into the formal economy. This could enable greater financial inclusion, particularly digital financial inclusion, by enabling banks, insurers, and alternative providers such as FinTechs to provide products and services to previously unserved and underserved South Africans that historically could not provide proof of address.

3.9 Microinsurance to promote financial inclusion in South Africa

The National Treasury published a policy paper entitled 'The South African Microinsurance Regulatory Framework' in 2011, which observed the challenge of financial inclusion in the domestic insurance sector, particularly in respect of the informal insurance market. Microinsurance refers to insurance that forms part of the broader insurance market, with a specific focus on the low-income market. Microinsurance carries sufficiently low prudential risk so that insurers can safely provide microinsurance products, that are straightforward to distribute, and thereby merit simplified regulatory requirements.

With the microinsurance policy framework the government proposed to achieve the following policy objectives – a) offer access to a wide variety of insurance products appropriate to the needs of low-income households, b) encourage informal providers to participate in the formal insurance market, thereby supporting the development of small business, c) lower barriers to entry that encourage broader participation, promote competition, and support poverty alleviation through economic growth and job creation, d) ensure protection of microinsurance consumers through appropriate prudential and business conduct regulation, and e) facilitate effective supervision and enforcement.

The Insurance Act 18 of 2017 has provided for a legal framework for the prudential regulation and supervision of insurance business and promotes

the maintenance of a fair, safe and stable insurance market for the benefit and protection of policyholders.

"The implementation of Risk-based KYC, one of the FATF recommendations, has enabled a dynamic approach towards customer due diligence and risk assessment and mitigation in South Africa. It has allowed both traditional and non-traditional financial service providers to reach out to the excluded or erstwhile "riskier" sections of the society. Another initiative of microinsurance, based on simplified regulatory requirements has acted as an enabler for the customers as well as the financial service providers in reducing inequalities and broadening participation."

Section 4: Empowering the Vulnerable Customers

High-Level Policy Guideline 7: "Enhance financial, business and digital literacy and capabilities through targeted interventions and by leveraging technology".

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.

In the past few years, the EMEs have made considerable progress in leveraging digital technologies to achieve higher levels of financial inclusion. But the journey does not end with mere inclusion itself; financial literacy and education-based empowerment of the customer remains the most vital cog in the system. A well-informed and empowered customer is the most crucial component of a sustainable and stable financial ecosystem.

The BRICS countries are pro-actively pursuing this agenda, given the high levels of financially and digitally vulnerable sections of the population. The 'Strategy for BRICS Economic Partnership 2025' acknowledges that member countries are not at the same levels of digital development and there is a need to focus on addressing digital divide and ensuring shared benefits of digitalisation.

The BRICS countries have a high potential for cooperation in bridging the digital divide[29] and promoting financial literacy. Given the associated challenges, it is necessary to continuously evaluate the impact of the actions undertaken and accordingly adapt and reform our strategies. The following case studies showcase the major programs and initiatives undertaken by the BRICS member nations, highlighting the high priority accorded to the issue, as recommended in HLPG 7.

29. Morozkina A. (2020), Regional Perspective of Digitalization in BRICS, International Organisations Research Journal, vol. 15, no 4, pp. 70–90, August.

4.1 *Aprender Valor* Program (Learning Value) in Brazil

The BCB launched the *Aprender Valor* Program in 2019 with a view to offering ready-to-use classroom projects for teachers in which financial education is embedded within Mathematics, Reading and Human Sciences. The Program involves partnership between the BCB, states and municipal educational systems to reach out to elementary and middle schools in the country. The *Aprender Valor* supports state and municipal education secretariats and schools in the implementation of financial education as a cross-curricular theme in public schools in the country. The program is aligned with the OECD's recommendation that advocates 'financial literacy should start as early as possible and be taught in schools.'

The *Aprender Valor* program seeks to develop the financial skills of the students so that they can develop an awareness about their use of money and establish a responsible and autonomous management of their financial resources from early childhood, hence attaining greater financial well-being. The *Aprender Valor* is founded on three pillars: *planning the use of financial resources, saving actively, and managing the use of credit*.

While the target group consists of students from 1st to 9th grades, the intermediate target group is composed of teachers, school managers, and school staff. This strategy is based on the philosophy of motivating and training the trainers (mainly teachers), who will be responsible for reaching the final target group. The program is structured on three main fronts:

- Training of trainers and other segments of the intermediate target group (teachers, school managers and school staff).
- Ready-to-use educational resources for use by teachers in the classroom (both face-to-face and online).
- Evaluation: learning assessment and randomised controlled trial impact evaluation.

The scope of the program covers 100,000 public schools, 1.2 million teachers, and 22 million students in 5,570 municipalities. Therefore, it is pertinent to use the digital platforms to have wider reach under the program. The communication between the central bank program leaders and the schools and state and municipal education secretariats takes place through digital channels, in spite of various technological difficulties including the lack of digital access.

In addition, in the beginning of 2020, all elementary and middle schools in Brazil adopted 'digital literacy, financial literacy, and education for consumption' as cross-curricular subjects that must be incorporated into core academic subjects. The program, using digital platforms, is being permanently enhanced and envisages to be more and more user-friendly, with provisions for more educational resources and reliable evaluation process.

The *Aprender Valor* has been through some adaptive changes in order to accelerate digitisation amongst students during the COVID-19 pandemic. These changes have helped students to access contents and to answer evaluations directly in the digital platform.

"The Aprender Valor Program is a commendable effort as it tries to develop financial literacy among the students at the school level itself, using digital platforms. A unique aspect of the Program is its focus on training of the teachers. The ready-to-use educational resources (including digital resources) is a major attraction of this Program."

4.2 BoR's Mobile Application, 'CB online'

The BoR launched its mobile application (app) 'CB online' in August 2020. The app allows the public to access news and useful information on various financial market sectors, verify whether a financial institution is operating legally, find locations of its offices, give a consumer review, follow the movement of exchange rates and other financial parameters and send questions to the app chat, where the BoR employees would provide consultancy to consumers 24/7.

From August 2020 to 1 August 2021, over 22 thousand dialogues were performed via the chat and the average user rating was 4.76 out of 5. Besides, the pandemic's unpredictable impact caused a spike in the number of complaints from financial institutions' clients and through the mobile app has proven to be particularly useful for providing rapid consultations to consumers and investors.

"Within a short span of time, the BoR's mobile app 'CB online' has made considerable impact on improving financial literacy and providing financial information. The mobile app has been useful for providing rapid consultations to consumers and investors during the pandemic time".

4.3 National Centre for Financial Education in India

Financial inclusion in India is viewed as a multi-stakeholder responsibility necessitating coordinated efforts of all financial sector regulators including the Government. The National Strategy for Financial Inclusion (NSFI): 2019-2024, which sets forth the vision and key objectives of the Financial Inclusion (FI) policies in India to help expand and sustain the FI process, recommends convergence of action involving all the stakeholders in the financial sector. The NSFI envisages leveraging technology with focus on, *inter alia*,

strengthening ecosystem for digital financial services, creating innovative approaches to enhance outreach through virtual modes, strengthening robust consumer protection measures and developing targeted financial literacy modules, especially keeping in view the growing digitalisation.

With a diverse range of financial services, including *inter alia* banking, insurance, pension and investments now available, it becomes imperative that consumers of these services are provided with appropriate knowledge, skills and awareness to make informed choices. Towards this objective, India developed the National Strategy for Financial Education (NSFE), with an ambitious vision of creating a financially aware and empowered India. The Strategy recommends adoption of a Multi-Stakeholder Approach to achieve financial well-being of all Indians.

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 creates financial awareness and empowerment through financial education campaigns, seminars, workshops, conclaves, trainings, programmes and discussion forums. They also provide training in financial education and create financial education material for target-based audience (children, young adults, women, new workers/entrepreneurs, senior citizens, MSMEs and Persons with disabilities) on financial markets and digital modes for improving financial literacy.

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.

> *"NCFE is an example for a multi-stakeholder and coordinated approach amongst various financial regulators towards promoting financial literacy and education. NCFE focuses on digital technologies to reach out to the various target groups, such as adults, students, MSMEs and persons with disabilities".*

4.4 Centre for Financial Literacy (CFL)

The pilot Centres for Financial Literacy (CFL), were set up in 2017, initially in 100 blocks as a collaborative initiative between select banks and NGOs to strengthen financial literacy in a structured and coordinated manner by imparting financial education through community-led participative approach towards financial literacy. It is now being scaled up across India to every block in a phased manner by March 2024[30]. A standardised content structure incorporating the different themes of financial literacy are used for dissemination of financial literacy concepts, including encouraging transactions through electronic means.

"The scaling up of the CFL project across the country at the block level would be the cornerstone of community-led participatory approaches in the journey towards greater financial literacy."

4.5 Scientific Literacy Plan in China

China's State Council issued a National Action Plan for Scientific Literacy 2021-2035 in June 2021. Scientific literacy refers to the understanding of scientific concepts and processes as well as the ability to apply them in analysing and solving real-life, practical issues. As a result, scientific literacy is an important part of a population's overall ability. According to the guidelines, scientifically literate citizens currently constitute 10.6 percent of the Chinese population in 2020. The Scientific Literacy Plan plans to achieve 15 percent scientifically literate citizens by 2025 and 25 percent target by 2035, to alleviate the imbalance in the scientific literacy across regions and groups. The Plan targets five priority groups — teenagers, farmers, industrial workers, elderly and civil servants and officials, especially in rural regions. It also targets higher opportunities for the elderly to use technologies.

The Plan is likely to have considerable influence on the financial literacy and financial education of the society. The ability to use technology would help the youth, farmers, industrial workers and elderly to have better financial awareness and access to financial products.

"Scientific Literacy Plan envisages to create a progressive, scientific society with a strong technological base. Such a community with higher human capability is expected to reap many benefits including higher financial literacy, awareness and access to financial products".

30. National Strategy on Financial Education 2020-25, Keynote Address delivered by Shri Shaktikanta Das, Governor, Reserve Bank of India, on December 16, 2020. Available at *https://www.rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=1103*

4.6 'My Life, My Money' Consumer Education Website in South Africa

The Financial Sector Conduct Authority (FSCA) is mandated to provide, promote, and support financial education, awareness and confidence regarding financial products, institutions and services. The FSCA has launched the '*My Life, My Money*' consumer education website[31] with a view to assist consumers to make their financial decisions.

It gives consumers a platform to share their experiences with their peers and learn more about recourse mechanisms when dealing with the insurance and pension fund sectors. Key features of the website are — free online calculators, a downloadable budget template, information on life events and financial responsibilities, topical articles and useful links for workshops and presentations.

4.7 'Teach Children to Save' and 'Star Saver' Programs in South Africa

The Banking Association South Africa (BASA), which is comprised of all registered banks, has launched a financial education programme titled 'Teach Children to Save', which seeks to inculcate a culture of saving among youth and promote volunteerism within the sector. In its first year of implementation, the initiative reached over 200 schools.

Another major BASA initiative is the 'StarSaver' program, in partnership with the Department of Basic Education. 'StarSaver' aims to help children become financially savvy by teaching them about the financial world. The BASA utilises several delivery channels for rolling out these initiatives including classroom-based activities, financial literacy, spelling bee, website and social media, amongst others. The StarSaver has reached over 1.5 million learners in its first eight years of implementation.

"My Life, My Money' Consumer Education Website is a technology-based intervention to improve the financial awareness. 'Teach Children to Save South Africa' and 'StarSaver' Programs in South Africa are intended to inculcate a culture of saving among youth and children by applying digital interventions and reflect a concerted effort towards leveraging technology and furthering digital financial literacy in South Africa".

31. www.fscamymoney.co.za

Section 5: Mitigating Risk to the Digital Financial Landscape

High-Level Policy Guideline 8: Support financial consumer protection measures including data protection that address the needs of youth, women and SMEs

The need for responsible and safe digital financial practices has been widely acknowledged. While the digital technologies-driven inclusion continues at a rapid pace, there is a need to focus on the associated challenges such as, customer protection, data protection, data privacy and cyber-threats. A robust consumer and data protection framework is crucial to build confidence and trust in the ongoing use of digital financial services, particularly for consumers with limited financial literacy. Clear rules of conduct for financial entities combined with initiatives towards financial education for consumers develop the consumers' confidence in financial services and products and at the same time support the development of these financial instruments. With the ever-expanding landscape of financial services bringing new risks to the users, both of individual privacy and financial loss, issues related to data privacy and cyber security concerns have come to the fore. Several international fora[32] also support dialogues on consumer and data protection framework by way of promotion of best practices based on global experiences, which provide a comprehensive diagnostic tool to identify the consumer financial protection issues. Safe, secure and efficient payment systems are critical to the effective functioning of the financial systems. The national authorities have prioritised mitigating risk to the system and protecting customer's privacy in order to build trust and credibility, which can accelerate the adoption of these systems as well as the financial inclusion drive.

5.1 Effective Fraud Prevention Measures under Emergency Aid Program in Brazil

The Federal Government of Brazil has launched a cash transfer program for self-employed workers and people whose income has been severely affected due to the COVID-19 pandemic. Deposit of the first installment began in April 2020 for those who registered in the cash transfer program through the mobile app ('Caixa TEM') provided by the state-owned *Caixa Economica Federal* (CAIXA) or its website. Citizens can request the emergency aid through *Caixa TEM*, in which they are only required to inform Individual Taxpayer Identification (CPF[33]), date of birth and names, (including their dependents) without any requirement to upload documents for the approval

32. Includes *inter alia* G20 Digital Economy Task Force, OECD Privacy Framework, Responsible Finance Forum, UN Privacy Policy Group and World Economic Forum.

33. Cadastro de Pessoa Fisica

of the request. To receive the resources, citizens have to provide details of their current account in any bank or, if they do not have one, they could request the opening of a digital savings account with CAIXA.

Initially, digital savings accounts to provide the emergency aid were opened by CAIXA at no cost and without any further data validation by the Caixa TEM app. In the period from April to August 2020, about 68 million people received the Emergency Aid, of which 38.5 million payments were channelled through Caixa TEM. According to the Ministry of Citizenship[34], the benefit of this scheme reached more than 126 million people or 60 percent of the Brazilian population.

By April 2021, however, the occurrence of fraudulent activities through the appropriation of personal data and tampering in Caixa TEM registry led to transactions not acknowledged by the account holders. As a result, CAIXA requested the Brazilian Federation of Banks (FEBRABAN) members to report any evidence of frauds detected in transfers (for instance, deceased citizens registered as beneficiaries), in order to suspend payments and claim full compensation from account-holders involved.

In addition, the CAIXA found that Caixa TEM privacy policy was too generic and did not contemplate all the rules established in the Brazilian data privacy law of 2018. In view of this, the CAIXA updated the registration process in record time by allowing it to be carried out remotely. In the second round of emergency aid payments, which started in April 2021, only beneficiaries enrolled in the original program were considered for selection, who needed to update their records in Caixa TEM by sending a photo (selfie) and digital copy of an ID document. With the implementation of these adjustments, Caixa TEM has proven to be an effective tool of making social and welfare benefit payments to the right person.

5.2 Pix: Safe Environment for the Instant Payments Scheme in Brazil

The BCB created Pix instant payment scheme, detailed in Section 2, to provide robust mechanisms and measures to ensure the security of the transactions and information used. This safe environment is based on the following three dimensions:

i. User digital authentication: any transaction can only be initiated in a secure environment (ATM, computer, mobile phone) accessed through a password or other security devices, such as biometrics and facial recognition integrated into the smartphone.

ii. Encryption: transaction information run encrypted in the National Financial System Network (RSFN[35]). All Pix participants have to issue security certificates to be able to operate on this network. In addition, all transaction information and personal data linked to Pix keys are encrypted and stored in BCB's internal systems.

34. https://www.gov.br/pt-br/noticias/assistencia-social/2020/08/auxilio-emergencial-tem-impacto-positivo-na-vida-de-126-milhoes-de-brasileiros

35. *Rede Do Sistema Financeiro Nacional*

iii. Pix operating rules: Pix rulebook provides for measures that mitigate the risk of fraud, such as: (i) maximum value limits set by participant institutions based on their clients' risk profile; (ii) differentiated maximum time for transaction authorisation, applied by participant institutions when unusual transactions initiated by their clients indicate high probability of fraud; (iii) central information shared with all participants about Pix keys, account numbers, and taxpayers numbers that have been involved in fraudulent transactions; and (iv) QR Code generation allowed only for participants that have sent specific security certificates to BCB.

"After the first round of emergency aid payments through the mobile app ('Caixa TEM'), the drawbacks of the system were identified, and effective fraud prevention measures were undertaken in the second round. These initiatives made the overall system efficient and reduced the scope of fraudulent activities while upholding consumer's data privacy. It is an example of an effective intervention to ensure better customer protection. Similarly, Pix payments system provides a secure environment to undertake transactions."

5.3 Bank of Russia's Online Reception

The BoR introduced an application to send a consumer complaint to its website in 2009. With a view to increasing its information transparency in 2015, the BoR introduced the first stage of its 'Bank of Russia Online Reception' software to automate its complaints handling processes. Now Online Reception allows consumers to contact the regulator online and receive an email in response, which has significantly simplified such communication. In 2020, BoR received 165.6 thousand applications (complaints (135 thousand), proposals, questions, requests) from financial consumers through the Online Reception which was 50 percent of all applications. The BoR often receives inquiries stemming from consumers' lack of information on the provision of financial services. For this reason, the BoR has compiled FAQs, which has made communication with consumers more efficient.

"BoR's direct engagement with the consumers, online complaint system and transparency has made the financial ecosystem more efficient and credible."

5.4 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 instance, in case of online banking, this mechanism works through user-id/password combination and second factor like a digital signature or One Time Password (OTP)/dynamic access code 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 combat various cyber-attack mechanisms like replay attacks, phishing, keylogging, scraping of passwords using spyware/malware and other internet-based frauds targeted at the customers.

5.5 Ombudsman Scheme for Digital Transactions in India

The RBI introduced the Ombudsman Scheme for Digital Transactions[36] in January 2019. It is an expeditious and cost-free apex level complaint redressal mechanism for resolution of complaints relating to deficiency in customer services in digital transactions undertaken by customers through the System Participants.

The Ombudsman can receive the complaints pertaining to deficiency in prepaid payment instruments, mobile/electronic fund transfer or non-adherence to instructions of the Reserve Bank/respective System Provider to System Participants, on payment transactions through Unified Payments Interface (UPI)/Bharat Bill Payment System (BBPS)/Bharat QR Code/UPI QR Code. 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. This Scheme is a step forward towards forming a redressal framework for an emerging digital transaction system in India.

36. Details available at *https://m.rbi.org.in/Scripts/bs_viewcontent.aspx?Id=3631*

"The AFA is an effective tool to ensure safety of the transactions and safeguard the customer confidentiality of payment data as well as combat various cyber-attacks. The Ombudsman scheme for Digital Transactions provides an effective mechanism for redressal of complaints against deficiency in services related to digital transactions."

5.6 Out-of-Court Financial Consumer Dispute Third-Party Resolution Mechanism in China

The PBoC took the lead in developing the out-of-court financial consumer dispute third-party resolution mechanism, based on the advice of the 17th Session of the Central Leading Group for Comprehensively Deepening Reforms held in October 2015. The PBoC conducted pilot studies for this mechanism, in Shanghai, Guangdong, Shaanxi, and Heilongjiang at the provinces (municipality) levels and in Shandong and Guangdong at the prefectural (city) levels. The pilot trials yielded positive results, as independent third-party mediation services were provided to all disputing parties in a fair, just, professional, efficient, economical, and convenient manner.

In November 2017, the PBoC took stock of and evaluated the pilot work, identified a feasible model for an out-of-court financial consumer dispute third-party resolution mechanism and found that the mechanism is replicable across the country. On this basis, different cities independently chose the appropriate model based on local conditions. In 2018, three provincial financial consumer protection associations (federations) were established in Fujian, Hainan, and Guizhou and five municipal financial consumer protection associations were established in Nanjing, Wuxi, Nantong, Yangzhou, and Suqian in Jiangsu province.

Meanwhile, the PBoC guided financial consumer dispute mediation organisations to improve the work mechanism and employ innovative methodology so as to duly resolve the disputes. For example, the Financial Ombudsman Service in Shanghai continuously improved the mechanism for rapid resolution of small claims and disputes, introduced a neutral evaluation mechanism, and promoted and expanded the scope of the mechanism that connects litigation and mediation. It has been shown that instituting and operating an out-of-court financial consumer dispute third-party resolution mechanism can ease the pressures on financial regulators and help to settle financial consumer disputes with convenient, and economical dispute-resolving services. By acting as a "pressure reducing valve" and "lubricant", the mechanism reduced the use of legal resources for small claims and financial consumer disputes.

5.7 Setting up Standards on Classifying Financial

Consumer Complaints in China

Financial consumer complaints' data not only demonstrate how well financial institutions implement the regulatory policies of financial authorities and their own internal controls but also fully reflect the opinions and demands of financial consumers on financial products and services.

The PBoC has conducted statistical analysis on how the whole system accepts and handles financial consumer complaints and has designed a set of standards for classifying financial consumer complaints. In order to test whether such standards match the internal business lines and management procedures of financial institutions, the PBoC conducted three pilot programs on the application of standards to classify financial consumer complaints. By the end of 2017, the pilot programs had covered four large state-owned commercial banks, eight joint-stock commercial banks, one foreign incorporated bank – HSBC China – and 108 locally incorporated banking financial institutions from 31 provinces (regions and municipalities) across China.

While conducting pilot programs, the China Financial Standardisation Technical Committee (CFSTC), after earlier registration and evaluation, officially issued plans for formulating financial sector standards 'the Statistical Classification and Code of Financial Consumer Complaints in November 2017'. In December 2017, the PBoC, jointly with the CBIRC, set up a working group for standards compiling and drafting, developed work plans for formulating the standards and officially started compiling the standards. In January 2018, upon reviewing the draft, the working group for formulating standards sought opinions and advice from members of the CFSTC and other experts. Based on their comments, the group for standard drafting revised and improved the draft standards and has submitted them to the secretariat of the CFSTC for review. Going forward, efforts will be made to improve access to financial consumer complaints and consultation channels, enhance the level of specialisation and capacity of financial institutions in handling complaints, establish financial dispute mediation organisations, and unify mediation rules, procedures and standards.

> *"The out-of-court financial consumer dispute third-party resolution mechanism can ease the pressures on financial regulators to settle financial consumer disputes with convenient and economical dispute-resolving services with the use of technology. This would help financial institutions to improve their handling of complaints and help to identify, alert, and resolve common problems and risks in the financial sector. Also, transparency and analysis of financial consumer complaints data can help in assessing the existing policies and gauging the needs of the consumers."*

5.8 Dedicated Market Conduct Authority for Financial Consumer Protection in South Africa

The Financial Sector Regulation (FSR) Act, which was put into effect in 2018, introduced a Twin Peaks model of financial regulation for South Africa. The essence of the South African Twin Peaks model[37] is that it established i) a new prudential regulator, the Prudential Authority, tasked with overseeing the system-wide safety and soundness of financial institutions, as well as ii) a new market conduct regulator, the Financial Sector Conduct Authority (FSCA)[38], tasked with overseeing system-wide efficiency and integrity of financial markets and affording greater financial consumer protection.

The FSCA is a dedicated market conduct authority mandated to enhance the efficiency and integrity of financial markets, and promote fair customer treatment by financial institutions in addition to providing financial education and promoting financial literacy and thus assisting in maintaining financial stability. The FSR Act extends the jurisdiction of the FSCA to include oversight of financial products and services not overseen by the former FSB, which comprises, among others, banking, services related to credit, and the buying and selling of foreign exchange. It also dictates a shift in approach from the former FSB's traditional compliance-driven model to being more proactive, pre-emptive, risk-based, and outcome-focused. Crucially, the FSR Act includes financial inclusion and transformation of the financial sector in its objectives.

In addition to introducing rules and regulations to ensure consumer protection, the FSCA also actively scans and cautions South African consumers against potentially harmful individuals and firms that are either operating without the required authorisation, operating in a fraudulent manner, or in breach of financial sector laws and other activities that could lead to losses for consumers.

"The FSCA undertakes measures for orderly conduct of the financial markets. The FSCA provides warning/ information about fraudulent activities. It promotes fair customer treatment, provides financial education and assists in maintaining financial stability".

37. The Financial Sector Regulation (FSR) Act of 2017, introduced a Twin Peaks model of financial regulation for South Africa, aimed to make the financial sector safer and effective by reducing potential threats and protecting customers by ensuring that financial institutions treat their customers fairly.

38. Formerly the Financial Services Board (FSB).

Box 6: Digital Financial Inclusion in times of COVID-19

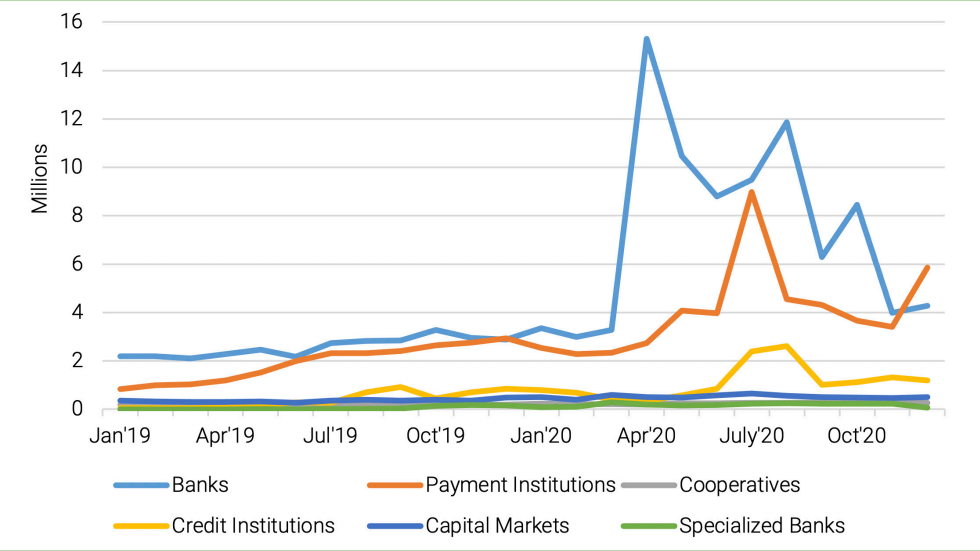
The increased usage of digital payment systems facilitated financial transactions during the COVID-19 pandemic and the subsequent lockdowns, social distancing and no- contact protocols. There was a 42 percent increase in global cashless payments (PwC study, 2021)[39]. Furthermore, there was a cross-generational shift to digital channels with older people (56 years and above) increasingly accessing digital payment modes during this period (World Payments Report, 2020)[40]. The private sector, especially small businesses, increased their presence online and gave an impetus to the digitalisation of payments. The private players are also spearheading innovation in the retail digital payment space and fostering financial inclusion. These increased retail transactions along with the digital direct transfer of COVID-19 related social benefits from government to individuals and MSMEs, expanded the ambit of financial inclusion.

A snapshot of the payment related scenarios and policy responses amongst the BRICS in times of COVID 19 is given below.

Brazil

In 2020, there was a sharp growth in the number of people with a banking relationship in Brazil. Between the months of May and July alone, the period of strongest expansion, almost 10 million people accessed the formal financial system for the first time. The graph below shows an abrupt rise in the opening of new accounts especially on banking institutions, starting in April 2020 (Figure 17). It is also important to note the surge of Payment Institutions, which are mainly digital platforms that enable purchase and sale services and movement of resources. Account creations in this segment which were already on a rising trend in 2019, witnessed a sharp increase after the start of the pandemic.

Figure 17: New Relationships with the financial system by segment



Source: Central Bank of Brazil

The temporary Emergency Assistance Program (monthly grant) gave a boost to the digital financial transactions in Brazil. According to the Ministry of Citizenship, 68 million Brazilians received aid in

39. PricewaterhouseCoopers (PwC) Study, Payments 2025 & Beyond - Navigating the payments matrix, available at *https://www.pwc.com/gx/en/industries/financial-services/publications/financial-services-in-2025/payments-in-2025.html*

40. *https://worldpaymentsreport.com*

the first phase of the assistance program between April and August 2020. Of these, about 97 percent of the beneficiaries now have a banking relationship, as compared to 82 percent in 2019[41]. Another development that contributed to this inclusion is that, in 2020, 30.9 percent of the adult population registered in the *CadÚnico* (a federal registry of social programs beneficiaries) had accounts in Payment Institutions. It is noteworthy that, in 2018, this percentage was only 9.4 percent.

Source: BCB

Russia

Deep insight about remote financial facilities, which had been provided to the population and MSMEs by the end of 2019, significantly facilitated access to financial services in the pandemic. According to the survey conducted by the BoR in May 2019, in the previous 12-month period, more than half of the adult population in Russia (55.2 percent) used remote access to their bank accounts for remittances (e-banking and/or mobile banking), and in May 2020 this indicator reached 75.4 percent.

The authorities, during the COVID-19 pandemic, encouraged increased use of digital financial services. The Bank of Russia undertook the following measures:

- Lowering and/or waiving the fees on instant payments using the Bank of Russia's Fast Payment System.
- Lowering the fees paid by online merchants for the acceptance of cards to encourage the use of online purchases for essential goods and services.
- Allowing banks an automatic extension of all bankcards approaching their expiration date.
- Temporarily allowing banks (during the quarantine period) to open accounts remotely with simplified know-your-customer (KYC) rules. This relaxation was only for individuals to make or receive socially important payments, including *inter alia* social transfers, alimony, insurance reimbursements and mortgage payments or for small and medium enterprises (SMEs) to receive grants/loans and salary payments to employees.

Source: COVID-19 (Coronavirus) Policy Response on Facilitating the Use of Digital Payments in Russia, World Bank. https://www.worldbank.org/en/country/russia/brief/covid-19-response-digital-payments-russia

India

The COVID-19 pandemic and the consequent restrictions imposed to curb its spread, necessitated implementation of a host of measures to ensure smooth functioning and continuous availability of not only the RBI-operated centralised payment systems, but also the payment systems operated by other Payment System Operators (PSOs). The following measures were undertaken in India:

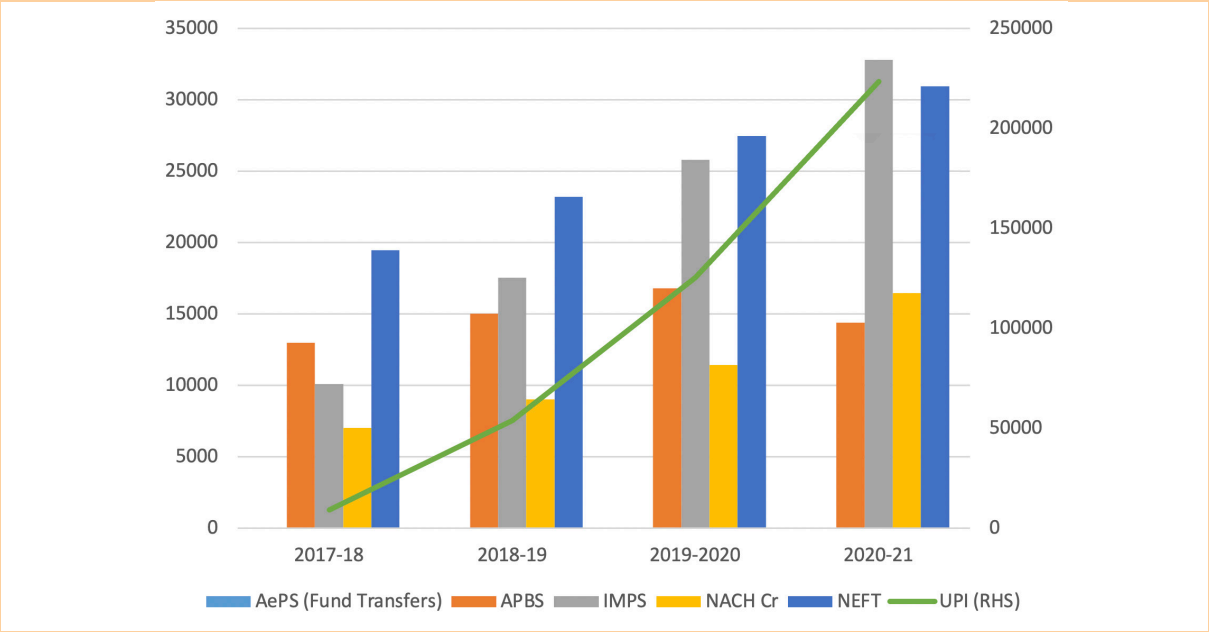
- The Real Time Gross Settlement (RTGS) and the National Electronic Funds Transfer (NEFT) systems became operational on a 24x7x365 basis from December 2020 and December 2019, respectively.
- The RBI engaged in constant discussions with the National Payments Corporation of India (NPCI) and other authorised PSOs to ensure uninterrupted operations of all payment systems. The PSOs and their services were declared as 'essential services' and allowed to work even under

41. http://www.portaltransparencia.gov.br/download-de-dados/auxilio-emergencial

the lockdown protocols. NPCI fast-tracked the onboarding system on UPI or UPI-QR to make it totally contactless and fully online.

- The Government's Direct Benefit Transfer (DBT) payments of the government welfare transfers were facilitated by the National Automated Clearing House (NACH) – Aadhaar Payment Bridge System (APBS), wherein bulk transfers are made to individuals based on the beneficiary Aadhaar number. Consequently, Aadhaar based cash withdrawals at micro-ATMs and Business Correspondents using Aadhaar enabled Payment System (AePS) have also witnessed an increase in transactions (Figure 18).

Figure 18: India - Digital Retail Payment (Volume)



- To promote digital payments, banks have temporarily waived fund transfer charges on their digital platforms such as NEFT, RTGS and IMPS.
- As regards contactless card payments using NFC-enabled EMV Chip cards, the RBI had increased the per transaction limit from INR 2,000/- to INR 5,000/- for relaxation of PIN requirement at the time of performing the transaction. Transactions above this value can be done in contactless mode, but with PIN entry. This measure was taken to make the card payments at PoS terminals safer from health point of view.
- The Money Transfer Service Scheme (MTSS) operators ensured that inbound remittances were paid to the beneficiaries without any delay and also encouraged their customers to receive remittances in their bank accounts to avoid issues/ difficulties in cash pay-out.
- "Digital KYC" and " Equivalent e-Documents", and video verification were facilitated through simplified and flexible procedures.
- To increase customers' convenience, facility of cash withdrawal from full-KYC PPIs issued by non-banks were allowed (April 2021).
- The RBI developed the Digital Payments Index (DPI), to measure the diffusion and deepening of digital payments through five broad parameters, *viz.,* Payment Enablers, Payment Infrastructure – Demand side Factors, Payment Infrastructure - Supply-side Factors, Payment Performance, and Consumer Centricity (Figure 19).

Figure 19: RBI- Digital Payments Index

- The RBI had issued guidelines to enhance public awareness about the availability of various digital payments modes that could be used from home while maintaining social distancing. As a part of financial awareness drive, during July 2020-March 2021, 178 e-BAAT (electronic Banking Awareness and Training) programmes were conducted on electronic payment systems, covering both their benefits and issues related to cyber security. Further, stakeholders in the payment ecosystem, including the RBI, have been releasing advertisements promoting the use of digital payments.

Source: RBI

China

The use of QR codes have been common in China, facilitating contactless payments to taxi drivers, vendors, utility payments, rents and even government payments can be done through mobile payment.

During the pandemic, around 30 local governments issued digital vouchers and delivered to users via third-party platforms, such as Alipay and WeChat pay. The users could redeem their coupons through these apps.

The PBoC ensured the smooth functioning of electronic payment services, flexibly allowed the adjustment of the amount of transaction limits according to specific cases, and encouraged payment and settlement through electronic channels including *inter alia* electronic commercial bill system, personal online banking, enterprise online banking, mobile banking and payment service app.

Concessional payment service charges were given to the users in specific fields or specific regions to expand the reach of digitalisation. Banks and non-bank payment institutions were asked to conduct user access evaluation and daily inspection through video and telephone during the pandemic to safeguard the system.

The regulators (CBIRC) have set additional rules to contain risks through risk management model, risk management for systems, data, and IT risk management[42].

42. CBIRC (2020), "The Provisional Rules on Internet Loans of Commercial Banks", July 17, 2020, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=916525&itemId=928

South Africa

There was an increase in the use of digital platforms like the banking apps and online banking for transactional banking services, during the pandemic, due to the lockdown protocol and closure of some of the post office branches and reduced bank opening hours. This is significant as, in South Africa, about 52 percent of the financial transactions are done through cash. The pandemic has heightened the importance of digital transactions, including online, mobile and contactless payments. However, the digital divide in South Africa is a challenge, with high cost of technology and connectivity, which is exacerbated by the lack of reliable network infrastructure in the country.

The National Treasury of South Africa listed its financial inclusion priorities in 2020, which included building an appropriate digital and payments ecosystem to drive the use of digital financial services (Priority 2) and increase the financial inclusion impact of social grant distribution (Priority 7).

Last year, the major mobile phone service providers, MTN and Vodacom, implemented a reduction on their prepaid data bundles in compliance with an agreement reached with the Competition Commission based on recommendations made by the Data Services Market Inquiry (DSMI) in December 2019.

With digital payments, the risk of scams and cybersecurity issues have also emerged, particularly targeting senior citizens. These could undermine the confidence and trust in digital technologies. A significant divide between different population groups and income levels with regard to financial literacy is still evident. Thus, emphasis is laid on improving consumer digital capability and literacy.

Source: SARB[43]

While the COVID-19 pandemic has brought about a paradigm shift in the way banking and payments are being used, the authorities have to address the challenges of digital divide, amplified by lack of digital access and digital literacy. There was enhanced recourse to using social media and mass media (including local TV channels and radio), for dissemination of financial education. Greater financial literacy and education, together with sound consumer protection mechanisms, will ensure that people at the bottom of the pyramid are empowered to take informed financial decisions.

There have been relaxations and simplification of procedures and KYC norms to facilitate the on-boarding of customers. The resulting enhanced use of digital financial services has been usually accompanied by collection of vast amounts of personal and non-personal sensitive data, during the pandemic. These developments bring renewed focus on consumer data privacy and other consumer protection measures such as data ownership rights, and clear and comprehensive dispute resolution mechanisms. Thus, there is an urgent need to fully secure the digital financial systems. A tightrope has to be walked between customer convenience and the cybersecurity measures.[44]

43. Information based on National Treasury, South Africa (2020), Draft Consultation Paper "An Inclusive Financial Sector for All", available at *http://www.treasury.gov.za/comm_media/press/2020/Financial%20Inclusion%20Policy%20-%20An%20Inclusive%20Financial%20Sector%20For%20All.pdf*

44. Crisanto, Juan Carlos X and Jermy Prenio (2020), "Financial crime in times of Covid-19 – AML and cyber resilience measures", BIS, FSI Brief No. 7, May

The digital financial system will have a crucial role in fulfilling the aspirations and needs of our economies on the mend. Sahay *et. al,* IMF (2020)[45] observed that during the COVID-19 pandemic, technology has created new opportunities for digital financial services to accelerate and enhance financial inclusion. It could play an important role in mitigating the economic and social impact of the ongoing COVID-19 crisis and support a more inclusive recovery from the pandemic. The possibility of an enhanced global inequality in the post-pandemic period demands much deeper international engagements in the areas of technology and financial inclusion. They also cautioned that the risks associated with digital financial services will be even more relevant in the post-pandemic period.

45. IMF (2020), "The Promise of Fintech: Financial Inclusion in the Post COVID-19 Era", Ratna Sahay, Ulric Eriksson von Allmen, Amina Lahreche, Purva Khera, Sumiko Ogawa, Majid Bazarbash, and Kim Beaton, July.

Section 6: Conclusion

Financial inclusion is a key driver for sustained and balanced economic growth, which helps reduce income inequality and poverty. The 21st century saw the rapid evolution and development of the financial markets and systems, with technological advances, new financial intermediaries, innovative products and services. A PwC Report[46] estimates that the volume of cashless transactions will increase by 80 percent to 1.9 trillion by 2025, while digital payments per person will triple by 2030. Such transformations in the digital arena have led to significant re-engineering of the modes to enhance financial inclusion of the unserved and the under-served population in the EMEs, including BRICS. The BRICS members have been seeking ways to ensure that their financial inclusion policies stay abreast of the latest developments. Regulatory and supervisory frameworks to support digital financial inclusion are undergoing important changes in the BRICS jurisdictions. Within the overall leveraging of technological innovations in transforming financial inclusion programmes for wider and more effective impact, the BRICS have had diverse experiences, as captured in the earlier sections.

On the G20 HLPG1, which focuses on the promotion of a competitive environment, making digital infrastructure widely accessible, secure and responsible with interoperable payment systems, the BRICs countries are at various levels of implementation. All of them, however, consider the digital financial infrastructure as a public good and design their policies accordingly. The way forward is to facilitate development of the payment architecture through the engagement of all stakeholders. At the same time, systems must be geared to encourage innovation. The design of the payment architecture and infrastructure must be based on the principles of competition, comprehensiveness, interoperability, open source, multi-stakeholder participation, and risk mitigating mechanisms, and must clearly define the role of the government.

The HLPG5 looks to create a supportive regulatory and legal environment to reduce unequal access due to social, economic, and cultural inequalities. While assessing the progress made in this sphere across the dimensions of access, usage and quality, it is observed that the BRICS countries have undertaken a number of measures with a view to reducing this unequal access to financial services, including digital financial services. While efforts are being made to deepen and expand the reach of digital financial services, countries have to work towards a faster, convenient, affordable and secure payment system, both for the individual consumer and the small merchants and businesses. The key to addressing the digital divide, within

46. *ibid.*

and across countries, is to expand the access to technology (mobile phone, the internet, electricity and digital ID), enable online-offline integration, design appropriate financial services and financial and digital literacy. The BRICS members are trying innovative approaches including *inter alia* open banking, differentiated banks, guidelines to facilitate engagement of the low-income households, small business and informal sector.

HLPG 7 and 8 emphasise the measures towards leveraging the recent technological advances for enhancing the targeted access of the consumer on the one hand and building a protection framework on the other. On HLPG 7, which calls for enhanced financial, business and digital literacy and capabilities through targeted interventions and by leveraging technology, the experience of the BRICS member nations is encouraging. They have leveraged digitalisation to implement schemes which aim to garner significant advantages linked to financial education strategy, targeting the youth at the formative stage itself and adopting various channels of communicating, including social media, to reach out to small businesses, young people, women and the elderly. While all the BRICS countries are working on consumer awareness, the promotion of consumer literacy has to proceed on an ongoing basis both in terms of utility and awareness of frauds.

On HLPG 8, which recommends support for financial consumer protection measures, including data protection, that address the needs of youth, women and SMEs, the national authorities in BRICS countries have prioritised mitigating risk to the financial system and protecting customer's interest and privacy in order to build trust and credibility. Going ahead, the consumer redressal procedure has to be upgraded to cover the entire gamut of digital payment systems and has to be simple, quick, and transparent. To build confidence and encourage the formalisation and digitalisation of the payments systems, the authorities would need to put in place robust systems to protect personal information and ensure data privacy.

The COVID-19 pandemic has enhanced the focus on all aspects of digital financial inclusion. There has been accelerated use of the digital financial services mainly due to the relaxations and innovative approach adopted by the authorities, private players adopting the remote business and payment models and increase in first-time consumers due to lockdown and social distancing protocols. While these are encouraging developments, the challenges of bridging the digital divide have got amplified. The risk of cyber incidents, online frauds, illicit financial flows and data privacy have come to the fore with increase in customer uptake as most of these technologies and platforms are relatively new and evolving. As the countries emerge from the pandemic, the digital financial system will have a crucial role to fulfil the aspirations and needs of our economies recovering from the pandemic. At the same time, these new technologies must be designed and implemented with adequate safeguards so as not to exacerbate the risk of further marginalising the excluded section. Going ahead, the authorities have to focus on a robust and safe architecture to strengthen the trust of the stakeholders which will help in broadening the coverage and impact of digital financial inclusion.

Digital financial inclusion in emerging market economies remains an

ongoing journey, with considerable successes achieved so far, as highlighted in this report. The countries have a significant scope of learning from each other and the report provides a toolkit for connecting the global guidelines evolving on the current issues with the on-ground efforts being taken by the BRICS. Thus, the countries can align their strategies with the global commitments while learning from their peers.

"Alone we can do so little; together we can do so much"

- Helen Keller

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