SAARCFINANCE Collaborative Study on FinTech and Financial Inclusion

No.	Central Bank	Collaborators
	Research Lead	
1	Reserve Bank of India	Mr. Divyanshu Pathak (Deputy General Manager)
		Dr. Ajesh Palayi (Assistant Adviser)
	Members	
2	Da Afghanistan Bank	Matiullah Stanikzai (Payment Analyst)
3	Bangladesh Bank	Mr. Gazi Md. Mahfuzul Islam (Deputy General Manager) Mr. Md. Abdul Karim (Deputy General Manager) Mr. Mohammad Kamrul Islam (Joint Director)
4	Royal Monetary Authority of Bhutan	Mr Kelzang Jurmey (Chief Payment Systems Officer)
5	Maldives Monetary Authority	Ms. Hawwa Latheef (Senior Manager)
6	Nepal Ratra Bank	Mr. Nishchal Adhikari, Director (Payment Systems Department)
7	State Bank of Pakistan	Mr. Muhammad Imaduddin (Additional Director)
8	Central Bank of Sri Lanka	Mrs P P U Dias (Assistant Director) Mrs S D N Chamindani (Senior Assistant Director)

Introduction

Financial inclusion can be broadly defined as delivery of financial services at an affordable cost to the weaker sections and low-income groups. These services include credit, savings, payments, insurance and remittance etc. Financial exclusion is a serious issue in many parts of the world including the SAARC countries. According to the Global Findex Database published by the World Bank, there were still 1.7 billion adults in the world without an account at a financial institution or a mobile money provider in 2017. The Findex report identified India and Pakistan as the countries with the biggest shares of financially excluded individuals though it remains a pervasive problem in all other SAARC countries.

Universal financial inclusion is one of the major developmental goals of all the SAARC countries. SAARC countries have taken many initiatives over the years to achieve this goal *viz.* no frills account, micro credit facilities, SHG-bank linkage, business correspondent model, branchless banks, direct benefit transfer scheme, various government missions and schemes to achieve financial inclusion, simplified KYC and agent banks. As a result of all these efforts, SAARC countries have achieved varying success to achieve financial inclusion depending on the various heterogeneity factors across these countries. The growth of technology, particularly in the last decade, has offered a new opportunity to narrow the gaps in terms of access and affordability of financial services and to ensure last mile connectivity. The higher mobile and internet penetration over the years has created a conducive atmosphere for the FinTech driven financial inclusion in SAARC countries. The policy makers have provided impetus to the financial service delivery through various products such as, mobile banking, digital wallets and internet banking. Further, the policies to encourage the entry of multiple players including non-banking businesses (along with the traditional banks) have helped to make the Fintech a dynamic area. Over the years, the Fintech has emerged as a necessary tool for financial inclusion.

The Financial Stability Board (FSB) defines FinTech as technology-enabled innovation in financial services that could result in new business models, applications, processes or products with an associated material effect on the provision of financial services. The Fintech driven financial inclusion would directly or indirectly play a significant role in determining the success to achieve UN Sustainable Development Goals (SDGs)

goals like *no poverty, gender equality, decent work and economic growth, innovation and reduced inequalities* by 2030. Further, the scale and magnitude of the COVID-19 pandemic, particularly the requirement of social distancing during the pandemic and possibility of increase in global inequality in the post-pandemic period, would demand much deeper engagements in the area of technology and financial inclusion, going forward.

Fintech offers wide-ranging opportunities. It has the potential to fundamentally transform the financial-landscape. The Fintech can offer effective solutions to ensure delivery of financial service to the people who were previously unable to access basic financial services. This can help promote the inclusion of groups such as women and youth. It holds the promise of reducing costs and frictions, increasing efficiency and competition, narrowing information asymmetry, and broadening access to financial services, especially in low-income countries and for underserved populations. Ongoing innovations and technological advances support broader economic development and inclusive growth, facilitate international payments and remittances, and have the potential to simplify and strengthen regulatory compliance and supervisory processes.

The government and regulatory bodies in the SAARC countries have undertaken various initiatives to enhance the adoption of the FinTech. SAARC central banks have provided focus on the FinTech in their financial inclusion strategies and have taken efforts to develop an enabling, resilient and responsible digital financial infrastructure and ecosystem, to create an enabling regulatory framework and to promote digital and financial literacy. For instance, the India stack model has been revolutionary in India with a set of technologies covering an identity layer, a payment layer and data empowerment. Unified Payment Channels and Services (UPCS) in Afghanistan, the DFS Lab of Bangladesh and National Financial Inclusion Strategy (NFIS) and National Payment Systems Strategy of Pakistan are other interventions, to name a few.

There are many risks and challenges associated with Fintech. Systemic risks may arise from unsustainable credit growth, increased inter-connectedness which may accentuate the contagion risk, greater degree of procyclicality, development of new activities beyond the supervisory framework. The increase in the frequency and sophistication of cyber-attacks and increased dependencies on third party service

providers for carrying out core operations are major challenges associated with adoption of FinTech. Data confidentiality and customer protection are other major areas that need to be continually examined and addressed. Lack of interoperability, lack of trust in the digital services, lack of familiarity with the technology and limited quality of internet infrastructure are major challenges which hampers the mass adoption of FinTech. Overall, if the risks associated the Fintech are not addressed effectively, it would pose serious threats to financial stability

Against the above backdrop, study on fintech and financial inclusion will be undertaken with the following Terms of Reference (ToR);

Terms of Reference

1. Review the drivers of financial inclusion and the macro-financial implications of Fin-Tech from an analytical perspective.
2. Review the experience of financial inclusion and Fin-Tech in SAARC countries and compare the same with some non-SAARC EMEs.
3. Assess the impact of Fin-Tech on financial inclusion in SAARC countries.
4. Assess the regulatory and other requirements that could help to leverage Fin-Tech for financial inclusion while addressing the risks in SAARC countries.
5. Frame recommendations on the path to be adopted by SAARC countries – in general and individually.

The ToR 1 and 2 cover the experience of SAARC countries on fintech and financial inclusion, macro-financial implications of Fin-Tech and comparison of experience of SAARC countries *vis a vis* some non-SAARC EMEs. The ToR 3 tries to capture the impact of Fin-Tech on financial inclusion in SAARC countries. While ToR 4 makes an assessment on various regulatory and other requirements, ToR 5 provides policy recommendation.

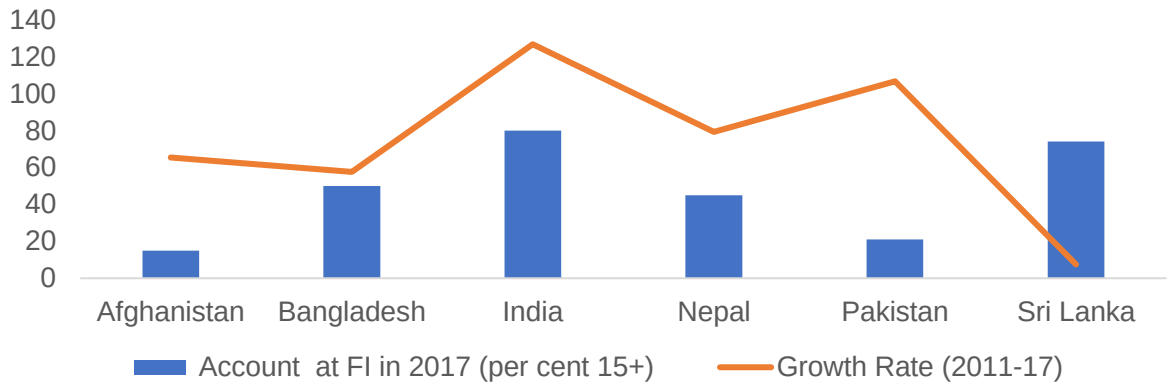
ToR I

Review the drivers of financial inclusion and the macro-financial implications of Fin-Tech from an analytical perspective.

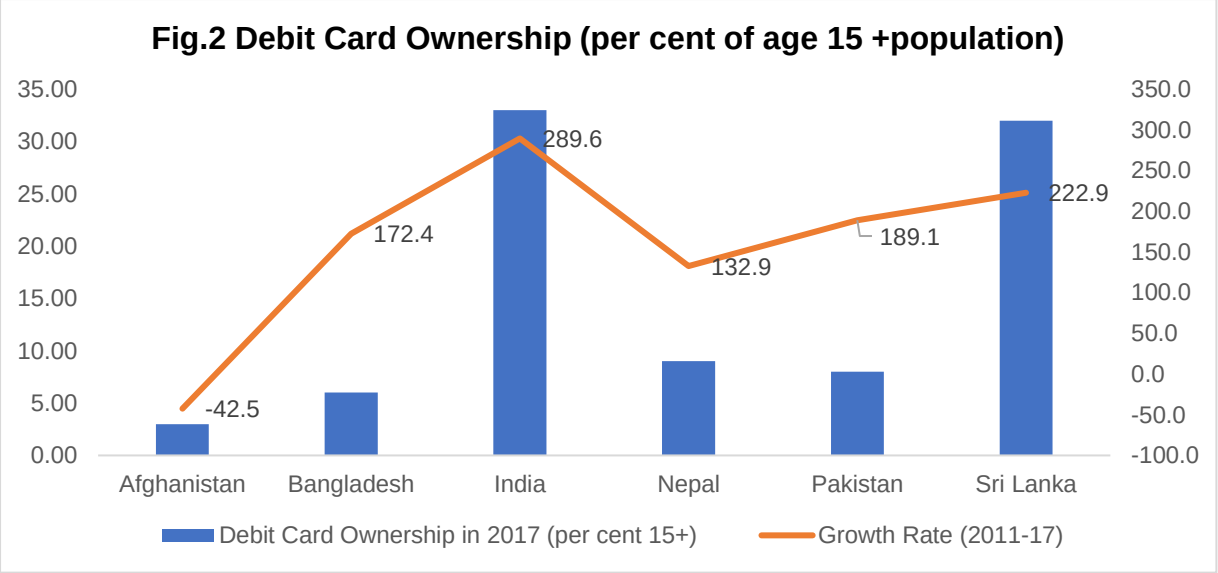
I. Financial Inclusion in SAARC Countries

The percentage of population in the age group of 15 and above having accounts at a financial institution (FI) is the highest for India and Sri Lanka (more than 75 per cent). The rate of growth in accounts from 2011 to 2017 is the highest for India at 120%, mainly on account of the Government initiative- "Pradhan Mantri Jan Dhan Yojana" to facilitate financial inclusion in the country. The levels are the lowest for Afghanistan and Pakistan (less than 20 per cent) in 2017. The growth rate for Pakistan during 2011-17 is more than 100 per cent. The accounts at FI has grown the least in Sri Lanka (less than 10%) during this period.

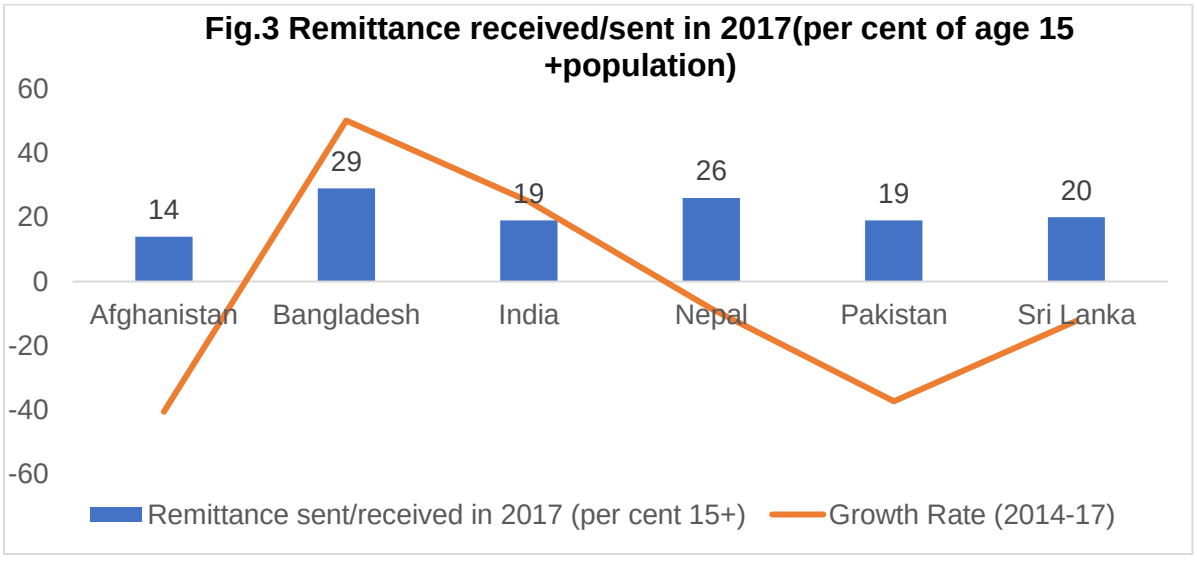
Fig 1. Account at financial institution (per cent of age 15 +population)



The percentage of population over the age of 15 years owning debit cards is the highest in India and Sri Lanka, with almost one-third of the adult population having a debit card in 2017. The numbers are less than 10 per cent in other SAARC countries. India, Pakistan, Bangladesh, Sri Lanka and Nepal recorded high growth rate during 2011-17.



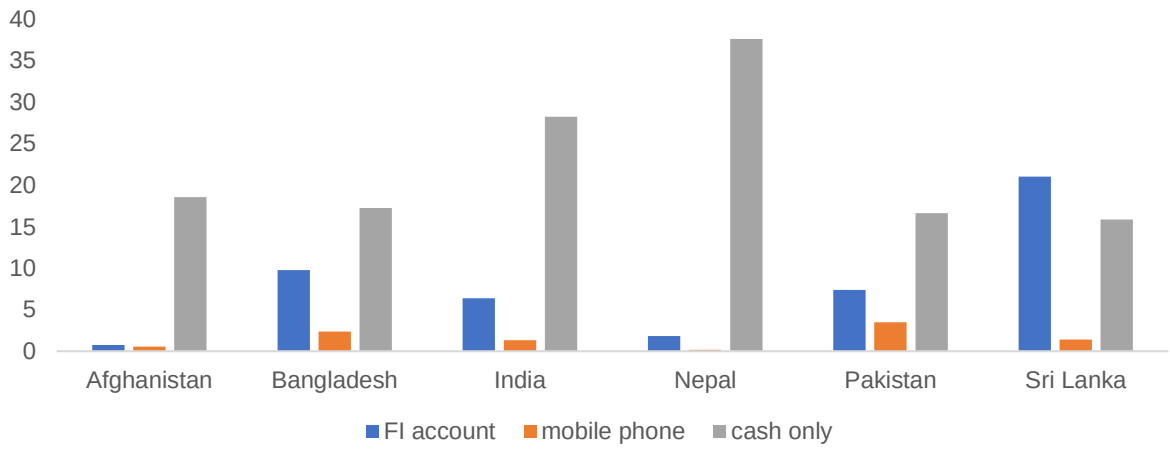
Having an account with a financial institution would not be suffice, rather it has to be an active account. The receipt and sending of remittance can be considered as an important indicator of the activeness of the account. Bangladesh and Nepal are leading on this front with more than 25 per cent of adult population having received or sent domestic remittance. However, during 2014-17, except Bangladesh and India, all countries recorded a decline in growth. The per cent of adult population with domestic remittance (having received or sent) was the lowest in case of Afghanistan.



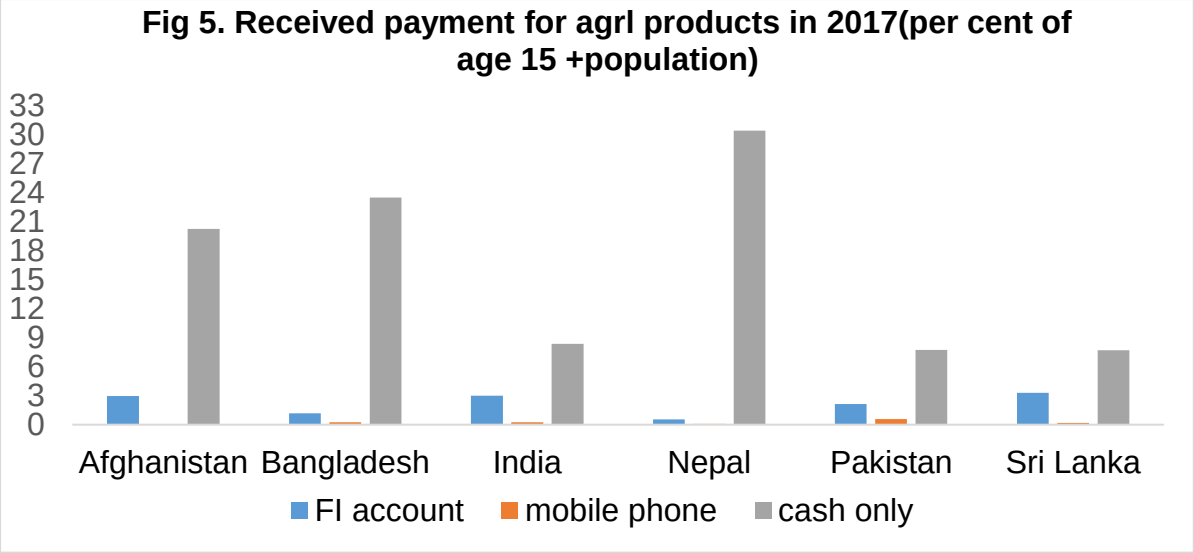
The method of payment of utility bills is another indicator of depth of financial inclusion. The method of payment is expected to make gradual transition from cash to account to mobile transaction, as countries deepen their financial inclusion and digitalisation. Cash is the dominant method of utility bill payment in SAARC countries, with the

exception of Sri Lanka, where account with financial institution is the dominant channel. Nepal and India have the highest per cent of population using cash as mode of utility bill payment. Bangladesh has around 10 per cent of the population using account with financial institution. The percent of adult population using mobile for the utility bill payment lies in the range of 1 to 3 per cent in all SAARC countries.

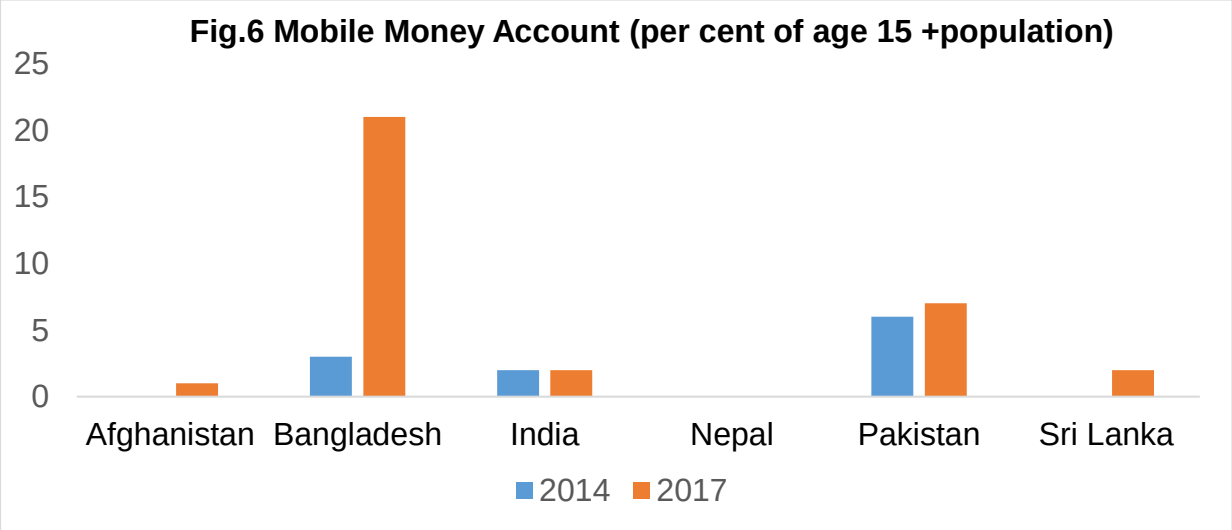
Fig.4 Payment of Utility Bills in 2017(per cent of age 15 +population)



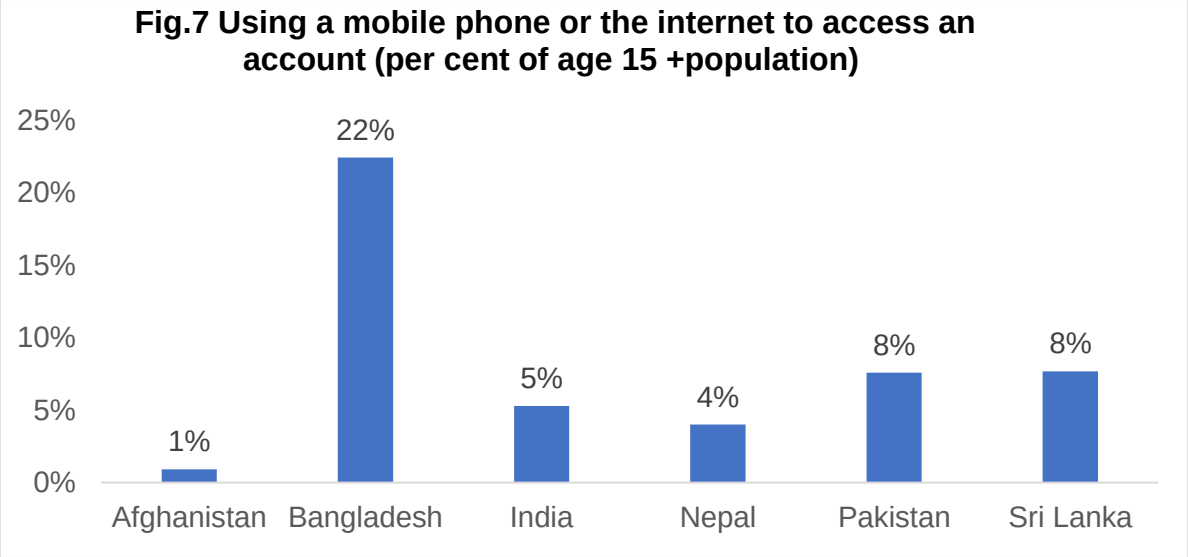
Since agricultural is a dominant sector in all the SAARC countries (in GDP or employment contribution), the mode of payment for agriculture product could be an indicator of financial penetration in rural area. Cash continues to be the dominant channel for the payment of agricultural products. The payment for agricultural product through account at financial institution is just 1-3 per cent in SAARC countries. It underlines the scope of deeper financial inclusion by enhancing the use of financial accounts for the transactions in rural areas for the agricultural payments.



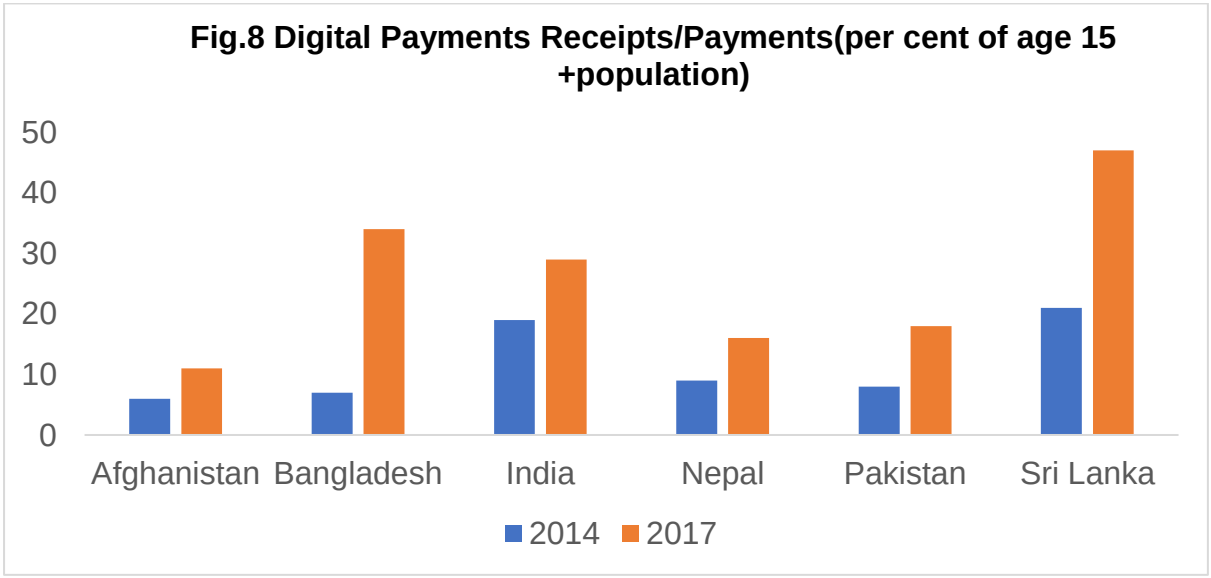
Mobile money account is a direct representation of the financial inclusion driven by digitalisation. Mobile money accounts such as wallets are common in SAARC countries. Bangladesh and Pakistan have highest adult population using mobile money account. Afghanistan, India and Sri Lanka have around 2 per cent of population using mobile money account in 2017 and in Nepal, there are no mobile money accounts.



Percent of adult population using a mobile phone or the internet to access an account is one of the effective measures of financial inclusion driven by digitalisation. Bangladesh Sri Lanka and Pakistan have the highest percent of adult population using a mobile or internet to access an account. India, Nepal and Afghanistan are lagging behind in this in comparison with other SAARC Countries.



In the total digital payments, Sri Lanka is the leading country in SAARC region in 2017 with 47 per cent of adult population making or receiving digital payment. Sri Lanka was followed by Bangladesh (34 per cent), India (29 per cent), Pakistan (18 per cent), Nepal (16 per cent) and Afghanistan (11 per cent). It reflects the need of SAARC countries to promote polices which would help to deepen financial inclusion driven by digitalisation.



II. Gender Disparity in Financial Inclusion

Here we try to see the disparity between male and female with regard to various measures of financial inclusion and its trend over the time. The gender gap in accounts which is the difference between the accounts held by males over females,

measures the gender inequality in access to accounts. Sri Lanka is the best performer in this with no difference in access to financial institution accounts between the genders. Bangladesh and Pakistan have the highest gender gap in 2017, with the gap widening further over the years. The gender gap for India has come down steadily over the years.

Table 1: Gender gap in accounts at FI (per cent of age 15 +population)

	2011	2014	2017
Afghanistan	13	12	15
Bangladesh	11	9	29
India	17	20	6
Nepal	8	5	8
Pakistan	14	16	28
Sri Lanka	3	-1	0

Sri Lanka is one of the best performers with the lowest disparity between genders in debit card possession. Afghanistan too significantly narrowed the gap during 2011 - 17. While India has performed well in reducing the gender disparity in access to financial institution, it could not replicate the same in case of debit card possession, as the gap widened over the period 2011 to 17. Bangladesh, Nepal and Pakistan also widened the gender gap over this period.

Table 2: Gender gap in debit card ownership (per cent of age 15 +population)

	2011	2014	2017
Afghanistan	6	3	3
Bangladesh	3	5	5
India	8	21	20
Nepal	4	5	6
Pakistan	3	5	11
Sri Lanka	4	5	3

The gender gap in remittance sent/received is significantly higher for Pakistan (15 per cent) and Afghanistan (12 per cent) as compared to other countries which are at below 10 per cent. Sri Lanka has recorded no gender disparity in this dimension.

Table 3: Gender gap in remittance sent/received (per cent of age 15 +population)

	2014	2017
Afghanistan	17	12
Bangladesh	6	9
India	7	8
Nepal	2	2
Pakistan	13	15
Sri Lanka	-3	0

Bangladesh and Pakistan have recorded the highest gender gap in using a mobile phone or the internet to access an account. All other countries recorded 0-5 per cent difference between male and female adult population using a mobile phone or the internet to access an account.

Table 4: Gender Gap in using a Mobile Phone or the Internet to Access an Account (per cent of age 15 +population)

	Gender Gap
Afghanistan	0
Bangladesh	22
India	3
Nepal	1
Pakistan	13
Sri Lanka	4

Gender gap in digital payment was highest in case of Bangladesh, Pakistan, Afghanistan and India with a difference of more than 10 per cent. Sri Lanka and Nepal recorded least gender gap with 6 per cent and 7 per cent respectively. However, it is a matter of concern that majority of the countries widened the gender gap during 2014 to 2017.

Table 5: Gender Gap in Digital Payment (per cent of age 15 +population)

	2014	2017
Afghanistan	9	13
Bangladesh	6	26
India	16	12
Nepal	5	7
Pakistan	10	24
Sri Lanka	5	6

III. Disparity in Financial Inclusion in terms of Education

Education gap has been measured in terms of difference between percentage of population over the age of 15 years having secondary education or more and the percentage having only net primary education for the same age group. The disparity in accounts at FI on the basis of education is the highest in Sri Lanka and Afghanistan. While Sri Lanka witnessed a consistent increase in the gap, India and Nepal have recorded a steady decline over the years.

Table 6: Gap in accounts at FI in terms of education (secondary education or more, net primary education or less (% ages 15+)

	2011	2014	2017
Afghanistan	25	18	22
Bangladesh	21	12	17
India	29	21	10
Nepal	23	22	17
Pakistan	21	15	18
Sri Lanka	14	17	23

India has the highest gap in debit card ownership in terms of education at 37 per cent, with the gap percentage increasing over the years. Sri Lanka also has a high education gap of 33 per cent. The education gaps in Afghanistan and Bangladesh are the lowest.

Table 7: Gap in debit card ownership in terms of education (secondary education or more, net primary education or less) (% ages 15+)

	2011	2014	2017
Afghanistan	12	5	7
Bangladesh	4	7	8
India	21	28	37
Nepal	8	22	18
Pakistan	8	8	16
Sri Lanka	15	35	33

While Bangladesh and Afghanistan have the highest gap in remittance in terms of education at 11 per cent each, India and Sri Lanka have the lowest gap of 6 per cent each. Afghanistan, Nepal and Sri Lanka narrowed the gap over the period 2014-17.

Table 8: Gap in Remittance in terms of Education (secondary education or more, net primary education or less) (% ages 15+)

	2014	2017
Afghanistan	15	11
Bangladesh	8	11
India	5	6
Nepal	17	8
Pakistan	2	8
Sri Lanka	14	6

Bangladesh and Pakistan Afghanistan have the highest gap in using a mobile phone or the internet to access an account in terms of education and Afghanistan has the lowest gap.

Table 9: Gap in using a Mobile Phone or Internet to Access an Account in terms of Education (% age 15+) in 2017

	Gender Gap
Afghanistan	2
Bangladesh	14
India	7
Nepal	9
Pakistan	12
Sri Lanka	8

Nepal and Sri Lanka recorded the highest gap and Pakistan has the lowest gap in digital payments in terms of education. India and Sri Lanka narrowed this gap over the period 2014-17.

Table 10: Gap in Digital Payment in terms of education (per cent of age 15 +population)

	2014	2017
Afghanistan	12	18
Bangladesh	8	17
India	18	16
Nepal	20	25
Pakistan	12	14
Sri Lanka	24	21

IV. Disparity in Financial Inclusion in terms of Income

The difference in access of financial account between the richest 60% population and the poorest 40% of the population has seen a decreasing trend in Afghanistan, Nepal and Sri Lanka. India recorded an increase in gap during 2011 -14 and steep decline in 2014-17. Bangladesh and Pakistan recorded a decline in gap during 2011 -14 and an increase in 2014-17.

Table 11: Gap in account at FI (richest 60% net poorest 40%) (% ages 15+)

	2011	2014	2017
Afghanistan	13	6	2
Bangladesh	21	13	17
India	14	16	5
Nepal	18	16	12
Pakistan	9	5	12
Sri Lanka	16	7	5

Inequality of income in India continues to be a major factor affecting debit card ownership, with an income gap of 26% followed by Sri Lanka. The gap is the least in Afghanistan (2%), followed by Pakistan (3%).

Table 12: Gap in in debit card ownership in terms of Income (richest 60% net poorest 40%) (% ages 15+)

	2011	2014	2017
Afghanistan	7	1	2
Bangladesh	4	7	9
India	8	19	26
Nepal	4	7	4
Pakistan	2	3	7
Sri Lanka	7	18	14

The income gap in case of remittance is the highest in case of Bangladesh and lowest in the case of Sri Lanka.

Table 13: Gap in in Remittance in terms of Income (richest 60% net poorest 40% (% ages 15+)

	2014	2017
Afghanistan	5	6
Bangladesh	10	11
India	10	7
Nepal	11	7
Pakistan	0	8
Sri Lanka	8	4

Bangladesh and Pakistan Afghanistan have the highest gap in using a mobile phone or the internet to access an account in terms of income and Nepal and Afghanistan have the lowest gap.

Table 14: Gap in using a Mobile Phone or Internet to Access an Account in terms of Income (% age 15+)

	Gender Gap
Afghanistan	1
Bangladesh	14
India	4
Nepal	0
Pakistan	7
Sri Lanka	3

India and Bangladesh recorded the highest gap and Afghanistan has the lowest gap in digital payments in terms of income. Afghanistan and Sri Lanka narrowed this gap over the period 2014-17.

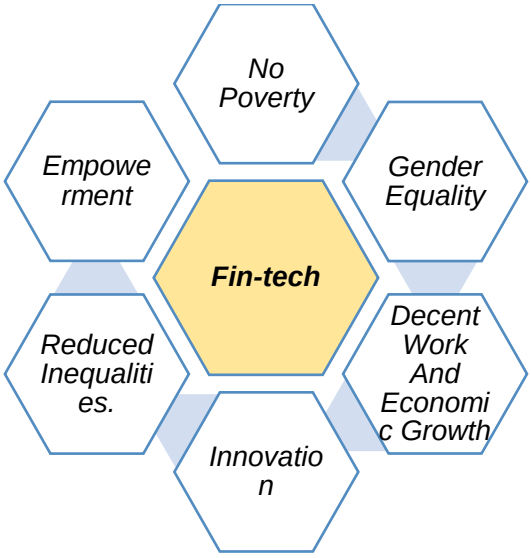
Table 15: Gap in Digital Payment in terms of Income (per cent of age 15 +population)

	2014	2017
Afghanistan	4	0
Bangladesh	6	13
India	15	15
Nepal	6	9
Pakistan	2	11
Sri Lanka	17	7

V. Macro-financial implications of Fin-Tech

The UN's Sustainable Development Goals (SDGs) is a collection of 17 interlinked global goals designed to be a "blueprint to achieve a better and more sustainable future for all". The SDGs, among others, involve the goals like *no poverty, gender equality, decent work and economic growth, innovation and reduced inequalities.* The technology-driven financial inclusion would directly or indirectly play a significant role in determining success to achieve these SDGs by 2030.

Fin-Techs can help boost the Gross Domestic Product (GDP) by providing financial access to small businesses and individuals. The increased access to financial resource will open more opportunities to the marginalised sections of the society. Gradually, this is expected to contribute to enhanced capability of these sections of the society. The access to saving, loan and other financial products would help the low-income people to invest the money into productive investments which would help them to improve their standard of living. This is very important to bring more people out of the poverty. The improvement in capability and investment in productive activity would contribute to the national output. The access to Fintech would help directly and indirectly to reduce the gap in access to financial services between rich and poor, urban and rural and male and female. The international experience shows that there is an inverse relationship between financial inclusion and economic inequality. Since Fintech is a dynamic and evolving sector, innovation is an integral part of it. The innovation would help to improve the speed, efficiency and cost aspects of the technology. Therefore, leveraging the full potential of the FinTech is pertinent to achieve a lot of macroeconomic benefits.

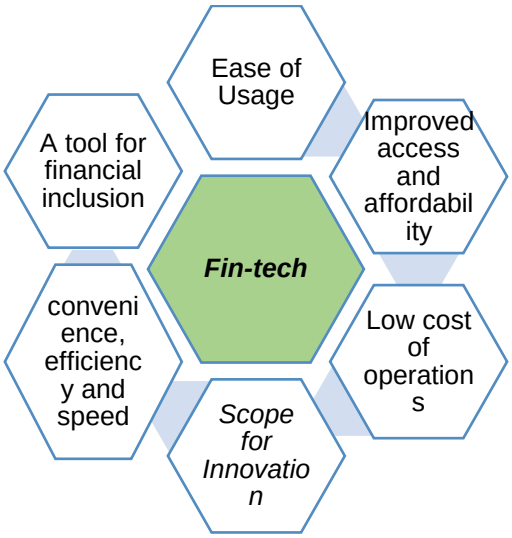


Source: G-20 HLPDs

FinTech has the untapped potential to reshape the financial inclusion landscape. It encompasses products and services within the categories of lending, personal finance, retail and institutional investments, equity financing and consumer financing. It promises easy access, convenience, efficiency and speed. FinTech can reduce costs and improve access and quality of financial services. FinTech has the potential to expand fast and accelerate financial inclusion by extending financial access to underserved communities. FinTech can improve efficiency of financial sector by offering new products and diversified products tailored to specific customers. For instance, mobile financial service (MFS) has become an important tool for off-branch financial services delivery to the underserved population of the country. The other example is the the DFS Lab, a joint initiative of BB and a2i (access to information) of Government of Bangladesh (GoB), has been developed for creating citizen-centered product and service innovation to assist rural e-commerce and increase financial literacy. This platform will offer Application Programming Interface (API) which will be used by FinTech organizations to make all kinds of financial transactions and boost digital financial inclusion. During the COVID-19 crisis, DFS platforms were used for paying salaries of readymade garments workers along with disbursing stimulus packages and safety net funds to remote areas.

Fin-Techs could also take the competition between the firms across borders. Such an expansion will support diversification of services facilitating more options to customers. It could help reduce the cost involved in facilitating services across countries. However, this requires considerable effort specifically towards harmonizing rules from

technical and legal aspects in order to obtain a mutual benefit from such arrangements.



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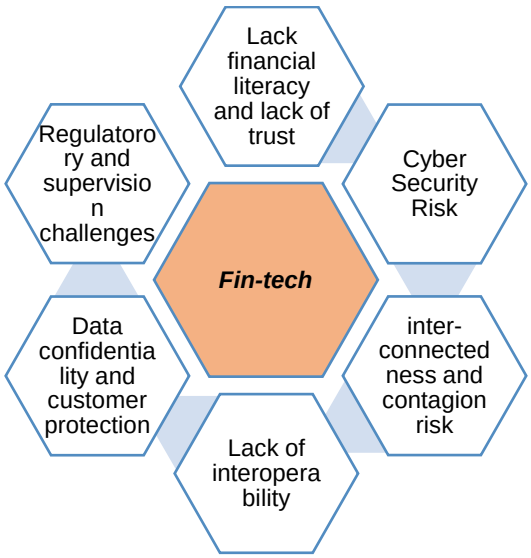


ToR II

Review the experience of financial inclusion and Fin-Tech in SAARC countries and compare the same with some non-SAARC EMEs.

In this section, we would review the overall FinTech and financial inclusion experiences of SAARC countries. We would elicit discussion on country experience, various FinTech models in SAARC countries and heterogeneity amongst them. This comparison would help SAARC countries to learn from each other's experience and wold help in framing its goals and required policies in medium to long term.

Financial Inclusion

In many of the SAARC countries, financial inclusion is a stated objective of both the Government and central banks. The concept and definition of financial inclusion is almost same with some marginal differences. In Sri Lanka, however, financial inclusion is not a stated objective of either Government of Sri Lanka (GOSL) or the Central Bank of Sri Lanka (CBSL). Nevertheless, having identified the importance of financial inclusion in economic development, CBSL with the support of the Government of Sri Lanka has taken steps to develop a comprehensive National Financial Inclusion Strategy (NFIS). SAARC countries provided adequate focus on the financial inclusion during the decade 2010-2020, more than any other previous decades. A lot of policy interventions were undertaken in the forms of designing of new schemes, targeting of specific sections, increasing the access, facilitating the penetration and focusing on affordability. The schemes like direct benefit transfer scheme provided required impetus to financial inclusion efforts. The differentiated Banks in India viz. Small Finance and Payment Banks are the new approaches to achieve deeper financial inclusion. The major schemes and initiatives undertaken by SAARC countries in recent years to promote financial inclusion are given in Table 16.

Table 16: major initiatives undertaken by SAARC countries in recent years to promote financial inclusion

1	**Afghanistan**	1. NFIS for Afghanistan (2020-2024) 2. a simplified (tier-based) KYC 3. Developed a regulation on agent banking 4. Integration of ATS and APS (National Switch) with Banks. 5. Integration of APS(National Switch) with three PIs 6. Development of the FID Regulation: FID Regulation has been enacted pursuant to Article 9(11) of Da Afghanistan

		Bank Law to manage, regulate and facilitate affairs related to Financial Inclusion Directorate General (FID). 7. Circulars issued to banks to promote financial Inclusion on the following: • Reduce account opening initial deposit and reduce minimum balance requirements for the individual accounts. • Encourage commercial banks to abolish account maintenance fee, dormant account activation fee, and cash withdrawal fee for individual accounts. • Banks have to design and develop products and services geared toward women and establish women-operated desks in bank branches. • Developing of Mobile banking application by Banks • Collateral diversification by Banks • Replace the customer card with local debit card(Afpay Cards) by all banks • Asset and Liability side products for MSMEs • Establishment of SMEs Department by Banks
2	**Bangladesh**	1. Revolving Refinance Fund' of 2.0 Billion BDT to facilitate the financing of the small and marginalised farmers 2. Mobile Financial Services (MFS) and agent banking 3. BB has issued directives that 20 percent of all bank/ financial institution loans should be to SMEs.
3	**Bhutan**	1. Priority Sector lending program 2. Crowd Funding
4	**India**	1. Pradhan Mantri Jan-Dhan Yojana (PMJDY) 2. Small Finance Banks and Payment Banks 3. Priority Sector Lending Certificates (PSLCs) 4. Trade Receivables Discounting System (TReDS)
5	**Maldives**	**1.** Credit Guarantee Scheme initiated by MMA in 2016 (targeted for SMEs)/ Affordable housing scheme. **2.** Initiation of National Payment System Development Project to enhance the access to financial services through a digital ecosystem **3.** SDFC (SME – Development Finance Corporation) **4.** Initiation of Development of National Financial Inclusion Strategy
6	**Nepal**	1. Interest subsidy for agricultural loan 2. There is special refinance facility at 1 percent interest with the objective of encouraging BFIs (A, B, and C class) to extend loans to agriculture 3. Nepal Financial Inclusion Roadmap (2017–2022)
7	**Pakistan**	1. National Financial Inclusion Strategy 2020 extended till 2023 with wider scope 2. Branchless Banking Regulations 3. Regulations for Electronic Money Institutions

		4. Warehouse Receipt Financing. 5. "Financing Facility for Low Cost Housing for Special Segments" (The Scheme). 6. Establishment of Pakistan Credit Guarantee Company (PCGC). PCGC will help in reducing collateral constrains for small enterprises and lower the financing cost for SMEs in the country. 7. Digital Merchant On-boarding Guidelines
8	**Sri Lanka**	1. Concessionary credit & credit guarantee facilities and other credit plus services aimed at specific sectors 2. Establishing dedicated Rural and Regional Development Banks, the National Development Trust Fund 3. Special government programs such as 'Janasaviya', 'Divineguma' and 'Samurdhi' 4. LANKAQR Initiative

FinTech

SAARC countries differ in their coverage, penetration and efficiency of the FinTech. A lot of heterogeneity is observed in FinTech models, FinTech regulation and supervision customer protection and data privacy. However, SAARC countries share many commonalities too. In almost all the SAARC countries, Fin-Tech is regulated by central banks and other regulators of the financial market. The Fintech in SAARC region is largely dominated by payment and credit. In recent years, all SAARC countries provided much focus on Fintech, particularly fintech driven financial inclusion. A few SAARC countries set up special committee/working group to help to frame right policies in this regard.

The Fintech ecosystem in SAARC region revolves around payment and credit. There are many new products, infrastructure and new players being put in place by SAARC countries to foster the payment system services. Banks and private entities were active players in providing Fintech driven services. All the SAARC countries providing real time payments, instantaneous payment services, mobile and internet banking services. A snapshot of payment products are given in the Table 2.

Table 17: Payment Products

Sl No.	Countries	Payment Products
		Afghanistan Clearing Settlement System Interbank Payments system (ACSS) Inter-City payment and settlement system(ICPSS) Real Time Gross Settlement (RTGS) Automated Clearing House (ACH) Card payment systems POS channels Internet and phone banking

2	Bangladesh	AFX system(web based securities trading system) CSD (Central Securities Depository) system Bangladesh Automated Clearing House (BACH , BACH-II) National Payment Switch Bangladesh (NPSB) Bangladesh Real Time Gross Settlement Systems (BD-RTGS)
3	Bhutan	EFT channel POS Interoperable Internet Banking Fund Transfer (IBFT) Mobile Financial Service EFTCS fund transfer application BITS RTGS
4	India	Bulk Payment RTGS NEFT Pre-paid instruments (PPI) POS EFT IMPS UPI
5	Maldives	Real-Time Gross Settlement System, Automated Clearing House, Mobile Banking, Internet Banking, POS, Mobile Payment Service (MNO-led), & Instant Payment System in the pipeline)
6	Nepal	Electronic Cheque Clearing (ECC) Inter Bank Payment System (IPS) ATM POS Mobile Banking Internet Banking PPI
7	Pakistan	POS Internet, Mobile and Call Centre Banking facilities, PRISM(Pakistan Real time Interbank Settlement) RTOB(real-time online banking)
8	Sri Lanka	Cards, ATMS, QR Codes, Tap and Pay, Digital Credit, Banking Apps, Branchless Banking (Mobile Financial Services) ATMs POS Mobile switch Internet Banking, Mobile Banking Kiosks

All the SAARC countries have provided much focus on the FinTech in recent years. There are multiple initiatives to improve the Fintech ecosystems in SAARC countries.

SAARC central banks have played a key role in this by developing new products and infrastructures, promoting innovation, focussing on customer protection and enhanced regulatory and supervisory oversight. Major policy initiatives of SAARC countries during 2019-20 are enlisted in the table 18.

Table 18: Major Developments during 2019-20

Sl No.	Countries	Developments during 2019-20
1	Afghanistan	Policy framework for (RTGS-ACH) Custom Revenue collection Government Entities Revenue collection Branchless Banking regulation EMI regulation is revised Payment Institutions regulation has been developed Financial Consumer protection regulation is developed
2	Bangladesh	Payment Gateway for providing e-commerce payment services, two e-wallet service providers Implementing Contact Less payment up to TK 3000 only in EMVCO Payment Systems Act in process formation of Payment Systems Task Force Oversight Policy Framework 2019 E-Money Regulation Act
3	Bhutan	Implementation of Global Interchange for Financial Transactions (GIFT) Revised provisions in the E Money Issuers Rules and Regulations 2017 Partial funding of PoS terminals, Interconnection of Bhutan Financial Switch and National Financial Switch of India Payment Card Industry Data Security Standards (PCI-DSS) certification Implementation of International Payment Gateway and e-Commerce
4	India	Extension of timing for customer transaction in RTGS Waiver of charges in RTGS and NEFT Guidelines for pre-paid instruments (PPI) interoperability Framework to Limit Customer Liability for Non-bank Authorised PPI Issuers Directions permitting all authorised card networks to offer tokenisation services Policy paper on Authorisation of New Retail Payment Systems Benchmarking India's Payment Systems Ombudsman Scheme for Digital Transaction – 2019 Guidelines on Regulation on payment aggregators and gateways

		Authorisation on new umbrella entity (NUE) for retail payment system.
5	Maldives	Instant payment infrastructure inclusive of Unified Payment Gateway (UPG), Smart addressing and Clearing System Initiating the work to formulate a National Financial Inclusion Strategy
6	Nepal	Formulation of the National Payment Systems Development Strategy (NPSDS, 2014)
7	Pakistan	Enactment of Payment and Settlement Act, 2019, National Payment Switch /Gateway National Retail Payment Strategy Regulations for Electronic Money Institutions Security of Digital Payments New PRISM Operating Rules Electronic Funds Transfer Regulations Micro Payment Gateway (MPG) Facilitation of FinTechs Standardization of QR Codes for Payments Actions to Improve Payment Card Acceptance Infrastructure in Pakistan Payment Card Industry Data Security Standards (PCI-DSS) compliance Revisions in Branchless Banking Regulations
8	Sri Lanka	Common Card and Payment Switch Common ATM Switch (CAS) Common Electronic Funds Transfer Switch (CEFTS) Lanka Pay Online Payment Platform (LPOPP) National Card Scheme (NCS) Regulatory framework relating to ecommerce and mobile applications (apps) based payments

There are multiple initiatives by banks and other Fin-Tech companies which helped to achieve financial inclusion in recent times. Some of the initiatives are enlisted in the table.

Sl No.	Countries	FinTech Initiatives promoting financial inclusion
1	Afghanistan	Digital/Mobile Wallet Interoperable infrastructure
2	Bangladesh	QR code based merchant outlets e-KYC
3	Bhutan	Bhutan Financial Switch Interoperable infrastructure.

4	India	Digital/Mobile Wallet UPI based payment applications QR Code based payments
5	Maldives	QR Code based payments
6	Nepal	Increased the merchant acceptance. Interoperable infrastructure. Innovative payment concept for retail payment.
7	Pakistan	Supply chain digitization and facilitation of supply chain financing project Agrimart initiative (based on digitisation) QR Code based payments Mobile Wallets Eliminated fee on Inter and Intra Bank Funds Transfer amid COVID Pandemic
8	Sri Lanka	QR Code based payments Mobile Wallets Provide discount/cash back for digital payments.

There are multiple models in the Fintech domains of the SAARC countries. The United Payments Interface (UPI) is one such a model in India, which has been a success story in the digital finance space and is attracting attention from global policy makers. The rapid growth in the number of users and transactions since its inception, are a testament to the success of this model. The innovative design of the model, which offers simplicity of use, safety and inclusivity is considered to be an important public policy tool that could improve financial inclusion. The UPI framework was also hailed by Google as a success story in digital finance payment in its letter to the US Federal Reserve to build FedNow – a new RTGS for faster digital payments in the US. There have been talks to introduce UPI in UAE and Singapore which has a sizeable Indian expatriate population and is also a popular tourist destination for Indians.

Presence of Big-tech companies

In addition to banks and domestic players, bigtech companies offer various fintech services in SAARC countries. A snap shot of major bigtech companies present in the SAARC region are given in Table 19.

Table 19: Presence of Big Tech Companies in FinTech

1	**India**	Google Pay (Google Pay), PhonePe (Walmart), Amazon Pay (Amazon)
2	**Maldives**	AliPay (Alibaba), WeChat Pay (WeChat) (service only for tourists not for local use)
3	**Nepal**	AliPay (Alibaba), WeChat Pay (WeChat)
4	**Pakistan**	Ant Financial owns a majority stake in Telenor Microfinance Bank
5	**Sri Lanka**	AliPay and WeChat Pay (service only for tourists not for local use)

Fin-Tech Services in Vernacular Languages

The FinTech companies are offering their services not just in English or one prominent language in SAARC countries, rather they provide their services in other vernacular languages. This helps them to reach out the wider population and thus contributing to financial inclusion.

Table 20: Fin-Tech Services in Vernacular Languages

		Yes	No
1	**Afghanistan**		✓
2	**Bangladesh**	✓	
3	**Bhutan**	✓	
4	**India**	✓	
5	**Maldives**		✓
6	**Nepal**		✓
7	**Pakistan**	✓	
8	**Sri Lanka**	✓	

Data Localisation

SAARC countries differ in their approach towards the requirement of data localisation. Bangladesh, India and Sri Lanka have put in place data localisation requirement for all the domestic transactions (both legs are within the country). Maldives and Nepal are currently contemplating on bringing in policies on data localisation requirement. However, Afghanistan, Bhutan and Pakistan do not have data stringent localisation requirement.

Table 22: Data Localisation

		In Place	Under Consideration	Not in Place
1	**Afghanistan**			✓
2	**Bangladesh**	✓		
3	**Bhutan**			✓
4	**India**	✓		
5	**Maldives**			✓
6	**Nepal**		✓	
7	**Pakistan**	✓		
8	**Sri Lanka**	✓		

Co-operation amongst SAARC countries

SAARC countries have great potential for co-operation in payment areas. The SAARC Payments Initiative (SPI) is one of such initiative of co-operation amongst SAARC countries. SPI regional forum created by central banks/ monetary authorities of SAARCFINANCE Group to have common understanding and cooperation to help each other to move forward in reforming their national payment and settlement systems (PSS) and also to establish an appropriate regional payment system that facilitates trade and investment in the region. The SPC is the nodal forum for the SPI. SPC comprises representatives nominated by the Governors of the SAARCFINANCE group and which meets bi-annually in a member country.

National Financial switch India and Bhutan financial switch integration project

The Royal Monetary Authority (RMA) and Reserve Bank of India (RBI) took measures to integrate Bhutan financial switch and national financial switch of India with a view to facilitating cash-less cross border digital payment. It would facilitate Indian nationals visiting Bhutan to use their RuPay card at more the 231 ATMs and 759 point of sales (PoS) terminals across the country. Likewise, the banks in Bhutan will issue RuPay co-branded cards that could be used in India at more than 250,000 ATMs and 210,000 PoS terminals. The process inter-connects the ATMs and PoS between two countries, which requires the integration of two distinct payment gateways of Bhutan and India under one platform. Due to one-to-one fixed exchange regime with India, there are no risks involved in exchange and settlement. This will also benefit Bhutan in earning Indian Rupees because the integration will streamline the flow of Indian Rupees into

the mainstream banking system enhancing the country's rupee earning capacity and consequently strengthening the country's reserve.

Pakistan has signed Memorandum of Understanding (MOUs) with central banks of Sri Lanka, Bangladesh and Nepal in order to promote cross boarder financial linkages by following the international best practices such as Basel Core Principles which stress upon having home-host coordination.

***Comparison of Experience of Financial Inclusion and Fin-Tech in SAARC* countries with some non-SAARC EMEs.**

In this section, we have compared the performance of SAARC countries with BRICS countries (excluding India) and with countries who recorded significant progress in digitization such as, Egypt, Kenya, Zimbabwe and South Korea using various indictors which reflect the digitalization.

In number of ATMS 1,000 km^2, SAARC countries value are relatively better than BRCS countries and Egypt, Kenya and Zimbabwe. South Korea's stupendous success of more than 1000 ATMs per 1,000 km2 and China's more than 100 ATMs per 1,000 km2 are really commendable. However, in number of ATMs per 100,000 adults, SAARC countries lags behind BRCS countries with all BRCS countries having more ATMs per 100,000 adults than SAARC countries.

Table 23: Number of ATMs per 1,000 km^2

Countries	2013	2016	2019
SAARC			
Afghanistan	0.19	0.32	0.55
Bangladesh	40.51	69.42	85.62
Bhutan	2.81	4.93	--
India	38.96	67.96	70.65
Maldives	213.33	320	500
Nepal	10.46	13.31	23.13
Pakistan	9.9	16.05	19.79
Sri Lanka	40.57	--	--
BRCS			
Brazil	21.84	21.55	20.28
China	55.39	98.44	116.92
Russia	11.53	12.3	11.94
South Africa	18.13	22.62	22.39
Other countries			
Egypt	6.52	9.88	13.39
Kenya	4.37	4.67	4.32
South Korea	1275.18	1234.05	--

Zimbabwe	0.97	1.47	1.4

Table 24: Number of ATMs per 100,000 adults

Countries	2013	2016	2019
SAARC			
Afghanistan	0.71	1.06	1.64
Bangladesh	4.96	8.03	9.39
Bhutan	21.15	34.83	--
India	12.82	21.17	20.95
Maldives	19.86	25.47	35.27
Nepal	8.52	10.34	16.46
Pakistan	6.29	9.45	10.84
Sri Lanka	16.49	--	--
BRICS			
Brazil	118.44	112.1	101.67
China	46.86	81.74	95.55
Russia	156.61	168.75	165.5
South Africa	58.04	68.96	65.31
Other countries			
Egypt	10.94	15.69	20.07
Kenya	9.49	9.16	7.69
Korea	288.59	271.54	--
Zimbabwe	4.85	7.07	6.4

SAARC countries recorded much lower number of mobile money transactions per 1,000 adults in comparison to countries like Kenya and Zimbabwe. Amongst SAARC countries, Bangladesh and Pakistan achieved highest number of mobile money transactions per 1,000 adults as in 2019.

Table 25: Number of mobile money transactions per 1,000 adults

Countries	2013	2016	2019
SAARC			
Afghanistan	26.96	104.42	100.04
Bangladesh	2151.84	13072.29	21066.13
Bhutan	--	--	--
India	36.17	632.75	4130.13
Maldives	--	--	564.78
Nepal	--	--	2668.1
Pakistan	1582.26	3654.31	9308.61
Sri Lanka	--	--	--
BRCS			
Brazil	--	--	--
China	--	--	--
Russia	--	--	--

South Africa	190.94	89.75	--
Other countries			
Egypt	--	178.71	707.6
Kenya	27944.21	52646.61	57527.87
Korea	--	--	--
Zimbabwe	15448.63	37117.68	228875.8

SAARC countries lags behind the BRCS countries both in number of credit cards per 1,000 adults and number of debit cards per 1,000 adults. The gap was more prominent in case of number of credit cards per 1,000 adults.

Table 26: Number of credit cards per 1,000 adults

Countries	2013	2016	2019
SAARC			
Afghanistan	0.05	0.06	0.06
Bangladesh	--	8.41	12.06
Bhutan	--	--	--
India	21.63	25.67	46.96
Maldives	--	--	74.07
Nepal	--	2.82	6.11
Pakistan	--	9.23	11.69
Sri Lanka	--	--	--
BRICS			
Brazil	530.2	519.77	730.36
China	--	--	649.34
Russia	242.14	252.5	314.68
South Africa	--	--	--
Other countries			
Egypt	--	61.59	50.81
Kenya	6.05	8.06	8.23
Korea	1065.83	992.04	--
Zimbabwe	0.94	1.99	2.14

Table 27: Number of debit cards per 1,000 adults

Countries	2013	2016	2019
SAARC			
Afghanistan	5.92	11.79	31.47
Bangladesh	--	113.63	165.22
Bhutan	--	--	--
India	366.4	693.04	903.37
Maldives	--	--	1038.37
Nepal	--	252.42	332.95
Pakistan	--	215.27	187.99
Sri Lanka	--	--	--
BRICS			
Brazil	585.9	630.25	793.81
China	3444.79	5006.28	6678.8
Russia	1561.83	1881.48	2104.29
South Africa	--	--	--
Other countries			

Egypt	--	192.8	260.81
Kenya	364.01	445.13	331.5
Korea	2369.85	2158.68	2459.68
Zimbabwe	291.31	388.74	664.02

SAARC countries also seriously lag behind in the number of mobile and internet banking transactions per 1,000 adults. Amongst SAARC countries, Maldives and India have the highest number of mobile and internet banking transactions per 1,000 adults, which is much lower comparing to the values of Brazil, Russia and Zimbabwe.

Table 28: No of mobile and internet banking transactions per 1,000 adults

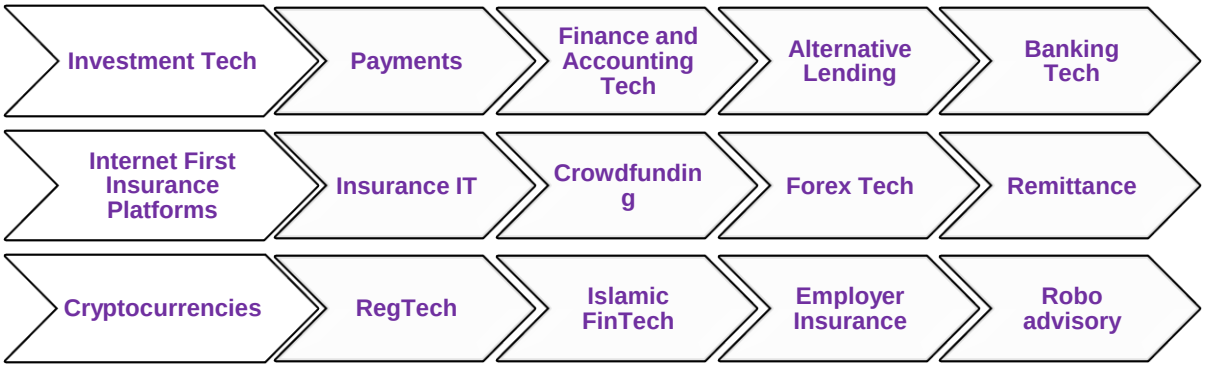
Countries	2013	2016	2019
SAARC			
Afghanistan	--	--	6.4
Bangladesh	--	57.95	123.74
Bhutan	--	--	--
India	58.97	408.04	6183.62
Maldives	--	--	38478.52
Nepal	--	--	1515.62
Pakistan	--	--	327.49
Sri Lanka	--	--	--
BRICS			
Brazil	115103.61	126162.61	137686.92
China	--	--	--
Russia	19319.48	42643.38	84369.67
South Africa	--	--	--
Other countries			
Egypt	--	--	--
Kenya	--	--	--
Korea	50.09	64.47	100
Zimbabwe	15506.65	37255.71	229940.62

ToR III

Assess the Impact of Fin-Tech on Financial Inclusion in SAARC Countries

FinTech covers wide range of products and business models in SAARC region viz. Payments, banking tech, investment tech, finance and accounting tech, insurance platforms, crowd funding, forex trade, remittance, RegTech, Islamic FinTech, crypto currencies etc. Since all these models play varying role and impact on financial inclusion, it would be an extremely difficult task to accurately estimate the impact of FinTech on financial inclusion. Variety of market players including both public and private level players exist in these sectors. The market players are not regulated by one institution (rather by various regulatory bodies) and a few of the sectors are not even adequately regulated. A considerable number of Fintech companies are startups and they focus on newly emerged sectors. There is a serious dearth of data on the performance of the firms in these sectors. The difference in the definitions of FinTech amongst SAARC countries is another factor. All these seriously constrain the assessment of the Impact of Fin-Tech on Financial Inclusion in SAARC Countries.

Major Business models of FinTech in SAARC region



Source: RBI Bulletin, November 2020.

Amongst the various Fintech models in SAARC countries, payments and banking tech are controlled by the central banks. Though sectors like Crypto currencies and RegTech are regulated by the central banks, their presence is not substantial in SAARC region. According to KPMG, payment and lending companies are leading companies among the top 100 FinTechs globally in 2019. This section also mainly focusses on the payment sector to assess the impact of fintech on financial inclusion.

G20 High Level Policy Guidelines (HLPG)

In one of its major initiative focusing digital financial inclusion, under the leadership of the 2016 Chinese G20 Presidency, the G20 developed a new set of eight High-Level Principles that encouraged governments to promote a digital approach to financial inclusion. These principles complemented the 2010 G20 Principles for Innovative Financial Inclusion, which were critical in drawing global attention to the issue of financial inclusion and spurring initial policy actions.

There are eight HLPGs 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. The HLPGs, based on best global practices, are robust set of considerations for public and private sector to spur innovation and set targets.

The HPLGS provide a clear direction to the countries on achieving the digital financial inclusion. The current study focusses on each of these HLPGS and how far SAARC countries have progressed in complying with these guidelines recent years to achieve deeper digital financial inclusion. This assessment will help us to provide an insight on the current position and preparation of the SAARC countries in tapping Fin-Tech for achieving its financial inclusion targets[1].

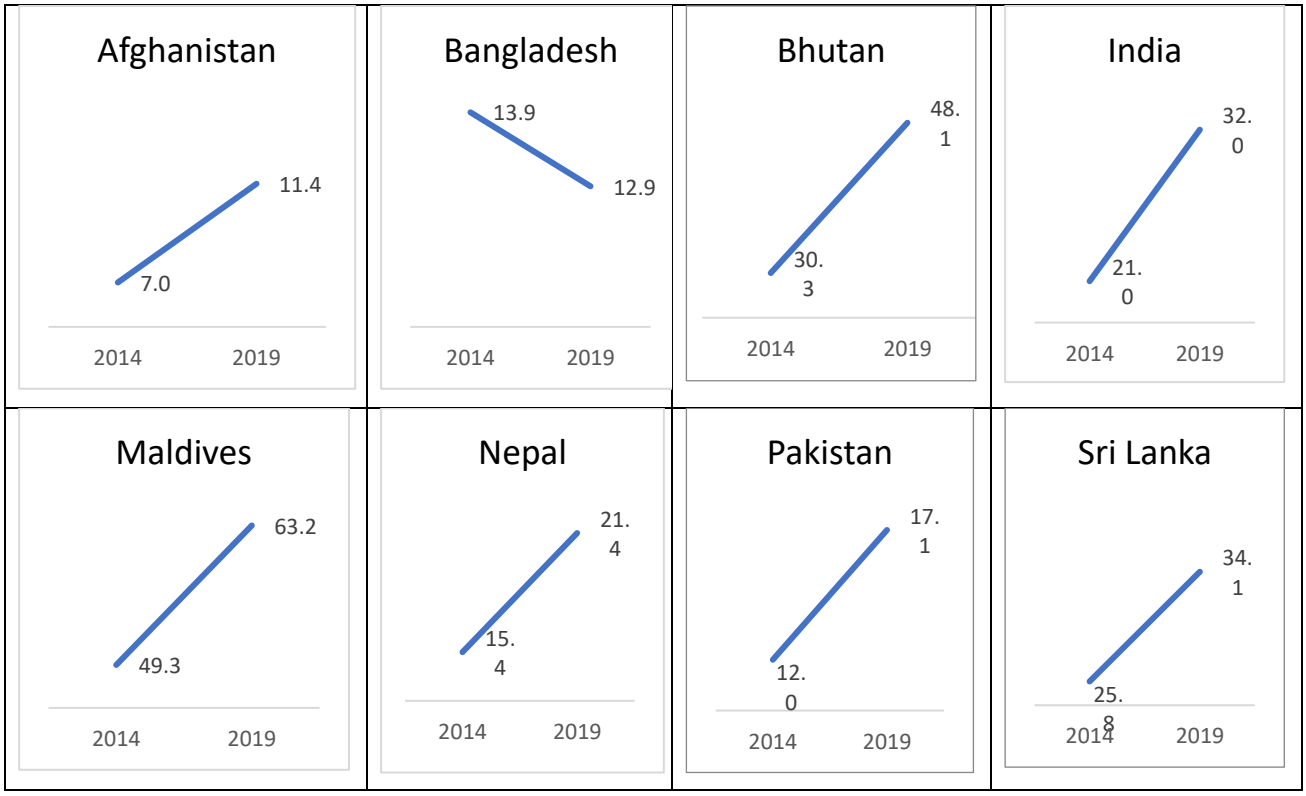
HLPGS 1: Promote a competitive environment for banks and non−banks and support the development of a widely accessible, secure and responsible digital infrastructure and interoperable payment systems

It envisages establishing a widely accessible, secure and responsible digital infrastructure and interoperable payment systems. Digital infrastructure which is accessible, secure and affordable infrastructure is the essential requirement for achieving digital financial inclusion. Digital infrastructure involves internet facilities, mobile facilities, broadband facilities and various wallet and payment infrastructures.

[1] HLPGS 5 is not covered.

The depth of internet penetration is one of the indicators of accessibility of digital infrastructure. All the SAARC countries barring Bangladesh have recorded an increase in percent of population using internet in 2019 as against 2014.

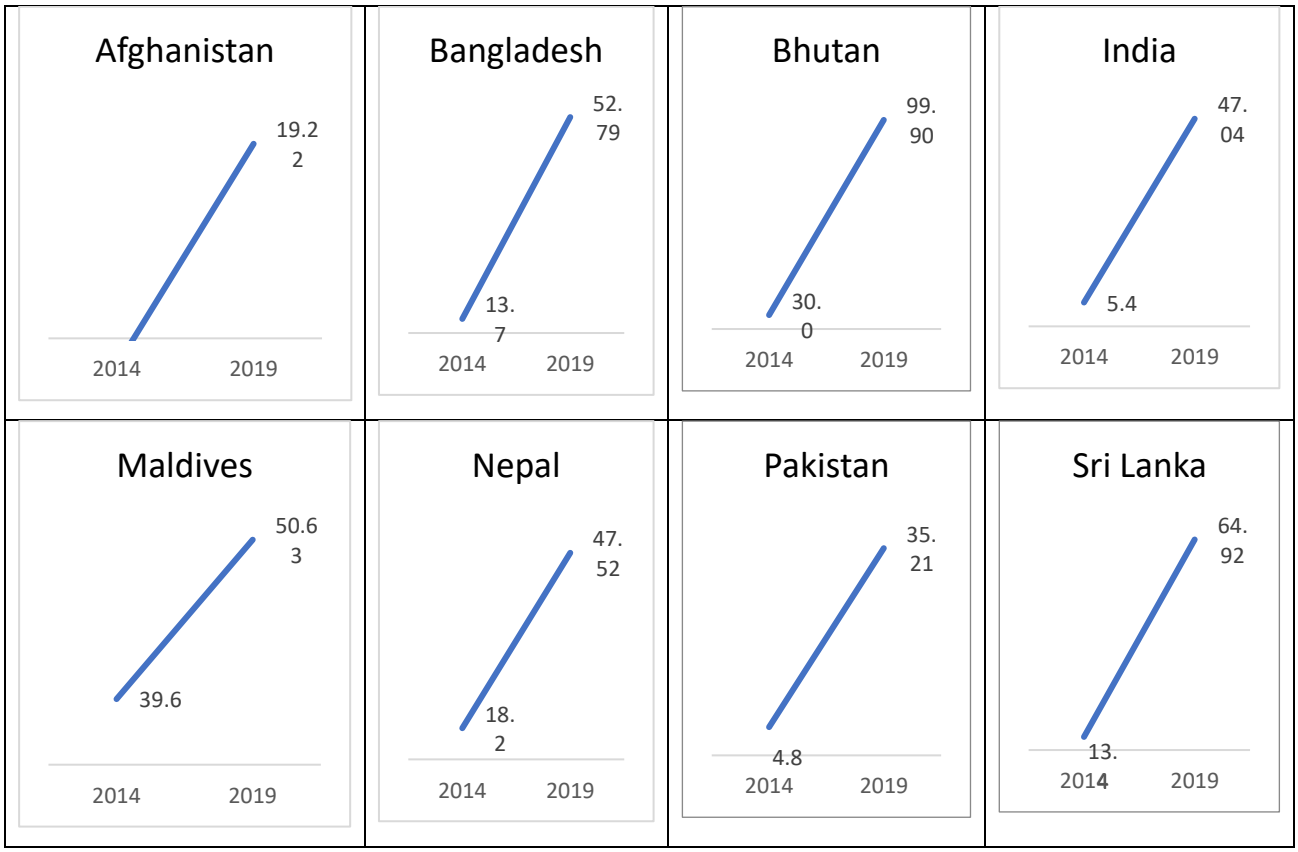
Percent of population using internet



Source: ITU

Active mobile-broadband subscriptions per 100 inhabitants is another indicator of accessible digital infrastructure. All the SAARC countries have recorded considerable increase in active mobile-broadband subscriptions per 100 inhabitants over the period 2014-19.

Active mobile-broadband subscriptions per 100 inhabitants



Source: ITU

Interoperability is the technical compatibility that enables a payment system to be used in conjunction with other payment systems. Interoperability would help to undertake, clear and settle payment transactions across systems without participating in multiple systems.

Interoperability of payment systems

	Countries	ATM Card	Mobile Wallet	QR Code
1	**Afghanistan**	Y	Y	Y
2	**Bangladesh**	Y		
3	**Bhutan**	Y		
4	**India**	Y	Y	Y
5	**Maldives**	Y		
6	**Nepal**	Y		

7	**Pakistan**	Y		
8	**Sri Lanka**	Y		

HLPGS 2: Encourage the availability and affordability of tailored digital financial products, while addressing the need for AML/CFT safeguards and the necessary customer due−diligence measures and digital−identity systems.

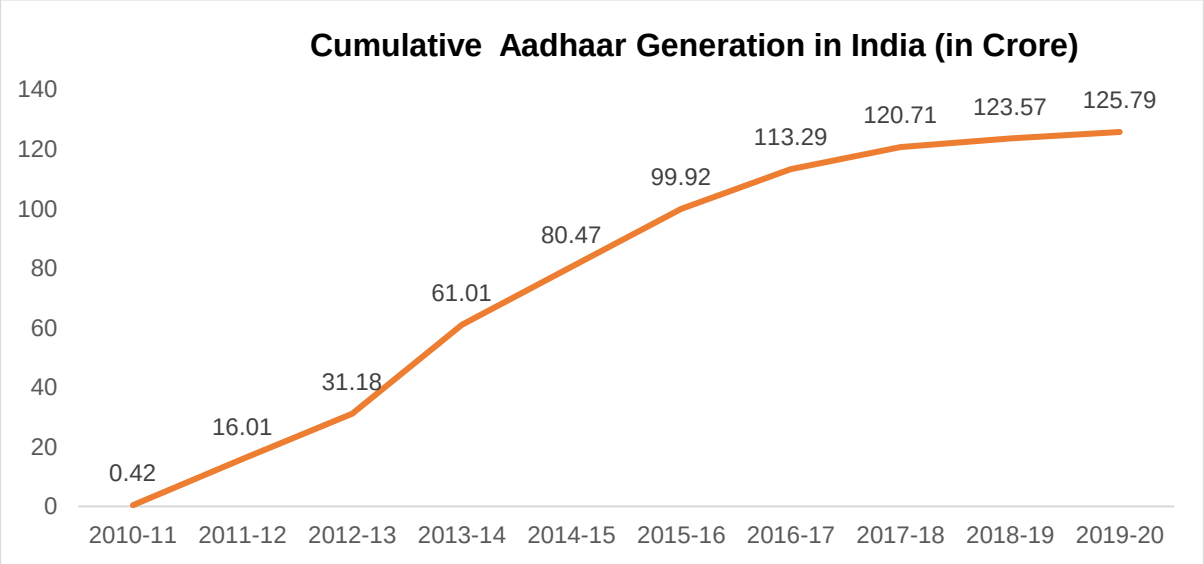
This guideline focuses on developing secure and responsible digital identity system and improving the availability and affordability of tailored digital financial products. The secured digital system and credentials would help for better identification of the citizens/customers and would help to better address money laundering and terrorist financing concerns. The digital identity system will help financial institutions to develop tailored digital financial products which are accessible and affordable. Linking of the digital identity system with bank accounts to various payment systems to delivery of government services would enhance the overall efficiency these services.

All the SAARC countries have made headways in developing digital identity system. Few of the countries have made considerable progress in covering larger chunk of the population with digital identity system. Aadhaar in India and Smart National Identity Card (SNIC) in Pakistan are examples. Countries like Bhutan has announced the establishment of digital identity system. All SAARC countries have followed biometric based identify system.

Sl No	**Countries**	**Status**	**Name**	**Biometric based**
1	Afghanistan	Yes	e-Tazkira	Yes
2	Bangladesh	Yes	NID	Yes
3	Bhutan	Announced	Digital Drukyul	Yes
4	India	Yes	Aadhaar	Yes
5	Maldives	Yes	Passport Card	Yes
6	Nepal	Yes	National Identity Card	Yes
7	Pakistan	Yes	Smart National Identity Card (SNIC)	Yes
8	Sri Lanka	Yes	e-NIC	yes

The Unique Identification Authority of India (UIDAI) is a statutory issues a Unique Identification numbers (UID), named as "Aadhaar", to all residents of India. It is a

biometric based identity system. As on 31 March 21, the Authority has issued 128.99 crore Aadhaar numbers to the residents of India.



HLPGS 3 Improve the availability and accuracy of disaggregated data with regards to access to and the use of financial products and services.

	Countries	2019
1	**Afghanistan**	All payment transaction data carried out using cards, mobile money and 246 is updated on the APS website
2	**Bangladesh**	Data regarding usage of payments systems is disseminated through Annual Reports of the BB. Transaction trends for the payment systems operated by the BB are updated in the bank's website[2].
3	**Bhutan**	The performance of the payments systems are recorded and the data is released as Quarterly Payment System Reports as well as Annual payment System Reports[3].
4	**India**	RBI releases data on payment transactions carried out by RBI, NPCI operated systems and Card Networks (domestic Off-Us transactions) on a daily basis both in value and volume terms. The data is published on RBI Website[4].
5	**Maldives**	
6	**Nepal**	NRB publishes access and usage data of payments systems on a monthly basis. Usage payments systems in value and volume terms are published[5]. In

[2] https://www.bb.org.bd/fnansys/paymentsys/paysystems.php
[3] https://www.rma.org.bt/paymentsystemreport.jsp
[4] https://rbidocs.rbi.org.in/rdocs/content/docs/PSDDP04062020.xlsx
[5] https://www.nrb.org.np/contents/uploads/2021/10/2078_05_Payment-Systems-Indicators-of-Bhadra_-final-1.pdf

		addition to the above, NRB publishes Payment Systems Oversight Report annually.
7	**Pakistan**	State Bank of Pakistan collects and reports the data on Payment System infrastructure, instruments and transactions, which illustrates the current state of the payments landscape of Pakistan, which is published on a quarterly basis. Also, half yearly and annual review of payment systems are published by the SBP[6].
8	**Sri Lanka**	The CBSL publishes Payments Bulletin[7] which contains information on the payment and settlement systems operated by CBSL. The Payments Bulletin is released quarterly.

HLPGS 4: Support the adoption of targeted policies and initiatives in national strategies.

To achieve the above objectives in a co-ordinated and time-bound manner, formulation of a National Strategy for Financial Inclusion (NSFI) is essential. Globally, the adoption of the National Financial Inclusion Strategy (NFIS) has been accelerated significantly in the past decade. As of mid-2018, more than 35 countries, including Brazil, China, Indonesia, Peru and Nigeria have launched an NFIS and another 25 countries are in the process of formulating a strategy. Further, several countries have also updated their original NFIS (World Bank, 2018).

No.	Countries	National Strategy for Financial Inclusion	Objectives	Digital Financial Inclusion
1	**Afghanistan**	National Financial Inclusion Strategy (NFIS) 2020-2024	To reduce financial exclusion in the country by 10 per cent and improve the overall financial access of Afghan citizens	NFIS accepted "promote access to digital financial services" as one of the policy objectives. Developing interoperable payment infrastructure, migrating to electronic payroll for government's payments, expansion of access point networks and further

[6] https://www.sbp.org.pk/publications/PSR-An.htm

[7] https://www.cbsl.gov.lk/en/publications/other-publications/statistical-publications/payments-bulletin

				development of payment systems are major focus areas.
2	**Bangladesh**	NFIS 2020-2024.	It has identified 46 targets under 14 goals of Sustainable Development Goals (SDGs) to assess the impact of its implementation	Digitization and Innovation have been identified o key base approaches with a vision of 'Digital Bangladesh' and 'Innovative Bangladesh'.
3	**Bhutan**	National Financial Inclusion Strategy (NFIS) 2018-2023	Vision of "Enhanced access to and usage of quality and affordable formal financial services by all Bhutanese through an inclusive financial system".	The strategy identifies digital financial services will be an important enabler of financial inclusion. Focus has been given on: (i) Increase access points through branches, ATMs, POS and agents; (ii) Promote and leverage digital financial services
4	**India**		Provide banking access to every village within a 5 KM radius/ hamlet of 500 households in hilly areas by March 2020.	Strengthen eco-system for various modes of digital financial services in all the Tier-II to Tier VI centres to create the necessary infrastructure to move towards a less cash society by March 2022. Every adult has access to a financial service provider through a mobile device by March 2024. Move towards an increasingly digital and consent-based architecture for customer onboarding by March 2024.

5	**Maldives**	Maldives has not formulated, till date, a National Financial Inclusion Strategy though they had undertook various initiatives for achieving the same	The Maldives Monetary Authority had decided to formulate a National Financial Inclusion Strategy, as envisaged in their strategic Plan 2018-2022	
6	**Nepal**	The Nepal Financial Inclusion Roadmap (2017–2022)[8] serves as an overarching guideline for the strengthening of financial inclusion in Nepal.		The NFI Roadmap envisages that in the long term, movement towards digital transaction is key for increasing system efficiencies and opening up the ability to transact remotely. Improving the functioning and coverage of the payments system would deliver wider systemic benefits, assisting with addressing general proximity issues and reducing the opportunity costs of accessing remote institutions.
7	**Pakistan**	National Financial Inclusion Strategy (NFIS) 2015-2020,	A target of ensuring 50 per cent adult population financially included by 2020	The presence of sufficient national payments system infrastructure, widespread use of mobile phones, a robust regulatory framework for branchless banking, the roll-out of a universal biometric national ID, a rapidly expanding agent network and growing competition in the branchless banking arena are all elements that contribute to a solid foundation.
8	**Sri Lanka**	Announced the launch of the first-ever		The strategy underlines that digital finance and payments can provide

[8] http://archive.nrb.org.np/mfd/MakingAccessPossible/Financial%20Inclusion%20Roadmap.pdf

	National Financial Inclusion Strategy (NFIS)[9] 2021-2024	affordable and easily accessible financial products to underserved consumers. Diversifying and facilitating access points, expanding available payment instruments, enabling fintech ecosystem, generating demand through digital means of payments, achieving scales through digital social transfers, to increase digital financial inclusion.

HLPGS 6: Consider developing a regulatory framework that supports responsible innovation in private and public sectors.

Regulatory Sandbox (RS) and innovation hub

SAARC countries promotes innovation in Fintech area mainly through regulatory sand box and innovation hub. RS usually refers to live testing of new products or services in a controlled/test regulatory environment for which regulators may (or may not) permit certain regulatory relaxations for the limited purpose of the testing. The RS allows the regulator, the innovators, the financial service providers (as potential deployers of the technology) and the customers (as final users) to conduct field tests to collect evidence on the benefits and risks of new financial innovations, while carefully monitoring and containing their risks. RBI in 2019 introduced RS with retail payment as first cohort. Bhutan is currently pilot testing RS with a few entities. While Bangladesh has a regulatory innovation office, Pakistan promotes innovation by providing financial support to start-ups in financial sector.

Table 21: Regulatory Sandbox/Innovation Hub

		Yes	No
1	**Afghanistan**		✓
2	**Bangladesh**	✓	
3	**Bhutan**	✓	
4	**India**	✓	

[9] https://www.cbsl.gov.lk/sites/default/files/cbslweb_documents/NFIS%20Summary_%20English_2.pdf

5	**Maldives**		✓
6	**Nepal**		✓
7	**Pakistan**		✓
8	**Sri Lanka**	✓	

Peer to Peer (P2P) Lending Platform

It is an intermediary providing the services of loan facilitation via online medium or otherwise, to the participants who has entered into an arrangement with an NBFC-P2P to lend on it or to avail of loan facilitation services provided by it; India laid out clear guidelines for the registration and regulation of P2P companies. Similarly, Bhutan also has prudential norms for P2P lending.

HLPGS 7: Enhance financial, business and digital literacy and capabilities through targeted interventions and by leveraging technology

	Countries	Key Measures
1	**Afghanistan**	Digital Citizen Fund (DCF), a non-profit company that helps women and girls in developing countries gain access to technology and connect with the rest of the world. There were certain initiatives run to promote financial and digital literacy via Facebook and mainstream media.
2	**Bangladesh**	**Master plan for ICT in education 2012-2021**[10] is contributing to achieving Bangladesh's Vision 2021 of building a digitally enabled knowledgeable, fair, and just society in Bangladesh. **Digital Bangladesh** promotes the best use of new technologies to build world-class 21st century skills through use of newer and cost-effective delivery tools and digital learning contents. Finding sustainable connectivity channels to ensure the benefits of Digital Bangladesh reach the marginalized and the disadvantaged are the major outcome area of Digital Bangladesh vision. Use of ICTs remains at the core of this vision. Facebook, in partnership with the Ministry of Education, ICT Division and a2i, launched '**We Think Digital'** program to provide digital literacy and citizenship training to promote responsible use of the internet.

[10] http://www.moedu.gov.bd/site/page/2859c582-aaf8-40bb-909c-57b409ead7d6/-

3	**Bhutan**	**Chiphen Rigpel Project** was launched in 2010 with a vision of transforming itself into a knowledge based society, with employment and advancement of opportunities in the knowledge sector and skilling of population, which is fully equipped to take advantage of these opportunities. **Digital Drukyul**[11] This is an electronic patient information system to centrally manage patient records of all health centres, issuance of business licenses of all categories, clearances for export and import and for other public services. Following also form part of the Digital Drukyul flagship program. • Create Digital Schools • Integrate e-business services (business licensing & Single window for trade) Under this flagship program digital literacy trainings are being conducted.
4	**India**	**Pradhan Mantri Gramin Digital Saksharata Abhiyaan** [12], launched in 2017, is the scheme to make six crore persons in rural India digitally literate by 2020. The scheme would empower the citizens in rural areas by training them to operate digital access devices and enable them to use IT and related applications especially digital payments. **The National Mission on Education through Information and Communication Technology (NMEICT)**[13] is a Centrally Sponsored Scheme to leverage the potential of ICT, in teaching and learning process in higher education institutions in any time anywhere mode.
5	**Maldives**	Maldives launched its first digital literacy program, the **e-Citizen program**, in 2012 with an aim to empower citizens with digital literacy skills necessary for a fast-changing world. This program trained people on basic IT, information search and e-participation skills. It is currently working to update the program to focus on the skills required to use the internet responsibly[14].

[11] https://flagship.gnhc.gov.bt/digital-drukyul/

[12] https://www.pmgdisha.in/about-pmgdisha/#header-img

[13] https://www.education.gov.in/en/sites/upload_files/mhrd/files/upload_document/MissionDocument.pdf

[14] https://thedocs.worldbank.org/en/doc/93bdbd79b45eeb504743f4514f1095e1-0310062021/original/April-2021-Maldives-Development-Update.pdf

6 **Nepal**

Open Learning Exchange Nepal (OLE Nepal) is a social benefit organization working to increase access to education through the integration of technology. Founded in 2007, the organization aims to increase the quality of education through the creation of open-source digital learning activities combined with teacher training.

2019 Digital Nepal Framework.[15] Possible actions include:

- Compulsory IT education in schools and colleges
- Increase the education system's capacity to impart advanced ICT education
- ICT literacy programs for rural communities and underprivileged Nepalese
- Ongoing communication and celebration of digital stories of success

7 **Pakistan**

Pakistan introduced its first '**Digital Pakistan policy'** in 2018. Building a digital ecosystem was the main objective. Taking a step forward, a 'Digital Pakistan Vision' was launched in December 2019 with an aim of enhancing connectivity, improving digital infrastructure, increasing investment in digital skills, promoting innovation, and tech. entrepreneurship. Its major strategic pillars are access and connectivity, digital infrastructure, digital skill and literacy, innovation and entrepreneurship.

8 **Sri Lanka**

The 2005 **e-Sri Lanka project** articulated a national strategy for ICT literacy, training and education[16]. The specific objectives of this strategy were: ensuring that Sri Lanka acquired the necessary human resources to achieve the e-Sri Lanka vision; building an IT-competent population; and making Sri Lanka a global leader in ICT learning. In 2006, ICTA launched the 'e-Citizen' learning programme, designed to provide a qualification in basic ICT skills consisting of two recognized ICT qualifications, the International Computer Driving Licence (ICDL) and e-Citizen.

Nenasala is a telecentre project by the Government of Sri Lanka started in 2005. Developed under the e-Sri Lanka Initiative which is implemented by

[15]https://mocit.gov.np/application/resources/admin/uploads/source/EConsultation/EN%20Digital%20Nepal%20Framework%20V8.4%2015%20July%20%202019.pdf

[16] https://egov4women.unescapsdd.org/country-overviews/sri-lanka/gender-in-e-government-programme-design

the ICT Agency of Sri Lanka. Communication centers are being built by the government in rural areas to help fight poverty, develop culture and commerce, and sustain peace. There are currently 1005 such centers in the country. The '*e-Diriya*', the national ICT literacy initiative of Sri Lanka was launched in 2011.

HLPGS 8: Support financial consumer protection measures, including data protection that address the needs of youth, women and SMEs.

	Countries	Financial consumer protection measures
1	**Afghanistan**	No data protection act is currently in place for online transactions. However, the Cyber Crime Code contains provisions for ensuring that privacy in the online domain is ensured. The Consumer Protection Act was adopted in early 2017, and a commission is being established to oversee the implementation of the Act. However, no provisions exist for consumer protection vis-a-vis transactions conducted over the digital medium.
2	**Bangladesh**	The Information Communication Technology Act 2006 and the Digital Security Act, 2018 have provision for data protection and privacy. The National Digital Security Council (NDSC) has been entrusted with the authority to formulate and issue data protection guidance as and when required. To ensure and implement financial consumer protection measures, the Bangladesh Bank had established Financial Integrity and Customer Services Department (FICSD) in 2012.
3	**Bhutan**	Consumer Protection for Financial Services (CPFS) Rules and Regulations 2019 for ensuring fair and balanced financial market conduct. The Bhutan Information, Communications and Media Act[17] came into force in 2018 provides Bhutan a data privacy law. The law covers almost all uses of electronic information and enables for the creation of an Infocomm and Media Authority, a partly-independent body with limited authority. Under the Act, it is able to investigate and resolve complaints. The Act also covers offences and compensation in such cases.
4	**India**	Data protection in India is currently governed by the Information Technology (Reasonable security practices and procedures and sensitive personal data or information) Rules, 2011 and ("Data

[17] https://www.nab.gov.bt/assets/uploads/docs/bills/2016/FinalBICMAbill2016Eng.pdf

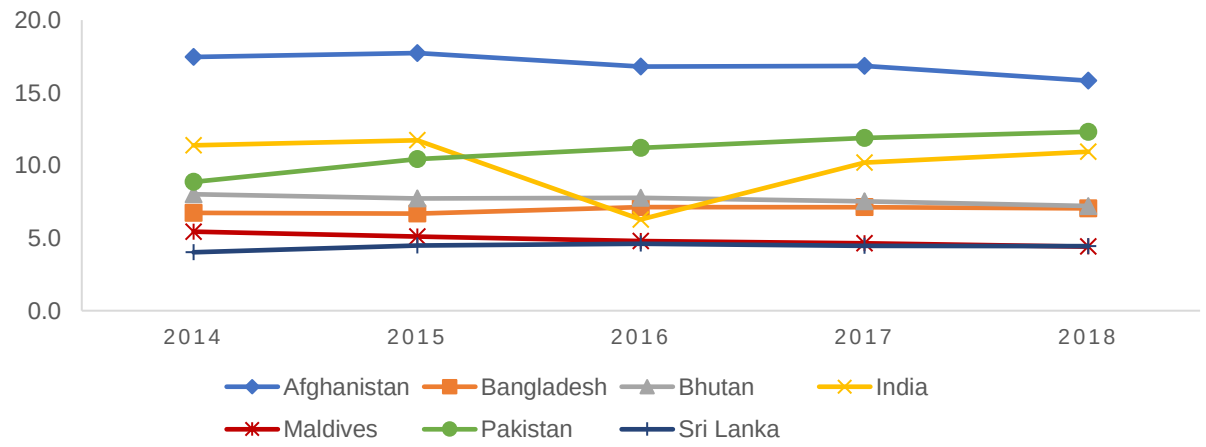
		Protection Rules") notified under the Information Technology Act, 2000 ("IT Act"). The RBI has formulated a "Charter of Customer Rights" for banks based on global best practices in the area of consumer protection. The Charter enshrines broad, overarching principles for protection of bank customers and enunciates the following five basic rights of bank customers 1. Right to Fair Treatment 2. Right to Transparency, Fair and Honest Dealing 3. Right to Suitability 4. Right to Privacy 5. Right to Grievances Redress and Compensation As a dispute resolution mechanism, three Ombudsman schemes, i.e. (i) Banking Ombudsman Scheme (ii) Ombudsman Scheme for Non-Banking Financial Companies and (iii) Ombudsman Scheme for Digital Transactions were in place. Clubbing these three, the Integrated Ombudsman Scheme has been rolled out in June 2021.
5	**Maldives**	Maldives has not yet enacted any comprehensive data protection legislation. Therefore, matters pertaining to data protection fall under the right to privacy, which is protected in broad terms under the Constitution and the Penal Code.
6	**Nepal**	Nepal passed The Privacy Act 2018 in September 2018 to ensure the right to privacy of the matters relating to body, residence, property, document, data, correspondence and character of every person, to manage the protection and safe use of personal information remained in any public body or institution, and to prevent encroachment on the privacy of every person.
7	**Pakistan**	Prudential Regulations for Consumer Finance in place since 2002. A Complaint Tracking System was introduced in 2006. Customer Facilitation Centers (CFCs) at its 16 Field Offices in major cities Banking Mohtasib Pakistan (BMP) Instructions to Further Strengthen Consumer Grievance Handling Mechanism in July 2021: • Banks are advised to ensure that following mandatory modes are available for complaint lodgment at all times for convenience of the customers: Call Center, Email, E-forms, Surface Mail, Fax and Complaint boxes/Registers • In addition to mandatory modes of complaint lodgment, banks are encouraged to invest and focus on adopting innovative modes of complaint lodgment that best suit their customer profile e.g. complaints lodgment through SMS/ call back service/ mobile application, self-service kiosks, social media platforms like Twitter, Facebook and WhatsApp, etc.
8	**Sri Lanka**	Financial consumer protection Framework 2018 provides minimum standards for protecting customer rights and interests.

The Central Bank of Sri Lanka (CBSL) established a new department named “Financial Consumer Relations Department” (FCRD) with effect from 10.08.2020 to serve as the single point of contact to handle all external complaints and grievances directed to CBSL on entities regulated by CBSL.

Performance of Payment System Indicators

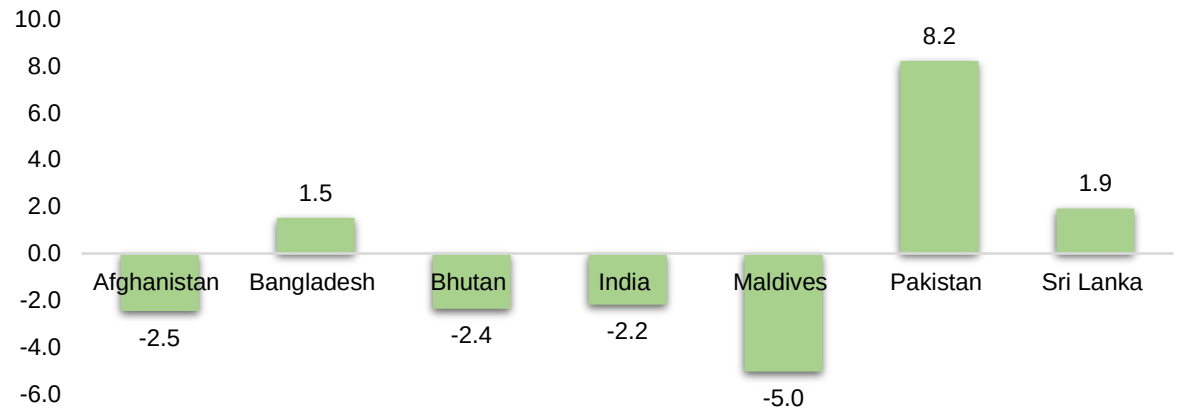
The performance of payment system can be assessed by tracking the performance of some of the payment indicators. In this session, we will assess the temporal performance of this indicators by making a comparison amongst SAARC countries. Currency in circulation is one of the indicators, which is expected to decline if there is more usage of digital mode of transaction. The behavioural change from cash to digital is expected to lower the currency in circulation (as a per cent of GDP).

Fig 9: Currency In Circulation (Per Cent Of GDP)



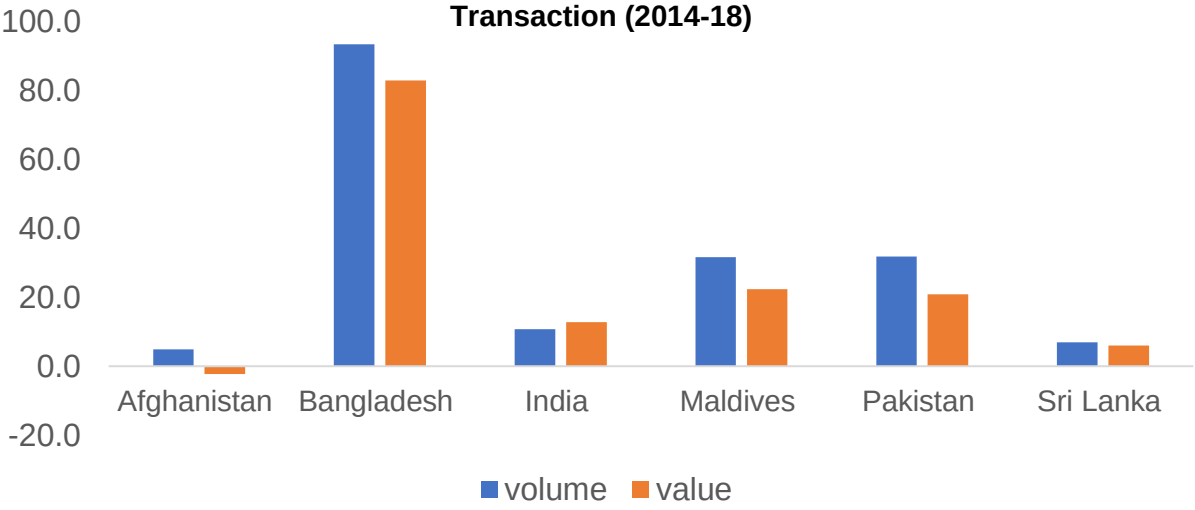
Amongst SAARC countries, while Afghanistan, Pakistan and India have the highest currency in circulation as per cent of GDP, Sri Lanka and Maldives have the lowest currency in circulation as per cent of GDP. However, when we compare the growth rates of currency in circulation, Pakistan, Sri Lanka and Bangladesh recorded highest growth rate during 2014 to 2018. Maldives, Afghanistan and Bhutan recorded highest fall in currency in circulation during this period.

Fig 10: Compound annual growth rate of currency in circulation (2014-18)



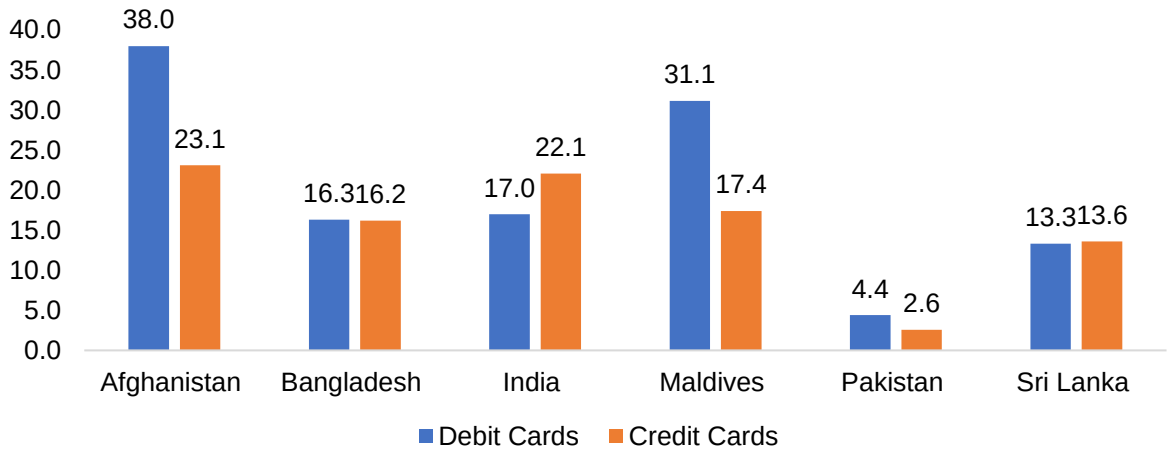
The volume and value of RTGS transaction is another indicator. While Bangladesh, Maldives and Pakistan recorded the highest compound annual growth in both volume and value of RTGS transactions, Sri Lanka and Afghanistan recorded the lowest growth.

Fig 11: Compound Annual Growth Rate of RTGS (Large Value) Transaction (2014-18)



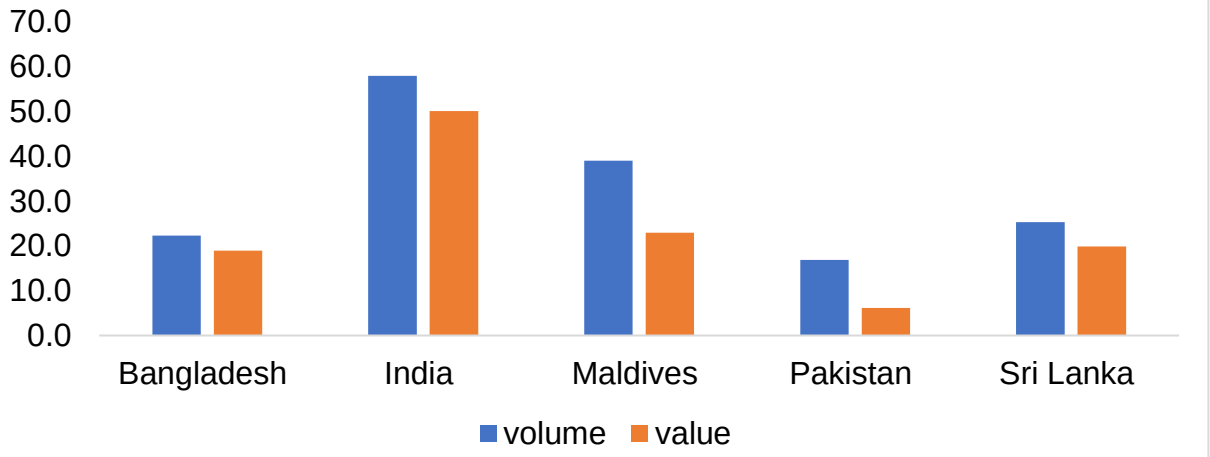
SAARC countries achieved significant growth in the number of debit and credit cards issued during 2014-18. While Afghanistan and Maldives recorded highest growth for the debit cards, Afghanistan and India recorded highest growth for credit cards.

Fig 12: Compound annual growth rate of debit card and credit card issued (outstanding 2014-18)



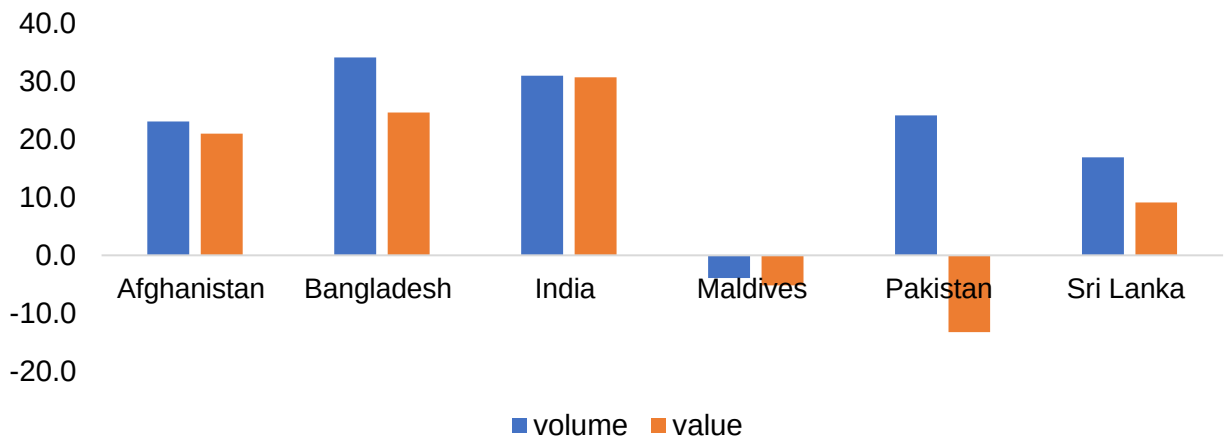
In debit card payments, India, Maldives and Sri Lanka witnessed highest growth during 2014 to 18. Pakistan, however, recorded lower growth during 2014 to 2018.

Fig 13: Compound Annual Growth Rate of Debit Card Payments (2014-18)



Afghanistan, Bangladesh, India, Pakistan and Sri Lanka recorded higher growth for the credit card payment during 2014 -18. Maldives, however, recorded negative growth for both volume and value of credit card transactions.

Fig 14: Compound annual growth rate of credit card payments (2014-18)



ToR IV

Assess the regulatory and other requirements that could help to leverage FinTech for financial inclusion while addressing the risks in SAARC countries.

1. Countries with deeper, more developed financial systems enjoy higher economic growth and larger reductions in poverty and income inequality[18]. Access to financial services also increases opportunities and resilience for the poor, particularly women. Financial services, leveraged on FinTech, are characterized by low marginal costs and greater transparency. Digital Financial Services (DFS), defined as the financial services which rely on digital technologies for their delivery and use by consumers, can address both the supply side barriers to access to financial services, such as high operating costs, limited competition, as well as the demand-side barriers, including volatile and small incomes for the poor, lack of identity documentation, trust and formality and geographical barriers[1a]. Every country's strategy and progress towards financial inclusion is unique because of significant variations in the government's priorities, institutional capacity to implement reforms, level of development, evolution of financial markets, payments infrastructure, financial capability of people, and cultural beliefs that drive financial behaviour. Therefore, to prescribe enabling regulatory regimes and the requisite enablers for harnessing the potential of FinTech to further the goals of financial inclusion, it is necessary that the respective countries' socio-economic background, political system, culture and beliefs, etc are considered.

2. There are many multilateral fora and organisations that have been proactively involved in furthering their respective financial inclusion plans and have emphasised the role of FinTech in financial inclusion, with major being the World Bank Group, IMF, OECD, UNGSA, and other groups such as the CGAP and CGD, etc. However, as far as guidance on regulatory aspects and enabling environment to harness the potential of FinTech is concerned, the 2016 G20 High-Level Principles for Digital Financial Inclusion (HLP-DFI) serve as one of the most important reference for providing a basis for country action plans reflecting country context and national circumstances to leverage the huge potential offered by digital technologies.

[18],[1a] World Bank, Digital Financial Services, April 2020.

3. The 2021-23 G20 Financial Inclusion Action Plan (FIAP),which is an important guiding document for the financial inclusion, calls for strengthening the focus on vulnerable, underserved groups and SMEs and addressing their needs by leveraging digital financial innovation. The FIAP recognises that the expansion of innovative digital services within an enabling regulatory and policy environment is a key driver of inclusion and that digital financial innovations—tied with sound regulatory frameworks, improved infrastructure, and capacity building—may provide the opportunity to expand the pace of financial services development. Technology-driven change presents unprecedented opportunities for financial inclusion by accelerating access for those hard-to-reach and offering customised, affordable and convenient ways for individuals to save, receive and send remittances, make payments, access credit, and obtain insurance. However, at the same time, these new developments present new challenges to policy makers and regulators, including those related to consumer protection, data protection (for example, cyber security threats and AML/CFT vulnerabilities), and financial literacy. Also, on the issue of digital financial inclusion, the GPFI[19], inter-alia has recommended the following, which are worthy of being focussed upon for the purpose of this study:

- To encourage policymakers in both G20 and non-G20 countries to use the G20 Financial Inclusion Policy Guide when developing, implementing and evaluating financial inclusion strategies, plans and programmes. Specially, when intending to use digital financial services.
- To take actions to harness digitisation to financially include those individuals and MSMES operating in the informal economy.
- To further implement the G20 High-Level Principles for Digital Financial Inclusion, in particular through promoting the G20 Financial Inclusion Policy Guide, peer exchange and the sharing of good practices.
- To lift the development of a safe and efficient system of digital customer identification and verification and to encourage the achievement of greater international coordination on digital on- boarding policies.
- To highlight the importance of developing an interoperable payments infrastructure and creating incentives for consumers to use and retailers to accept of digital payments.
- To encourage the responsible use of alternative data in credit reporting.
- To encourage the identification of the risks for consumers and raise awareness of using digital financial services.

[19] GPFI 2018 progress report to G20;
http://www.gpfi.org/sites/gpfi/files/documents/2018_GPFI_Progress_Report_G20_Leaders.pdf

There is a need that authorities adopt a regulatory framework that creates space and enables the FinTech innovations so that greater financial inclusion can be achieved. The regulations aimed at ensuring adequate solvency of financial institutions, liquidity and soundness, along with effective supervisory mechanisms, with the purpose of enhancing the financial stability and achieving other stated policy objectives, are a prerequisite for bringing out the desired results from those subset of regulatory measures that intend to enhance financial inclusion in particular. Notwithstanding this fact, some regulatory requirements such as capital adequacy and supervisory rules may limit the attractiveness of small deposits, loans, or other financial products for financial institutions. Strict requirements regarding the opening of branches or ATMs may also restrict the attractiveness of doing so in remote areas. Identification and other documentation requirements are important, both with respect to know-your-client requirements and monitoring of possible money laundering and terrorist-financing activities, but these can pose problems for poor households in countries that do not have universal individual identification systems. Regulatory requirements, such as restrictions on foreign ownership and inspection requirements, can also restrict the entry and/or investments into MFIs. Regulatory requirements, therefore, need to be calibrated to be commensurate with the systemic financial risks posed by various financial institutions and the trade-off between policies for maintaining financial stability and those for greater financial inclusion[20]. Therefore, it is important that the progress in improving financial inclusion must be compatible with the traditional mandates of financial regulation and supervision, namely, safeguarding the stability of the financial system, maintaining its integrity, and protecting consumers. In this connection, The Basel Committee on Banking Supervision (BCBS) guidance on the application of the Core Principles for Effective Banking Supervision to the regulation and supervision of institutions relevant to financial inclusion[21] is useful for the supervisors to respond to the changes and innovations in the products, services and delivery channels of financial institutions working for enhancing financial inclusion. The Guidance examines the risks presented by banks and non-bank financial institutions in their endeavour to reach unserved and underserved customers and guides

[20] ADBI Working Paper 878 Morgan, Zhang, and Kydyrbayev

[21] BCBS- September, 2016

prudential supervisors on the application of a proportionate regulatory and supervisory approach.

4. This study intends to frame enabling regulations aimed specifically at leveraging FinTech for financial inclusion. For this purpose, to prescribe the regulatory and other requirements that would be necessary to leverage FinTech for enhanced financial inclusion in SAARC countries, the relevant literature on the topic was studied, with a focus on extracting the best practices and prescriptions that would be applicable to SAARC nations as a group. The homogenous factors among these nations were considered to suggest broad guiding principles/ best practices and desirable regulatory structure. As the proposed regulatory regimen and enablers are set out in this study on a broader spectrum, the same may be adopted by the SAARC nations depending on their applicability to the respective SAARC nations, keeping in view the jurisdictional peculiarities, extant regulations and prevailing conditions.

5. Determining the best regulatory approach for delivering financial services in general is challenging, as the rules will have to reflect the features of each specific financial service and the risks entailed from alternative forms of financial service provision. This challenge is even greater for regulations aimed at FinTech enabled financial inclusion, given the many new forms of provision and providers. To tackle these challenges, the approach to regulation for financial inclusion advocated should follow three principles commonly used to guide regulatory choices: similar regulation for similar functions, regulation based on risk, and balance between ex ante and ex post regulation. Regulating by function can serve a dual purpose: that of levelling the playing field across alternative providers and that of reducing uncertainties regarding the nature of the regulatory framework that might apply to new players. A risk-based approach ensures that riskier the financial service provider is to the user, or the stability and integrity of the financial system, or the more the user is potentially at risk of loss of funds or of fraud, abuse, misuse, or being sold an inappropriate product, the higher should be the regulatory bar. Rules to implement this approach can include the licensing of providers who are allowed to offer certain financial products; capital or liquidity requirements (or both) and other limitations on some providers; and consumer protection rules and KYC regulations, among others, for specific financial products. Ex ante regulation refers to rules that set prerequisites on providers as a condition for

their being allowed to participate in a market. Regulation should be sufficiently well specified ex ante to give providers clear rules of the game and enable competition for the market, but regulators should also have the authority to intervene ex post as the financial system evolves and regulatory or market development issues emerge. The challenge is to strike an adequate balance between these two approaches. Because the provision of digital financial services involves the participation of both the financial services industry and also others in nonfinancial industry, such as the telecommunications industry, Technology firms, service providers, etc, designing an appropriate mix of ex ante and ex post regulation for digital services is a difficult challenge. An excessive ex ante regulation would inhibit innovation and the development of new products and markets. However, because the possibility remains that the market will develop in undesirable ways (for example, with the emergence of a dominant player), the option of imposing tough ex post regulatory intervention must be preserved.[22]

6. The SAARC countries have been pursuing financial inclusion for a long time for inclusive growth, poverty eradication and sustainable development. However, despite the progress achieved in recent years, much needs to be still achieved. Though some countries have formulated a national financial inclusion strategy enumerating their plans going ahead, the same are yet to be implemented in full scope, to achieve the desired objectives. Despite improvement of account ownership, usage of financial services is very low which is a major concern in many countries of the region. Many accounts which are opened under financial inclusion program remain dormant. Among the many challenges faced by SAARC nations to further their financial inclusion goals, the geographical peculiarities of some nations, weak availability of infrastructure, comparative lack of financial awareness and lack of coordination in the various stakeholders are the major ones that are common. Though most countries have encouraged the use of the expanding mobile networks to leverage their payment solutions, have encouraged e-payments, promoted direct transfers from government ,persons and businesses and expanding branchless banking, there exists a vast scope for leveraging the FinTech for enhancing Financial Inclusion. Microfinance Institutions

[22] CGD Task force report on Financial Regulations for Improving Financial Inclusion, 2016

(MFIs) too serve as an effective tool to enhance financial inclusion in SAARC countries as they fill the gap created by lack of access to formal banking system for a vast majority of poor adult population, microenterprise, landless and marginal farmers. Although the outreach by MFIs is impressive, the cost of services provided by them is comparatively higher. Micro, Small and Medium Enterprises (MSME) play a major role in employment generation in most countries of the region, besides contributing significantly to GDP and exports. The recommendations on enabling regulatory regime are framed accordingly, keeping in view these broad level similarities. An effective way to implement the G20 HLP-DFI is through applicable national strategies and related country action plans, or other country level actions, which take into account country context and national circumstances. Accordingly, the recommendations herewith may be suitably adopted in to a countries' national strategy/ action plan, as far as regulations for leveraging FinTech for financial inclusion is concerned. However, it should also be noted that the level of financial inclusion is associated more closely with social factors compared to income factors, for which the demand side phenomena *i.e*., education, health, and other social factors may be addressed for improving level of financial inclusion.[23]

7. The level of advancements in the payments services is an important determinant in achieving the financial inclusion goals. The CPMI-World Bank Group Task Force on the Payment Aspects of Financial Inclusion (PAFI)-2016, which outlines a framework for enabling access and usage of payment services by the financially excluded, notes that efficient, accessible and safe retail payment systems and services are critical for greater financial inclusion and that a transaction account is an essential financial service in its own right and can also serve as a gateway to other financial services. The access and use of at least one transaction account serves as a gateway to other financial services, besides meeting their payments and savings needs. The 'No- frills' and 'basic savings account' that have been encouraged and opened in some countries should be emulated by other countries in the SAARC for this purpose. To further improve the usage of these accounts, the required infrastructure needs to be developed. The characteristics of information and communication technology (ICT)

[23] Findings on Promoting Financial Inclusion in the SAARC Region, presented at the 34th SAARCFINANCE group meeting and SAARCFINANCE Governors' Symposium, July, 2017.

infrastructures that effectively support financial inclusion and the guiding principles on such ICT, along with the guiding principles on the legal and regulatory framework which effectively addresses all relevant risks and by protecting consumers, which were given in PAFI principles, were subsequently extended in April, 2020[24] to include the 'FinTech focus' on these principles. From among the seven Guiding Principles set out, the following two principles are emphasised, which set out the requirements of robust ICT infrastructure and legal and regulatory framework:

(i) Financial and ICT infrastructures

Robust, safe, efficient and widely reachable financial and ICT infrastructures are effective for the provision of transaction accounts services, and also support the provision of broader financial services.

Technological innovation requires that payment infrastructures continuously review their design to ensure that they adequately support the provision of innovative payment products and access modes. Furthermore, digital ID infrastructures can play a relevant role in supporting service providers to reliably validate customers' identity.

Key actions for consideration:

• *Key payments infrastructures are built, upgraded or leveraged as needed to facilitate the effective usage of transaction accounts. FinTech focus: The design of key payment infrastructures takes into account innovative technologies, products and access modes.*

• *Additional infrastructures are appropriately designed and operate effectively to support financial inclusion efforts by providing critical information to financial service providers, including an effective and efficient identification infrastructure, a credit reporting system and other data sharing platforms. FinTech focus: Public and private sector stakeholders support the establishment of a digital ID infrastructure for customers to digitally identify, authenticate and provide consent.*

• *The geographical coverage of ICT infrastructures and the overall quality of the service provided by those infrastructures are enhanced as necessary by their owners/operators to not constitute a barrier for the provision of transaction account services in remote locations.*

[24] Payment aspects of financial inclusion in the FinTech era, CPMI, WBG- April, 2020.

• Increased interoperability of and access to infrastructures supporting the switching, processing, clearing and settlement of payment instruments of the same kind are promoted, where this could lead to material reductions in cost and to broader availability consistent with the local regulatory regime, in order to leverage the positive network externalities of transaction accounts.

• Payment infrastructures, including those operated by central banks, have objective, risk-based participation requirements that permit fair and open access to their services.

• Financial and ICT infrastructures leverage the broad usage of open/non-proprietary technical standards, harmonised procedures and business rules to enhance their efficiency and therefore their ability to support transaction accounts at low costs.

• The safety and reliability of financial and ICT infrastructures, including their resilience against fraud, are tested on an ongoing basis and are enhanced as necessary to keep up with all emerging threats for holders of transaction accounts, PSPs and PSOs.

(ii) Legal and regulatory framework

The legal and regulatory framework underpins financial inclusion by effectively addressing all relevant risks and by protecting consumers, while at the same time fostering innovation and competition.

The key actions already cover a wide range of relevant risks and concerns, but FinTech may exacerbate data protection and privacy concerns. Furthermore, new approaches to regulation and the use of new technologies for risk management, compliance and financial supervision are a recent development that could be leveraged.

Key actions for consideration:

• A robust framework is established to foster sound risk management practices in the payments industry, including through the supervision/oversight of PSPs and PSOs by regulatory authorities. FinTech focus: Where appropriate, relevant authorities leverage new technologies for supervision/oversight and foster their adoption by the private sector for risk management and compliance.

• The framework requires PSPs and PSOs to develop and implement risk management measures that correspond to the nature of their activities and their risk profile.

• The framework aims to promote the use of transaction accounts in which customer funds are adequately protected through appropriate design and risk management measures, such as deposit insurance or functionally equivalent mechanisms as well as through preventive measures (eg supervision, placement of customer funds held by non-deposit-taking PSPs in high-quality and liquid assets, and, depending on the legal regime, specially protected accounts at banks and possibly trust accounts). FinTech focus: Any new or innovative forms of transaction accounts or payment products protect customer funds through appropriate design and risk management measures that are functionally equivalent to those that protect customer funds in "traditional" deposit transaction accounts.

• The framework requires PSPs to clearly disclose, using comparable methodologies, all of the various fees they charge as part of their service, along with the applicable terms and conditions, including liability and use of customer data. FinTech focus: The framework requires PSPs to clearly disclose the credit and liquidity risks that users face when storing funds in new or innovative forms of transaction accounts. FinTech focus: The framework requires PSPs to clearly disclose how customer data are safeguarded and how data privacy is protected, along with customer rights regarding the use of their data.

• The framework requires PSPs to implement a transparent, user-friendly and effective recourse and dispute resolution mechanism to address consumer claims and complaints.

• The framework preserves the integrity of the financial system, while not unnecessarily inhibiting access of eligible individuals and businesses to well-regulated financial services.

• The framework promotes competition in the marketplace by providing clarity on the criteria that must be met to offer specific types of service, and by setting functional requirements that are applied consistently to all PSPs.

• The framework promotes innovation and competition by not hindering the entry of new types of PSP, new instruments and products, new business models or channels – as long as these are sufficiently safe and robust. FinTech focus: The framework

aims to be technology-neutral by setting functional and safety requirements that are applied consistently to all PSPs.

8. Keeping in consideration, especially the aforesaid two guiding principles, the SAARC countries may frame enabling regulations, keeping in view the relative stage of development of payment infrastructures. For instance, the countries where enabling ICT is lacking, may focus on building the same and enabling a conducive legal and regulatory regimen for new players to enter. A robust payment systems law may be framed, along with a consumer protection framework. The nations in a comparatively more advanced stage may foster interoperability in financial and digital infrastructure, expand the scope and usage of existing payment system products and solutions, initiate the implementation of a completion policy, implement data protection measures and so on. The specifics, needs and considerations for enabling regulations that are in sync with the guiding principles are discussed in subsequent paragraphs. CPMI, besides these two principals also includes guiding principles which lay down the commitments from public and private sector organisations to broaden financial inclusion, on transaction account and payment products design, on availability of access points of transaction accounts, on financial literacy and those on large volume payment streams. While these principles are based on a payments perspective, the same can be adopted and applied to other aspects of financial inclusion as well.

9. Regulatory changes often are needed to enable the successful adoption and adaptation of innovations in digital finance, encourage their use, and increase competition among their providers, so that those new technologies can benefit, especially, the poor. In this connection, a market open to fair competition leads to a greater variety of products and services, higher efficiencies, and lower costs for consumers, which would lead to greater inclusion, especially for countries that are in nascent stage of FinTech adoption for the purpose of Financial Inclusion. Competition policy's main goal should be to allow and encourage new providers to enter. Because of crucial differences in their overall nature and their activities, however, the rules of entry should most likely differ between traditional players, such as banks and nonbank digital financial services providers (DSPs). Criterion for entry should be objective and conditional on standard fit-and-proper requirements. If the requirements are met, and as long as strong regulatory, supervisory, and consumer protection frameworks are in

place, entities should face no constraints on entry. For nonbank DSPs, entry rules should depend on the services they offer. Entry of DSPs that offer bank-like services (stores of value not fully backed by safe assets, credit, and so forth) should be conditional on fit-and-proper standards similar to those for banks, but otherwise liberal; failure to meet this recommendation would imply discriminatory practices vis-à-vis banks.

10. Besides ensuring competition, a level playing field in each financial service is required to ensure that all providers compete on an equal basis. This is enabled by regulations ensuring that functionally similar services are treated equally as long as they pose similar risks to the consumers of the service or to the financial system as a whole. A level playing field for each service is critical. Ensuring that that all service providers are treated equally in the regulatory framework is an essential step forward in achieving greater financial inclusion, as it would allow for more consistent consumer protection. Additionally, this would also aid considerably in the expansion of the financial services market, which is one of the leading frontier markets. A level regulatory playing field which is risk evaluated would also be of high importance, as the digital financial services would differ greatly from one another in terms of structure and business models. In addition, a level playing field reduces the scope for regulatory arbitrage and other distortions. Moreover, regulation should not discriminate among providers as to their rights, obligations, and entitlements for use of critical institutional Infrastructure. However, a level playing field does not mean that all types of financial services should be treated exactly the same with regard to regulations. As characteristics, including risks, vary across services and also across the providers of a service, the regulatory requirements should vary by service and or the service provider, depending on the riskiness and other as the overall objectives of consumer protection, security of the financial system and other intended objectives. In this connection, as countries strive to diversify the financial services and encourage newer providers for these services there shall be first-mover advantages, network externalities, and other underlying market factors which may give rise to monopolistic or oligopolistic situations, especially in small markets. Earlier experiences with some financial services, such as credit cards, as well as with other digital services industries, such as software and search engines, suggest that anti-competitive behaviour cannot be ruled out even when the conditions for entry and exit are pro-competitive.

Accordingly, sound antitrust rules and procedures are needed in the financial sector to avoid the emergence of entities with excessive market power. The antitrust regulators must have adequate tools and resources at their disposal to analyse the current state of competition, and they must have the authority to break up monopolies and oligopolies, penalize collusive behaviour and challenge uncompetitive pricing structures.[25]

11. Promoting interoperable, open technology platforms for digital financial services helps establish a broad-based ecosystem for private and Government entities to better reach consumers. Interoperable payment systems enable the seamless interaction of two or more proprietary acceptance and processing platforms, and possibly even of different payment products, subject to standard safeguards, thereby promoting competition, reducing fixed costs, enabling economies of scale that help in ensuring the financial viability of the service, and at the same time enhancing convenience for users of payment services. The G20 GPFI High Level Principle 4 emphasizes the need for policymakers and industry to work together to achieve a robust, open and efficient digital infrastructure, including a widely accessible retail payments system and ICT infrastructure. Areas of particular focus for national authorities include retail and online payments infrastructure that involve interoperable platforms linked to a wide range of POS, ATM and agent networks, bill payment platforms, credit reference systems, digital asset registries (particularly for movable assets) and, in some cases, the underlying communications infrastructure needed to support all these systems. Despite advances in identity and verification systems, interoperable databases are not yet the norm in many countries. Where “silo” databases cater for identification needs for specific industries (eg KYC/CDD in financial services), a “duplication of identity” is both costly and inefficient and may undermine the effectiveness of innovative verification techniques that source data from multiple databases[26]. In several jurisdictions, financial institutions have established, or are in the process of establishing, shared facilities for customer identification in the context of domestic payments. Prompted by a large fall in correspondent banking activities in the region,

[25] Op. Cit. ,CGD Task force

[26] Alliance for Financial Inclusion, 2019

the South Pacific central banks have launched an initiative to create a common KYC framework aimed at harmonising governance, technical and legal requirements for a shared KYC utility, with a view to reducing the AML/CFT compliance costs of cross-border payments[27].

12. Policies to create demand for DFS and incentivize switching away from cash are needed alongside efforts to expand the availability of such services. Informal-sector companies, largely operate in cash and pay their employees in cash, as well. Also, the business model of the banking sector is not appropriate to meet the full needs of financial services of low income populations and MSMEs because of the lack of credit history of poor people, rigid collateral requirements, low survival rates of SMEs and high transaction cost of small amount of credit, amongst others[28]. Better appreciation of the benefits of using DFS and the adoption of digital financial tools can motivate and make it easier for informal firms to register and operate in the formal economy. Digital sales are easier to track than cash sales. Digital payments make it easier for businesses to pay taxes. At the same time, the use of digital payment systems can help informal firms begin to establish a credit history, potentially opening the door to formal financing. Data generated from digital transactions and payments can be used to calculate credit scores, sometimes in combination with other sources of non-traditional data such as information gleaned from social media, as is being done presently in some countries. Such data enable potential borrowers (whether individuals or firms) to begin to develop “reputation collateral,” and even credit or risk scores, based on financial behaviours, such as timely payment of utility bills or consistent receipt of remittances or income, before they have received any loans from formal financial institutions. In this connection, Governments can use subsidies and other tax inducements to encourage both businesses and consumers to adopt digital financial services and simplify requirements for firm registration. Shifting G2P payments, such as social benefit transfers, from disbursements in cash to direct deposit into transaction accounts, results in efficiency gains for the Government by plugging leak and reducing operational expenses. It can also support the growth of

[27] King, 2020

[28] United Nations ESCAP- Report on Financial Regulatory Issues for Financial Inclusion.

DFS. G2P digitization needs to be accompanied by efforts to enhance the financial capabilities of the recipients who are new to DFS.

13. Credit information sharing seeks to mitigate the fundamental challenge of asymmetric information between credit service providers and their customers, which applies to traditional lenders such as financial institutions, as well as the new digital players. By incorporating new alternative data from digital sources and the use of analytical tools (AI/ML) and APIs, credit reporting systems lower the cost of lending, increase speed of service delivery and quality of the information, thereby promoting the emergence and sustainable operations of new digital lending models. Also, the providers of financial services need to conduct verification of their customers, conduct ongoing customer due diligence and validate information on their customer and their assets. These processes can benefit greatly and enable the leveraging of FinTech solutions if access to information held with public authorities, Government agencies and potentially other private sector players is made available, for example on – ID, land records, demographic information, income, tax records, education records and employment history. How financial service providers can access the data on customers held with the government has an impact on their ability to serve their customers. Availability of these data in an efficient manner using automated interfaces enable DFS providers to reduce their costs and improve customer convenience[29].For the purpose of credit information sharing, and to felicitate credit flow to SMEs, a Public Credit Registry (PCR) would enable better and faster underwriting standards for credit assessment and pricing by banks.

14. Lack of digital identity is a major constraint in furthering the financial inclusion goals, especially among the poor in lower-middle income economies[30]. Digital identity, or digital ID, refers to a set of electronically captured and stored attributes and credentials that can uniquely identify an individual or legal person and is used for

[29] World Bank- Digital financial services- April 2020.

[30] As per World Bank Group's 2018 ID4D Global Dataset, 63% population in these countries are without basic identification credentials.

electronic transactions[31]. A person's digital identity may be composed of a variety of attributes, including biographic data (eg name, age, gender, address) and biometric data (eg fingerprints, iris scans, hand prints) as well as other attributes that are more broadly related to what the person does or something someone else knows about the individual[32]. MSMEs, without formal business registration documentation can face similar problems in gaining access to financial services if they cannot establish the identities of the staff and directors authorised to set up, operate and instruct changes for the business. As a solution, unique digital ID for all can be used as a form of identification within the country. A legal, unique and digital ID is a critical element in delivering government services with greater efficiency, particularly G2P payments, and in addressing financial access and broader inclusion for individuals and MSMEs. Digital IDs offer the potential for countries to rapidly advance their identification goals and improve the quality and utility of ID systems. For example, digitalised databases of records, compared with physical ledgers stored in a local office, make it easier to verify a person's records remotely, creating efficiencies for service delivery and allowing ID agencies to replace credentials and records that have been lost, stolen or destroyed. Digital authentication mechanisms facilitate automated transactions that are more secure and reliable than manual authentication (ie visually comparing a person presenting an ID against their photo) and can reduce the amount of personal information revealed in a transaction (eg attribute-based credentials). The use of automated biometric recognition (eg fingerprints or iris scans) can help ensure that identities are unique (ie that people cannot enrol multiple times) and provide a convenient, password-free method of authentication. Also, in the absence of, or lack of access to, government-issued identification documents, alternative data can be used to support the proof of identity[33]. Biometric technologies can also be leveraged for remote onboarding of customers, by traditional PSPs as well as new entrants, eg by matching images in an ID document with an image or a video of potential new customer. The usage of biometrics can complement, and even in some cases replace, traditional means of proving an end user's identity and thereby preventing and/or

[31] Mittal, A (2018): Catalog of Technical Standards for Digital Identification Systems, World Bank Group.

[32] Natarajan, H, M Appaya and S Balasubramanian (2018): *G20 digital identity onboarding*, World Bank Group.

[33] CPMI, 2020, Payment aspects of financial inclusion in the FinTech era.

detecting fraud. However, Biometric data are considered to be highly sensitive, and the highest security standards are essential when processing and/or storing them. Thus, rather than storing biometric data, tokenization techniques may be utilized for accessing the data. In payment and other financial services, biometrics can overcome some of the challenges associated with personal identification numbers (PINs), passwords or social security numbers, among others. Innumerate and/or illiterate end users can be offered a better user experience, facilitating adoption of financial services. Depending on the use case, different biometric features, or a combination thereof, might be applied. Biometric characteristics can also be among the proof-of-identity requirements for the registration and activation of SIM cards to access mobile services (and, by extension, mobile financial services)[34]

15. Differentiated banks are distinct from universal banks as they function in a niche segment. The differentiation could be on account of capital requirement, scope of activities or area of operations. As such, they offer a limited range of services / products or function under a different regulatory dispensation. Regulators may, by allowing non-banks to enter the market through differentiated banking licenses, fill in the void which could not be achieved, owing to various reasons, through traditional banking models and service delivery modes adopted by commercial banks for financial inclusion. To achieve last mile delivery, the regulators may permit the financial institutions to engage services of Agents and Business Correspondents (BCs), while at the same time ensuring customer protection in terms of product suitability aspects with an adequate oversight mechanism over the activities of the agents and BCs. Neo Banks can also help in financial inclusion as being completely digital banks which provide end-to-end banking through digital platform. Thus, it may be able to reach out to include customers where brick and mortar banking cannot reach.

16. In many SAARC countries, micro finance institutions play an important role in Financial inclusion. However, if MFIs are governed by regulatory and supervisory frameworks developed for banking sectors, it does not fully take account of the special nature of micro lending. For example, many countries may not have explicit licensing regimes for MFIs. Furthermore, there are different types of MFIs institutions, for which

[34] GSM Association, Access to Mobile Services and Proof of Identity 2019 – assessing the impact on digital and financial inclusion, February, 2019.

a unified regulatory criterion may lead to inconsistencies and gaps. Accordingly, regulatory authorities should regularly monitor registered but not licensed non-bank financial institutions to identify whether they are required to apply a licensing approach by considering if they pose individually or collectively risks that become material. Regulators can enable microcredit organizations to integrate into the financial system as financial intermediaries with a tiered, risk-based approach to licensing, regulating and supervising savings-based microfinance[35].

17. There are many examples of adoption of FinTech, which have proven to enhance financial inclusion and which may be considered for suitably being leveraged via regulatory initiatives:

a. Mobile money. Mobile technology, along with high phone penetration, underpinned the first wave of DFS services. Equally critical was the development of new business models for mobile money, including e-money issuance and agent networks, and eventual regulatory support for such models. Once mobile money systems reach scale, they can provide a basis for more sophisticated financial services such as digital lending and insurance.
b. *Platform eco-systems.* bigtech platforms, such as social media, ecommerce, and ride hailing, have enabled new business models and sparked another wave of DFS by leveraging very large user bases and scale economies. By leveraging cloud services and machine learning, the consumer data generated on these platforms has enabled a further round of DFS innovation for credit, insurance, and savings which can be accessed through a "super app." For example, e-commerce marketplaces including Amazon, Alibaba, and Mercado Libre provide *credit* to businesses selling on their platforms, based on analysis of merchant cash flows, inventories, *fulfillment* performance, and other metrics.
c. *Open Application Programming Interfaces* (APIs) APIs allow different systems to exchange consumer data and instructions. APIs can be kept private or made publicly available (open or public APIs) to allow developers to integrate certain functionalities into their applications. They can be proprietary, with service providers designing different API interfaces and protocols, or standardised across service providers. APIs can be particularly powerful for the poor when they are underpinned by a digital ID system and facilitate interactions between governments, businesses, and citizens.

[35] Alliance for Financial Inclusion- Policy note: Formalizing microsavings- A tiered approach to regulating intermediation, April 2011

APIs can empower consumers and improve competition since market players no longer have a monopoly over consumer data they hold. Following legal and regulatory changes in several jurisdictions, the number of APIs that have been registered for the purpose of financial services and payments has increased sharply since 2016 [36]. APIs can also be used in electronic know-your-customer (e-KYC) processes and to support checks on anti-money laundering/countering the financing of terrorism (AML/CFT), by enabling selected data to be shared among financial institutions while ensuring the privacy of data not needed for customer due diligence (CDD) purposes. Finally, APIs are being used by payment service providers (PSPs) to facilitate integration with merchants, particularly in the e-commerce space, and to interface with payment systems.

d. Big data analytics: Big data is a generic term that designates the massive volume of data that is generated by the increasing use of digital tools and information systems (FSB (2017)). Big data analytics can be described as technologies that enable analysis of the significantly increased volume, variety, velocity and validity of data. Big data analytics uses a variety of tools, including artificial intelligence (AI), machine learning (ML) and deep learning (DL). Big data analytics has made inroads into payment and financial services and is expected to become an essential business driver across the financial services industry in the short run. New providers are augmenting financial data with other data sets. In order to gain a better understanding of the end user, they are proactively collecting data through increased customer interaction and tracking customer behaviour on their platforms, eg mobile telephony, social media, and psychometric and geospatial data[37]. Big data analytics can support the onboarding of new customers through screening processes (eg by providing information required for KYC, checking different spellings of a name against sanction lists, and making predictions about a person's creditworthiness). In this connection, the Buy now pay later (BNPL) experience in India is an example, which gives the retailers a scope for enhancing their sales by providing the end consumers an opportunity to pay their dues in instalments, later on. Big data can thereby help improve the precision of real-time approvals and reduce the number of false rejections. For the purpose of authenticating and authorising existing customers, big data analytics can leverage a variety of granular data (eg a person's biometric features, combined with geographical and behavioural information). Throughout the transaction process, big data analytics is

[36] Santoro, M, L Vaccari, D Mavridis, R Smith, M Posada and D Gattwinkel (2019):

[37] Schiff, A and M McCaffrey (2017): *Redesigning digital finance for big data*, MicroSave Helix Institute of Digital Finance.

leveraged for risk mitigation and to detect and prevent fraud and other malicious activities.

e. Cloud computing: enables the use of an online network ("cloud") of hosting processors to increase the scale and flexibility of computing capacity [38]. Cloud computing is the main enabling technology for banking as a service (BaaS) – and, more specifically, payment as a service (PaaS) – delivery models. While cloud computing can be leveraged by PSPs to migrate existing software or payment processes to the cloud, PaaS platforms typically have a modular service offering, giving flexibility to PSPs to choose the services they need at any given time. BaaS and PaaS providers can be technology service providers. Cloud computing and delivery models such as BaaS and PaaS can serve as a tool to "democratise" access to technology by PSPs of all sizes and as an enabler of innovation in payments and associated services. In particular, it reduces the need for large investments in IT, thereby lowering market entry barriers for new providers. Meanwhile, it also makes it easier for traditional providers to implement newer, more competitive customer interfaces in a flexible manner. Since providers are required to pay only for the services they use, cloud computing is often a more cost-effective solution compared with the ongoing costs of proprietary IT infrastructure. Cloud computing may also provide financial institutions with features and services that promote greater security and have higher degrees of operational resilience when compared with traditional practices. For instance, financial institutions can opt to build a private cloud, move across clouds or use multiple cloud service providers for a variety of cloud-based services. Some jurisdictions have introduced data localisation requirements for sovereignty reasons or in view of concerns that cloud services might reduce authorities' ability to access data or inspect the cloud provider's facilities. Countries may modified their existing regulatory frameworks or clarified their regulatory expectations on the use of cloud computing by financial institutions with the intention of ensuring that financial institutions adequately manage the risks associated with the use of cloud computing, as has been done by some countries.[39]

f. Smaller countries can benefit from a coordinated approach to FinTech to overcome capacity and scalability constraints. For instance, the ASEAN Financial Innovation Network (AFIN) launched with API Exchange (APIX) a cross-border marketplace and

[38] Financial Stability Board (2017): *Financial stability implications from FinTech– supervisory and regulatory issues that merit authorities' attention*, June.

[39] Dias, D and J C Izaguirre (2019): "Regulator's friend or foe? Cloud computing in financial inclusion", CGAP, 16 September, and Ehrentraud, J, D García Ocampo, L Garzoni and M Piccolo (2020): "Policy responses to FinTech: a cross-country overview", *FSI Insights on policy implementation*, no 23, Financial Stability Institute, January,

sandbox environment to facilitate the adoption of APIs to drive financial inclusion across the Asia-Pacific region[40].

18. There is a growing trend towards collaboration between FinTech startups and traditional financial institutions. Regulators' initiatives such as sandboxes, innovation hubs and innovation offices can foster the development of the FinTech ecosystem A so-called regulatory sandbox is generally a regulator- controlled environment that allows private sector participants to test their products and services prior to formal licensing or registration. Alternatively, regulatory sandboxes can be used to evaluate regulations or policies that may impede beneficial new technologies or business models[41]. A sandbox differs from regulatory tools insofar it is a flexible exercise at the regulator's discretion, normally within the parameters of the existing legal and regulatory framework[42]. "Innovation hub" generally refers to a regulator-provided knowledge centre open to regulated and unregulated entities. Innovators receive guidance, advice and assistance from hub staff or third-party experts regarding matters such as licensing issues and navigating complex legal and regulatory systems. Innovation offices are structures held by the regulator to provide regulatory clarification to financial service providers that seek to offer innovative products and services, and can be considered as a first step towards obtaining regulatory approval. The key objective of innovation offices is to facilitate regulator-innovator engagement and mutual learning in a pro-innovation setting. This interaction helps regulators identify emerging issues and may inform policy developments. These models of collaboration can be suitably included in the overarching framework of leveraging FinTech for financial inclusion. The jurisdictions can establish dedicated FinTech and Innovation Units responsible for regulatory policies and developing strategies for technology and innovation, to better manage risks, enhance efficiency, and strengthen competitiveness in the financial sector. A region-wise, theme-based, or a dedicated

[40] (UNSGSA) FinTech Working Group (2019): Early lessons on regulatory innovations to enable inclusive FinTech–innovation offices, regulatory sandboxes, and RegTech, February.

[41] United Nations Secretary-General's Special Advocate for Inclusive Finance for Development (UNSGSA) FinTech Working Group (2019): Early lessons on regulatory innovations to enable inclusive FinTech– innovation offices, regulatory sandboxes, and RegTech.

[42] Centre for Financial Inclusion (2019): *Regulating for innovation: an evolving framework*.

Regulatory Sandbox model specifically for financial inclusion may be considered by the countries depending upon their preferences and other modalities. Central banks in SAARC countries can establish innovation hubs to identify and develop in-depth insights into critical trends in financial technology of relevance to central banks and to serve as a focal point for a network of central bank experts on innovation. Also, as part of SAARC collaboration initiatives, Regulatory Sandboxes may be established at SAARC countries' level by financial authorities from multiple jurisdictions. Such sandboxes, among other objectives, will help provide firms with an environment to trial cross-border solutions.

19. Periodic monitoring and evaluation of the progress made in financial inclusion sphere can help in identifying the bottlenecks and also initiate corrective measures. Countries and various institutions are recognizing the need for reliable financial inclusion data, to get an overview on parameters relating to access, usage, and quality of financial services rendered. The multidimensional measurement of financial inclusion is important in several aspects to track the targets planned and impact of policy measures. When policymakers have reliable performance indicators and survey mechanisms, they can diagnose the state of financial inclusion, agree on targets, identify barriers and make suitable policies, besides helping private sector improve the design and delivery of financial services. Geo-tagging of the financial transactions would help in the measurement of the financial inclusion which can be used for planning and policy measures. Jurisdictions should strive for identifying and collating data on (i) 'Access indicators', that reflect the depth of outreach of financial services, such as the penetration of bank branches / banking outlets or point of sale (POS)/ mATMs devices in rural areas, or demand-side barriers that customers face to access financial institutions, such as cost or information and on (ii) Usage indicators that measure how clients use different financial services, (e.g. average savings balances, number of transactions per account, number of electronic payments made).[43] Accordingly, there is a need to supplement the collection and collation of relevant, reliable and consistent data in SAARC countries, where, during the course of this study, scope of improvement in this regard was observed. Use of RegTech and

[43] https://www.worldbank.org/en/topic/financialinclusion/brief/how-to-measure-financial-inclusion

SupTech tools for the collection and analysis of financial inclusion data may be utilized to assess depth of financial services and supplementing the regulatory and policy decisions.

Risks and challenges of new models and products leveraged on FinTech:

20. Financial inclusion can introduce potential benefits to the safety, soundness and integrity of the financial system. However, it can also bring potential risks to providers and customers alike, and entail the transfer of well-known risks to new players. Research at the IMF suggests that financial inclusion significantly increases macroeconomic growth, although broadening access to credit can compromise macrofinancial stability when combined with poor quality of banking supervision[44]. In this connection, BCBS has given guidance on the application of the Core Principles for Effective Banking Supervision to the regulation and supervision of institutions relevant to financial inclusion, in September 2016. The Guidance examines the risks presented by banks and non-bank financial institutions in their endeavour to reach unserved and underserved customers and, using the lens of the Core Principles, guides prudential supervisors on the application of a proportionate regulatory and supervisory approach. Financial inclusion, especially when driven by novel technology, is likely to enhance financial stability, increase its integrity, and allow for greater protection of consumers.

21. As far as Financial stability aspects of increased financial inclusion are concerned, it is believed that stability will be enhanced if greater financial inclusion broadens the system's customer base, allowing financial services providers to diversify their risks beyond the large corporations and state enterprises to which, in many developing countries, they often lend. Addressing financial inclusion through changes in regulation is necessary for two main reasons. First, regulatory changes often are needed to enable the successful adoption and adaptation of innovations in digital finance, encourage their use, and increase competition among their providers, so that those new technologies can benefit, especially, the poor. Second, progress in improving financial inclusion must be compatible with the traditional mandates of financial regulation and supervision, namely, safeguarding the stability of the financial system,

[44] Sahay, R, M Cihak, P N'Diaya, A Barajas, S Mitra, A Kyobe, Y Nian Mooi and R Yousefi (2015): *Financial inclusion: can it meet multiple macroeconomic goals,* IMF Staff Discussion Notes, no 15/17,

maintaining its integrity, and protecting consumers. Those favorable synergies and outcomes are not guaranteed, however. Financial inclusion could be a source of system instability if the entry of new providers, using untested technological innovations and modalities, compromises overall soundness of the system. Another concern for financial stability and consumer protection is that the expansion of credit to previously unserved low income households and small firms could result in excessive credit growth, leading to over indebtedness, high rates of default, and, ultimately— through the financial system's many interconnections—to system wide risks. To avoid potential trade-offs between financial inclusion on one hand and financial stability, financial integrity, and consumer protection on the other, and to make inclusion even more likely, appropriate regulations and supervisory practices need to be in place. Thus, a sound regulatory framework needs to address new and evolving sources of risk related to the entrance of new market participants, new technologies, and new modalities in the provision of financial services[45]. While as per assessment of FSB, there is currently limited evidence regarding risks to financial stability emanating from FinTech developments, change is occurring rapidly and decisions taken in this early stage may set important precedents. FSB's assessment identifies three priority areas that merit authorities' attention, which includes the managing of operational risks from third-party service providers, mitigating cyber risks and monitoring macro-financial risks[46].

22. Consumer protection hold a vital importance while leveraging FinTech for financial inclusion. This is because farmers, women, poor and low-income customers have little experience with formal financial institutions, they generally face challenges to understand the innovative products and services offered as well as their rights and responsibilities as financial consumers. Without basic protective measures, previously excluded and inexperienced consumers may be subject to abusive sales and collections practices and risk being sold products that do not fit their needs and may even be harmful. A proportionate consumer protection regime can address the issue of trust by balancing between protective measures and the cost of these measures for

[45] CGD Task force report on Financial Regulations for Improving Financial Inclusion, 2016

[46] FSB- Financial Stability Implications from FinTech: Supervisory and Regulatory Issues that Merit Authorities' Attention, June 2017.

financial institutions. In this context, a proportionate consumer protection regime is designed in a way that does not set the bar so high that responsible providers are dissuaded from entering the market or offering new services by tailoring regulation and supervision to the specific risks observed in the market[47]. In particular, countries that have lower levels of regulatory and supervisory capacity should use the principle of proportionality in their regulations and supervisions, which requires careful prioritization of the most important risks observed and incremental phasing-in of consumer protection measures over time as markets and regulatory and supervisory capacity develop[48].

23. Other risks and challenges of new models and products leveraged on FinTech, that the regulators in a developing country should consider are indicated below:

• Data governance and privacy. DFS revolve around collecting, storing, processing, and exchanging consumer data by a variety of eco-system players. This exposes consumers to the risk of unauthorized disclosure and use personal data and calls for comprehensive consumer data protection frameworks. Missing or uninformed consent to the use and/or sharing of personal information, illegal discrimination, unfair price segmentation and data privacy are key concerns for policymakers. Moreover, the repercussions of data security issues increase along with the amount of personal information stored and shared in digital form. Authorities may need to update existing national data frameworks to clarify the rights and obligations of key stakeholders. These include: (i) data subjects (who the data are about); (ii) public authorities (who enact and enforce laws); (iii) controllers (who have an interest in using the data); and (iv) processors (who would collect, store, transfer and analyse the data on behalf of the controllers) Where a provider permits access to or transfer of personal data (for legitimate business purposes) to third parties, it should take steps to ensure that the data remain protected. First, providers should set minimum default policies for sharing personal information that may pose risks to customers. Second, they should draw up

[47] Global Standard-Setting Bodies and Financial Inclusion for the Poor Toward Proportionate Standards and Guidance, CGAP, October 2011

[48] United Nations ESCAP- Report on Financial Regulatory Issues for Financial Inclusion.

written agreements with third parties (either processing personal data or having access to personal data) to determine responsibilities for data privacy[49].

• Cyber security and operational risks. DFS may rely on data infrastructures which are vulnerable to cyber-attacks, system failures, and an over-reliance on third party service providers, for example cloud storage and analytics, data provision. This may compromise business continuity and financial stability and is closely related to data governance concerns. Although cyber risks are not unique to FinTech developments, increased connectivity and new entrants increase the entry points for cyber criminals and the potential for successful attacks[50]. The outsourcing to third parties can exacerbate the risk by further expanding the surface of attack and the attractiveness to malicious actors. Cyber security risks can be especially damaging for the inexperienced end users in their first encounters with financial services and have the potential to undermine their trust in financial services altogether, thus deterring financial inclusion. Furthermore, low-income customers are the least able to rebound from an incident resulting in financial losses[51]. Cyber attackers are targeting markets and/or stakeholders which tend to have weaker cyber resilience in place, on both the demand (users) and the supply side of the market (financial service providers). In the case of less experienced entities, not only the detection, protection and recovery capabilities may be weaker, but also the communication and redress strategies could be insufficient to respond to a large-scale attack. Any effective approach to tackling cyber risk should bring together the financial sector, authorities, law enforcement agencies, intelligence agencies and other relevant authorities.

• Financial integrity. Some DFS, such as crowdfunding platforms, e-money, pre-paid cards, and crypto assets enable fast and remote financial transactions which enable users to circumvent or evade current controls and can be used for illicit financial activities. The Financial Action Task Force is enabling DFS through specific guidance on digital ID, KYC utilities, and virtual assets, supported by simplified Customer Due

[49] GSM Association- *Guidance on mobile money data protection*, September 2018.

[50] Lukonga,I -"Fintech, inclusive growth and cyber risks – a focus on the MENAP and CCA regions", IMF Working Papers, September, 2018

[51] CGAP Blog Series: Cybersecurity and Financial Inclusion: Protecting Customers, Building Trust- 2018

Diligence (CDD) requirements. However, implementation gaps and lags in developing economies are risks.

• Regulatory arbitrage. Some DFS have been offered by new unregulated entities, such as peer-to-peer platforms or bigtechs, which have introduced products that fall between cross-sectoral regulatory gaps and reside outside existing legal frameworks. They share similar risks and activities but do not always receive a similar regulatory treatment. This can lead to the buildup of risks outside the regulated system related to stability, integrity, and consumer protection. Furthermore, regulatory arbitrage can create an uneven playing field that can undermine competition and innovation.

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

24. The risks that can inhibit financial inclusion, when financial inclusion is leveraged using FinTech solutions include:

• Exclusion. Unequal access to infrastructure and technology increases the digital divide. Examples include lack of access to basic telecommunication and financial infrastructures, as well as affordable mobile devices and data-plans. Women and the poor are often disproportionately disadvantaged.

• Over-indebtedness. Evidence has emerged that digital credit has led to late repayments and defaults in Kenya and Tanzania, particularly in poorer and most segments of the population, calling for a closer look at digital lending practices.[52]

• Discrimination. DFS-linked decision-making tools such as credit scoring may not fully remove biases present in the underlying data, or in the mindset of the people that design these tools, for example prejudices or discrimination against minority borrowers. This may result in unfair segmentation and inappropriate pricing.

• Unfair practices. DFS may be delivered with limited electronic disclosure of terms and conditions, agent liability, effective recourse mechanisms, and safety of funds,

[52] Kaffenberger, M., E. Totolo, and M. Soursourian. 2018. *A Digital Credit Revolution Insights from Borrowers in Kenya and Tanzania*. CGAP Working Paper.

and may be adopted by newcomers to financial services with little understanding and no face-to-face interaction with providers that might help ensure appropriateness of a product or service. This exposes consumers to abuse, fraud, and operational failures which reduce trust in DFS and undermines their adoption.

Finally, education and awareness are critical factors in the uptake of any financial service or product and in reducing risks. Policymakers designing effective financial education programs to improve financial capability for digital uptake should include four core competencies in the programs: (i) knowledge of digital financial products and services; (ii) awareness of digital financial risks (online fraud, digital footprint, overborrowing); (iii) digital financial risk control (securing PIN, account and other personal information; avoid spam, phishing, etc.); and (iv) knowledge of consumer rights and redress procedures. These programs should be made available to a broad range of audiences, through a variety of delivery channels including digital and non-digital.

ToR V

Frame recommendations on the path to be adopted by SAARC countries – in general and individually

Country Specific Recommendations:

While the regulatory and other requirements for leveraging FinTech have been set out in the above paras, which are generally applicable to SAARC countries as a group, to frame the country specific recommendations on the path to be adopted by SAARC countries, an assessment of the following six aspects was carried out for the countries:

(i) The policy initiatives recently proposed or under the pipeline, with a focus on leveraging FinTech for Financial Inclusion: These initiatives need to be followed up for implementation and conclusion.

(ii) Recent steps taken and proposed to be taken by other key stakeholders, viz., Governments and other regulators.

iii) A gap analysis in achieving the policy targets, as set out in the respective tasks force/ working groups/ committees/ national strategies/ vision documents of the member countries: Countries should work towards filling these identified gaps.

iv) Scope for further adoption of Digital Financial services in near and long term, given the existing infrastructure and regulatory regimes.

(v) Existing impediments to adoption of various FinTech innovations for furthering Financial Inclusion, such as in KYC solutions, account opening, DBT, payments and remittances, platform ecosystems, etc. and plausible solutions for the same.

(vi) The major risks identified, faced and foreseen in FinTech solutions already deployed for Financial Inclusion along with the controls / policy regulations framed/ proposed for containing and mitigating those risks, etc.

Accordingly, the observations for each of the country, covering the above aspects are as under:

1. Afghanistan:

(i) Policy Initiatives underway: As alluded to earlier, for creating Unified Payment Channels and Services (UPCS) in Afghanistan, the National e-Payment Switch of Afghanistan in collaboration with the Central Bank undertook an initiative to encourage the operation and activities of Fintechs in Afghanistan in order to increase financial inclusion in Afghanistan. The major regulations by Da Afghanistan Bank, that would enable the leveraging of FinTech or financial inclusion include:

- Electronic Fund Transfer system (EFT) regulation also provides specific clear measures, applicable to both banks and EMIs regarding e-payments.
- Payment Institutions Regulation.
- Electronic Money Institutions regulation.
- Afghanistan interbank payment & security Settlement System (AIPSSS) policy for (Real-time gross settlement system (RTGS) - Automatic clearing House (ACH).
- Licensing and Oversight of Payment.
- Regulation On domestic payment operations in Afghanistan.

(ii) Recent steps by other key stakeholders, viz., Governments and other regulators:

(iii) Gap analysis: The legal and regulatory framework for payment systems in Afghanistan had significant improvements, yet several gaps are remaining unaddressed. Lack of a National Payments System Law, to create a legal framework for payment systems regulation, operation, and oversight has been one of the challenges. Besides, public financial management regulations limit the role of non-banks in the disbursement of government-to-person payments. The National Payment System (NPS) should be conducted to determine whether there is a need for amending the central bank law to make certain oversight powers more explicit and enact the legal definitions of key payment, clearing, and settlement terms in primary legislation.

(iv) Scope for further adoption of Digital Financial services:

(v) existing impediments:

(vi) Major risks identified, faced and foreseen:

2. Maldives:

(i) Policy Initiatives underway: In order to accelerate the level of financial inclusion in the Maldives, MMA is working on establishing the National Financial Inclusion (NFI) Strategy. The strategy will be formulated with broad consultation with both public and private sector stakeholders to achieve the desired objectives. The key objective of this strategy is to enhance the level of financial inclusion in the Maldives, by focusing on the access, usage and efficiency of the financial services. This comprehensive strategy will focus on key policy areas such as enhancing the access to finance, improving and enhancing consumer protection and financial literacy and promoting digital financial services in the Maldives. With respect to enhancing access to finance,

this strategy seeks to explore efficient mechanisms to facilitate alternative modes of financing. Thus, promoting and enhancing digital financial services in the Maldives along with the establishment of its regulatory frameworks.

In addition, MMA is currently in the process of implementing an Instant Payment System for the Maldivians under the Maldives Payment System Development (MPSD) project which would facilitate innovative, convenient, and affordable access to digital financial services through an instant payments system. The system infrastructure is being planned such that all banks and other Payment Service Providers (PSPs) will be linked to the system to facilitate real-time, 24/7/365 payments using smart addressing capabilities. An important component of the project includes implementation of a mobile platform which will act as a supporting infrastructure for the existing banks and potential payment service providers to enhance the access to digital payment services and accelerate financial inclusion. The development of the instant payment system, is expected to bring out the creativity of the incumbent PSPs, in addition to potential new entrants due to the level playing field the system aims to create for these service providers. As a result, a host of value-added services are anticipated to embrace the market, aided by the central infrastructure facilitated by MMA.

To ensure the successful implementation of the system, a comprehensive legal framework is essential to ensure smooth operation of the systems, as well as to align all participants of the system within a regulatory regime. Development of the regulatory framework is also being carried out parallelly under the Maldives Payment System Development Project.

As of May 2021, the National Payment System Act has been passed by the parliament and ratified by the President. The Act is due to come into effect in September 2021.

As part of the concurrent developments, the regulations and guidelines that are to be issued under this Act – such as Payment System Operators Regulation, Payment Service Providers Regulation, e-Money Regulation, to name a few – are on course to be published before the end of 2021.

(ii) Recent steps by other key stakeholders, viz., Governments and other regulators:

The establishment of SME Development Finance Corporation by Ministry of Economic Development as a specialized financial institution providing financial products to micro, small and medium enterprises is one such initiative towards bridging the gaps in the financial sector and to promote financial inclusion in the Maldives.

Prior to this, MMA had launched in 2016 a Credit Guarantee Scheme which was closed in 2021 and also established the Credit Information Bureau at the Authority in the year 2011, with the aim to facilitate access to finance to Small and Medium Enterprises (SME).

In addition, with the current developments in the modern dynamic financial system stemming mainly from technological innovations in finance, data security, etc., several other legislations are required to be established. Hence, the Ministry of Economic Development is in the process of drafting and finalizing the Laws on Electronic Transactions, Data Protection & Consumer Protection which would play a key role in enhancing the acceptance and usage of digital financial services in the country.

(iii) Gap analysis: The following gaps have been identified:

- The technological readiness of banks.
- Absence of an adequate legal and regulatory framework related to the payment systems, specifically, laws and regulations pertaining to the payment systems, electronic transactions, data protection, cyber security and consumer protection.
- The lack of ideal level of competition and the shallowness of financial markets are challenges to the development of both the financial sector and the payments ecosystem.
- Lack of financial literacy and consumer awareness.

(iv) Scope for further adoption of Digital Financial services:

Existing payment infrastructure and the legal and regulatory framework is a significant determinant of the level of adoption of Digital Financial services by consumers. Current infrastructure does not support the innovative payment solutions and the cost involved is very high. As per the current timeline, the Instant Payment System is expected to go-live during the first quarter of 2022. The regulatory framework will be also be revamped to provide an enabling environment for innovation and competition in digital financial services, thereby enhancing the adoption of Digital Financial services. In the long term, national payment system needs to be integrated cross borders allowing for further adoption of DFS.

(v) Existing impediments:

Absence of an adequate legal and regulatory framework, and lack of consumer awareness are among the key challenges for the adoption of new innovations. These

are important factors to build customer trust and confidence in new technologies. Similarly, the adoptions of such innovations are also hindered by consumer behaviour such as cultural habits.

(vi) Major risks identified, faced and foreseen:

Absence of an adequate legal and regulatory framework that provides a clear and sound legal basis to license, regulate and oversee financial market infrastructures (including payment systems & services, clearing systems and settlement systems). This poses many challenges in addressing the key risks involved in the provision of services such as technology risk, loss of funds & interoperability. However, MMA is in the process of developing the necessary guidelines/standards for regulating and supervision of payment service providers which will address these challenges. These regulations and guidelines are expected to be published before the end of 2021, prior to the go-live of the system.

3. India:

(i) Policy Initiatives underway: The Pradhan Mantri Jan Dhan Yojana (PMJDY), Launched in August 2014 was a watershed in the financial inclusion movement in the country. The programme leverages on the existing large banking network and technological innovations to provide every household with access to basic financial services, thereby bridging the gap in the coverage of banking facilities. Web portals like the 'Udyami Mitra' and 'psbloanin59minutes' have also been launched to provide easy access to credit, especially for the SMEs. To solve the problem of delayed payment to MSMEs, RBI had laid down guidelines for operationalization of Trade Receivables Discounting System (TReDS). TReDS was put in place to facilitate Electronic Bill Factoring Exchanges, which could electronically accept and auction MSME bills so that MSMEs could realize their of receivables without delay. Kisan Credit Card Scheme (KCC) was introduced in August 1998 as a revolving cash credit for ease of access and delivery. An exclusive fund viz., Financial Inclusion Fund (FIF) has been created to support, inter-alia, adoption of technology and capacity building. To widen financial inclusion, RBI has issued differentiated banking license viz., Small Finance Banks (SFBs) and Payments Banks in 2015, to further financial inclusion by, inter-alia, leveraging high technology-low cost operations. RBI has also taken several steps including encouraging use of mobile banking, pre-paid instruments such as digital and mobile wallets, digitising repetitive bill payments through BBPS, etc. Roll

out of the Business Correspondent (BC) Model in 2006 by RBI, to efficiently deliver financial services to the last mile, which has been finetuned over the years in order to build robustness in the financial inclusion sphere. Further, RBI has taken several initiatives to strengthen the BC model over the years.

(ii) Recent steps by other key stakeholders, viz., Governments and other regulators:

Jan Dhan Accounts, Aadhaar biometric ID and Mobile (JAM) are enablers which provide a unique opportunity to implement DBT in all welfare schemes across the country including States & UTs. The DBT has enabled efficiency, effectiveness, transparency and accountability in all Government to Persons (G2P) transfers.

The RBI, in August 2019, framed the 'Enabling Framework for Regulatory Sandbox', with an objective to foster responsible innovation in financial services, promote efficiency and bring benefit to consumers. The Reserve Bank opened the first cohort under the Regulatory Sandbox with 'Retail Payments', as its theme. Out of the 32 applications received, six were selected for 'test phase' who have started testing their products since then. The selected products for 1st cohort of RS focus on the offline payment solution and use of a basic feature phone for making payments and the test locations were chosen in a way to cover a Tier IV location and thus, it provides a suitable platform to test out products which have the potential to have far reaching affects in financial inclusion. Guidelines on carrying out the business of peer to peer lending platform, besides setting out eligibility criteria and prudential requirements, also mandate transparency, disclosure requirements, fair practices code, grievance redressal mechanism. The regulations aim to bring down potential risks while creating the right environment for legitimate expansion of business opportunities.

To give a fillip to insurance penetration and to facilitate innovations in the insurance sector, especially those triggered by technology, the Insurance Regulatory and Development Authority (IRDAI) notified the IRDAI (Regulatory Sandbox) Regulations and has since approved applications which covered concepts such as Wellness, Wearables, Group insurance, Usage Based Insurance, Loyalty / Rewards programmes, electronic platforms, KYC onboarding, Distribution, products, etc. Leveraging on technology, Web Aggregators and Insurance Repositories have been set up, which facilitate access and storage of insurance policy details and enable issuance of insurance policies in an electronic form. Key initiatives undertaken in the pension sector by the Pension Fund Regulatory and Development Authority (PFRDA) include expansion of New Pension Scheme (NPS) through increasing the channels of

distribution, developing capacity of the officials of its intermediaries and increasing awareness on old age income security and retirement planning. It has also leveraged on technology to drive efficiencies & improve ease of access to NPS for the subscribers and service providers.

(iii) Gap analysis:

The National Strategy for Financial Inclusion (NSFI) for India 2019-2024 has been prepared by RBI under the aegis of the Financial Inclusion Advisory Committee and is based on the inputs and suggestions from Government of India and other Financial Sector Regulators. It includes an analysis of the status and constraints in financial inclusion in India, specific financial inclusion goals, strategy to reach the goals and the mechanism to measure progress. The major challenges included therein are:

(a) Inadequate Infrastructure: Limited physical infrastructure, limited transport facility, inadequately trained staff etc., in parts of rural hinterland and far flung areas of the Himalayan and North East regions create a barrier to the customer while accessing financial services.

(b) Poor Connectivity: With technology becoming an important enabler to access financial services, certain regions in the country that have poor connectivity tend to be left behind in ensuring access to financial services thereby creating a digital divide. Technology could be the best bridge between the financial service provider and the last mile customer. FinTech companies can provide solutions to address this issue by focussing on feature phone based and offline financial services. The key challenge that needs to be resolved would be improving tele and internet connectivity in the rural hinterland and achieving connectivity across the country.

(c) Convenience and Relevance: The protracted and complicated procedures act as a deterrent while on-boarding customers. This difficulty is further increased when the products are not easy to understand, complex and do not meet the requirements of the customers such as those receiving erratic and uncertain cash flows from their occupation.

(d) Product Usage: While the mission-based approach to financial inclusion has resulted in increasing access to basic financial services including micro insurance and pension, there is a need to increase the usage of these accounts to help customers achieve benefits of relevant financial services and help the service providers to achieve the necessary scale and sustainability. This can be undertaken through increasing economic activities like skill development and livelihood creation, digitising

Government transfers by strengthening the digital transactions' eco-system, enhancing acceptance infrastructure, enhancing financial literacy and having in place a robust customer protection framework.

(e) Payment Infrastructure: Currently, majority of the retail payment products viz., CTS, AEPS, NACH, UPI, IMPS etc. are operated by National Payments Council of India (NPCI), a Company promoted by a group of public, private and foreign banks. There is a need to have more market players to promote innovation & competition and to minimize concentration risk in the retail payment system from a financial stability perspective. RBI has since released framework for authorisation of pan-India Umbrella Entity for Retail Payments.

(f) The National Strategy for Financial Education (NSFE: 2020-25), prepared in consultation with the concerned financial Sector Regulators and other relevant stakeholders, seeks to improve usage of digital financial services in a safe and secure manner by using technology, mass media channels and innovative ways of communication for dissemination of financial education messages. It also aims to effectively deploy the already existing delivery channels for disseminating financial education messages, newer modes of delivery channels such as social media platforms, community radios, technology kiosks, chatbots etc.

(iv) Scope for further adoption of Digital Financial services:

A Public Credit Registry (PCR) would enable better and faster underwriting standards for credit assessment and pricing by banks; risk-based, dynamic and counter-cyclical provisioning at banks; supervision and early intervention by regulators; and help in restructuring stressed assets effectively.

With a view to leveraging the digital channels for Customer Identification Process (CIP) by Regulated Entities (REs), the Reserve Bank has decided to permit Video based Customer Identification Process (V-CIP) as a consent based alternate method of establishing the customer's identity, for customer onboarding. Further, equivalent e-documents, including documents issued to the digital locker account of the customer, with valid digital signature of the issuing authority have been allowed for Customer Due Diligence (CDD) purpose. The ecosystem created under the Account Aggregator (AA) framework is yet another example of proactive regulation in the technology-intense activities. The AA framework has ushered in the required framework for safe, secure and consent-based sharing of information on financial assets of a customer. The Account Aggregator does not store or view the data passing through it, thereby

leaving no scope for any perverse incentive to abuse/ misuse the financial data. The account aggregator framework, may be promoted going ahead and leveraged to play a key role in giving FinTech lenders access to reliable financial data sets of a potential low-ticket borrowers for assessing the credit worthiness and credit needs of borrowers, with borrowers consent. This would enable newer access points for the borrower to meet his credit requirements.

RBI has also been flexible in according registered Non-Banking Financial Companies (NBFCs) to be completely app-based in financial intermediation. However, recently, it has been observed that banks and NBFCs having been lending either directly through their own digital platforms or through a digital lending platform under an outsourcing arrangement. In this connection, to address the concerns emanating from non-transparency of transactions, customer protection and violation of extant guidelines on outsourcing of financial services and Fair Practices Code, etc., banks and NBFCs have been advised to adhere to the Fair Practices Code guidelines in letter and spirit and follow extant regulatory instructions on outsourcing of financial services and IT services. Also, in cases where banks and NBFCs engage digital lending platforms as their agents to source borrowers and / or to recover dues, they must disclose on their website, the names of digital lending platforms engaged as agents. Such banks/ NBFCs are also advised to ensure effective oversight and monitoring over the digital lending platforms engaged by them.

Reserve Bank considers that the innovation of P2P Lending through Platforms facilitates direct interaction between small lenders and small borrowers, and hence it supports financial inclusion. Accordingly, the regulations set out by RBI for P2P lending, while encouraging orderly growth of the sector, has prescribed prudential & operational guidelines, guidelines on information technology framework, data security, technical specifications, grievance redressal, etc. P2P lending platforms are also required to adhere to fair practices code as well as required to become member of all Credit Information Companies and submit data to CICs.

With the growth of the internet and mobile phones, an explosion of data in several sectors of our economy is being witnessed. Likewise, in microfinance, a lot of formal and informal data is becoming available in the form of digital footprints by low income customers who also transact on e-commerce platforms and use the internet. These digital footprints can be further used by leading banks and online lending firms to lend to individuals and micro and small enterprises. Artificial intelligence (AI) and machine

learning are also finding greater application in the Indian banking and financial services industry. Also, instances of leading e-commerce companies tying up with banks and NBFCs to offer working capital loans to their suppliers at competitive terms are seen. Most of the suppliers are micro and small entrepreneurs. Keeping in view the need to increase transparency, address customer-centric issues and safeguard the interests of low-income customers, microfinance lenders must put the interests of their clients first and implement the Code for Responsible Lending and the Code of Conduct in both letter and spirit. Redressing consumer complaints quickly and effectively should be on top of the agenda for MFIs and the Self-Regulatory Organisations (SROs)[53].

The recommendations by the Expert Committee Report on Micro, Small and Medium Enterprises (MSMES) in India, which focus on leveraging FinTech may be taken up for implementation. The major recommendations by the Expert committee address the problem of non- availability of information; non-existence of any Unique Identification Number to correlate various information related to an MSME and the absence of standardized rating mechanism leads to lender specific assessment models, delaying the credit risk assessment. The Committee inter-alia, recommends that the RBI facilitate the creation of additional information sources from where a financial institution may download a report which includes a score for the entity based on additional factors including business risk, industry risk, management risk, and financial risk.. The Committee recommends that the RBI may enable the MSME to check the credit rating / Credit Monitoring Report (CMR) for their buyers, based on consent, through their primary banker. CMR being a strong indicator of liquidity risk, repayment track, specific behaviour pertaining to vintage and regency to credit, the Committee recommends the incorporation of CMR in the credit rating mechanism. TReDS is an effective mechanism to solve the problem of delayed payments and liquidity issues of MSMEs. The Committee recommended for creation of pooled API of all TReDS platforms providers that would enable the financiers to understand the past repayment history of buyers thus enabling them to take more informed decisions. Other suggestions such as promotion of digital signatures by partners & directors for acceptance and documentation; creation of a platform to upload digital documents for

[53] https://www.rbi.org.in/scripts/BS_SpeechesView.aspx?Id=1088

online stamping which incorporates compliance with state-wise stamp duty payments; Integration with online mortgage repository for ensuring end to end digital journey in secured cases and digital KYC which enables digital site visit with geo-location tagging, video KYC for ease & seamless on-boarding, may also be explored[54].

(v) Existing impediments: Innovation and Technology in the overall landscape have resulted in rise of FinTech entities which leverage technology to offer financial services. While these new entities have the potential to increase competition and provide the customer with greater choice through suitable products and easier processes, they may also exclude those customers who do not have the basic infrastructure like internet connectivity and access to smart phones. It is therefore imperative to have a balance between technology and agents to provide customers with adequate handholding. Since technology evolves very rapidly, oversight on the technology led institutions is of utmost importance and their regulation needs constant upgradation.

The NSFI notes the important of providing a robust and efficient digital network infrastructure to all the financial service outlets / touch points for seamless delivery of the financial services. The NSFI, inter-alia recommends to extend the digital financial infrastructure to co-operative banks and other specialised banks (Payments Banks, Small Finance Banks) as well as other non-bank entities. NSFI also lays emphasis on strengthening the eco-system for various modes of digital financial services in all the Tier-II to Tier VI centres to create the necessary infrastructure to move towards a less cash society and moving towards an increasingly digital and consent-based architecture for customer on-boarding. Though the efforts of the regulator and participants over a period has ensured widespread adoption of digital payments, there is still a long road ahead for migration of the country from predominantly a cash-based economy to a predominantly digital economy which is a work in progress.

The cost of digital payments is sometimes a deterrence for users to adopt digital payments as against cash which is perceived to be free by such users. In addition, the cost of installation of acceptance infrastructure, like Point of Sale (PoS) devices, dissuades certain small merchants to adopt them. Further, connectivity issues in remote areas hamper digital payments and offline payment solutions need to be

[54] Report of the Expert Committee on Micro, Small and Medium Enterprises https://www.rbi.org.in/Scripts/PublicationReportDetails.aspx?UrlPage=&ID=924#CH8

developed to overcome connectivity issues. There is also a gap area in terms of digital payment products for the non-smartphone users and hence there is scope for innovation which will offer digital payment products for the non-smartphone users. To provide further fillip to digitisation of payment systems, it was considered necessary to give impetus to acceptance infrastructure across the country, more so in underserved areas. For this purpose, the Payments Infrastructure Development Fund (PIDF) has been set up, which is intended to subsidise deployment of payment acceptance infrastructure, focussing on underserved areas and envisaging the creation of 3 million new touch points every year for digital payments.

(vi) Major risks identified, faced and foreseen:

Recognising the need for customer protection and grievance redressal, the NSFI seeks that customers shall be made aware of the recourses available for resolution of their grievances. About storing and sharing of customer's biometric and demographic data, adequate safeguards need to be ensured to protect the customer's Right to Privacy. With a large number of new customers included in the ambit of formal financial services, and with the emerging risks from digital financial services due to the incidents of cloning, hacking, phishing, vishing, SMiShing, pharming, malware etc. a strong customer protection architecture is vital. The Reserve Bank of India had issued a comprehensive set of instructions on Cybersecurity vide its circular dated June 2, 2016 on 'Cybersecurity framework in banks'. The circular *inter alia* covers the aspects of IT Governance, the baseline cybersecurity guidelines and guidelines on the setting up of Cybersecurity Security Operations Centre (C-SOC). These instructions also mandate the Regulated Entities to report any unusual cybersecurity incident to RBI within 2-6 hours on incident happening.

Besides the Banking Ombudsman Scheme, which was launched in 1995, and the Ombudsman scheme for complaints against deficiencies in services by Non-Banking Financial Companies, RBI introduced, in January 2019, the Ombudsman Scheme for Digital Transactions which covers complaints against all non-bank PPI issuers authorised to conduct digital transactions by RBI.

With the increased thrust on financial inclusion and customer protection and considering the recent surge in customer grievances relating to unauthorised transactions resulting in debits to their accounts/ cards, the criteria for determining the customer liability in these circumstances were reviewed and in 2017, wherein zero liability for customer has been laid down where the unauthorised transaction occurs

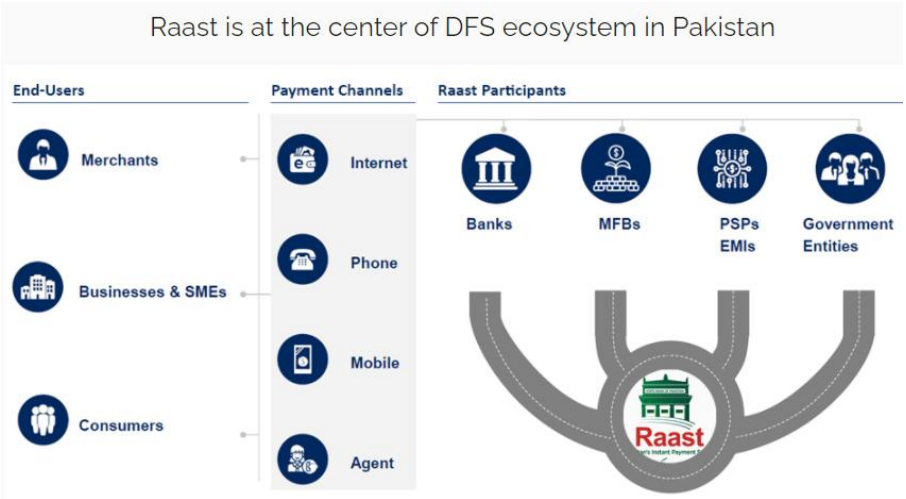
owing to Contributory fraud/ negligence/ deficiency on the part of the bank or third party breach where the deficiency lies elsewhere in the system. The provisions, initially applicable to scheduled commercial banks, have in January 2019, also been extended to cover authorised non-banks that issue PPIs.

With the recent spurt and popularity of online lending platforms/ mobile lending apps ('digital lending') has raised certain serious concerns which have wider systemic implications. Against this backdrop, a Working Group (WG) has been set up by RBI in January, 2021, to study all aspects of digital lending activities in the regulated financial sector as well as by unregulated players so that an appropriate regulatory approach can be put in place. The Terms of Reference (ToR) for the WG would include an evaluation of digital lending activities and assess the penetration and standards of outsourced digital lending activities in RBI regulated entities; identification of risks posed by unregulated digital lending to financial stability, regulated entities and consumers; suggest regulatory changes, if any, to promote orderly growth of digital lending; and recommend measures for robust data governance, data privacy and data security standards for deployment of digital lending services.

4. Pakistan:

(i) Policy Initiatives underway: The State Bank of Pakistan (SBP) has launched the RAAST, which is Pakistan's first instant payment system that will enable end-to-end digital payments among individuals, businesses and government entities instantaneously. The state-of-the-art Pakistan's Faster Payment System will be used to settle small-value retail payments in real time while at the same time provide a cheap and universal access to all players in the financial industry including banks and FinTechs.

Pakistan has had low electronic transactions for a number of reasons including low banking penetration, lack awareness of digital payment methods, interoperability, difficult accessibility and cost of transactions. The Real Time Gross Settlement System (RTGS) of Pakistan provides



instant payment settlements for large value and corporate transactions only. Raast, which is Pakistan's Instant Payment System will facilitate retail payment settlements with much great efficiency.

- The Security and Exchange Commission of Pakistan launched the first Peer-to-Peer (P2P) digital Lending Platform through the Regulatory Sandbox approach to support and encourage FinTech revolution in the country. The P2P lending helps the borrowers give out short-term loans that enable the SMEs to scale up their business, eventually qualifying them to take bigger bank loans. This current approval for testing and experimentation of a P2P Lending Platform in Pakistan is also attributed towards development of an ecosystem for SME financing to achieve higher growth prospects and to create new employment and business opportunities. During the testing/experimentation stage, the P2P lending platform shall operate within pre-defined parameters and is subject to certain terms and conditions. Furthermore, specific eligibility criteria shall also apply on selection of each lender/borrower on the platform. These terms and conditions have been imposed to address the inherent risks involved in the operation of such platforms in the absence of a regulatory framework. However, these terms and conditions shall be reconsidered parallel to the results of the experimentation stage of the subject P2P Lending Platform. This will help the SECP devise the much needed enabling regulatory framework.
- State Bank of Pakistan has issued regulatory framework to facilitate Business-to-Consumer (B2C) e-Commerce exports from Pakistan. Under the new regulatory framework, the mandatory requirement of 'Export' (E) form has been done away with and now an exporter can export goods up to USD 5,000/- per consignment without the requirement of 'E' Form. This step will facilitate exports in small quantities directly to the consumers. This will also help small entrepreneurs and exporters (including FinTechs) who typically export varied goods in small quantities and find it cumbersome to fulfill the detailed requirements of E Form that is mainly designed for bulk exports.

(ii) Recent steps by other key stakeholders, viz., Governments and other regulators:

In Oct-2019, Pakistan launched its first e-Commerce policy framework, with a vision to create an enabling environment for holistic growth of e-Commerce across all sectors of the country. As per statistics, e-commerce sales in 2017 were Rs 20.7bn, which grew by 93.7 pc to Rs 40.1bn in 2018. In terms of overall online business (of which e-commerce is just a part), there is huge untapped potential for further growth; take for example the freelance market which shows Pakistan in top four countries in the list of fastest growing freelance markets. Under the policy, there is a gradual shift of cash-on-delivery (CoD) payment method to digital payments, with a time line of September 2022 for payments beyond Rs 10,000. Furthermore, efforts will be made to convert all CoD payments into digital payments preferably within 10 years (2029). Currently, 60pc e-commerce transactions by value are post-paid CoD transactions. Under the framework, a National e-Commerce Council will be established and the re-export of faulty goods will be allowed. It has also been decided to allocate e-commerce to the commerce division and review and follow international best practices in taxation. The e-procurement model will also be introduced.

The intended goals of the e-Commerce policy framework include:

a. To augment e-Commerce industry's growth and to make it one of the key drivers of Pakistan's economy.

b. To provide a single interface to e-Commerce enterprises through a single window hub and National e-Commerce Council for review and implementation of Policy.

c. To streamline laws and regulatory framework for e-Commerce businesses in Pakistan both inland and cross border keeping in view the ever-changing e-Business dynamics.

d. To contribute achieving higher export growth through enhanced activities from e-Commerce platforms.

e. To promote small e-businesses and create employment opportunities through digital connectivity for empowering youth, especially in remote areas by raising awareness, training and financing.

f. To provide an efficient e-Payment infrastructure that allows for smooth and quick local and cross border transactions by issuing rules, regulations and guidelines.

g. To create enabling environment for e-businesses to operate and flourish by addressing challenges and gaps more specifically related to legal systems, taxation structures and digital infrastructure.

h. To create such an e-Commerce ecosystem, which is responsive to consumers' interests, including dispute resolution.

i. To ensure transparency and accountability in digital industry.

The policy framework will facilitate Pakistan's implementation of SDG-8 (Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all), SDG-9 (build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation) and SDG-12 (Ensure sustainable consumption and production patterns).

(iii) Gap analysis:

(iv) Scope for further adoption of Digital Financial services:

(v) Existing impediments:

(vi) Major risks identified, faced and foreseen:

5. Nepal

(i) Policy initiative underway- although there is no specific FinTech policy in Nepal, some key policy initiatives from Government and Nepal Rastra Bank are:

- Payment and Settlement Act, 2018 promulgated – the act among other things has provisions to promote, develop, oversee and regulated the payment service providers and payment system operators.
- Payment and settlement bylaw, 2019 is formulated on the basis of payment and settlement act
- Licensing policy for Payment service providers.
- Adoption of Digital Nepal Framework, 2019 by the Government of Nepal. Under the Digital Nepal framework, eight sectors – digital foundation, agriculture, health,

education, energy, tourism, finance and urban infrastructure – have been identified based on close engagement with stakeholders. Eighty digital initiatives are identified which aims to propel socioeconomic growth in Nepal by addressing crucial challenges while unlocking the growth potential in each of the eight key sectors (source : Digital Nepal Framework, 2019)

- Retail payment strategy, 2019 is in implementation. The strategy is focussed on creating an enabling framework for the development and widespread use of digital payment services in Nepal. The key components of the strategy are (i) strengthening the legal and regulatory framework, (ii) deepening digital retail payment systems, (iii) Government and remittances payment to transaction account, (iv) settlement in central bank money, (v) financial awareness, (vi) oversight- covering endpoint security, and (vii) coordination with authorities (source: Retail Payment Strategy,2019).
- Adoption of Financial Sector Development strategy, 2017 adopted by the council of ministers.
- Adoption of National Payment System Development Strategy, 2014 by NRB.
- NRB has given priority to digitization of financial sector in monetary policy. The key focus area is digital payment.

(ii) Recent steps by other key stakeholders, viz., Governments and other regulators

- Government has allowed its revenues to be collected through electronic wallets. Most of the government payment happens through banking channel.
- Nepal stock exchange has introduced electronic transaction platform.

(iii) Gap analysis:

1. Poor infrastructure - given the difficult geographical terrain of Nepal, it is very hard to provided infrastructure conducive to FinTech development. Specially providing electricity and mobile network to all part of Nepal is challenging.
2. Concentration of service providers in urban area including the agent networks.
3. Low level of literacy- people find it hard to use FinTech that is available in the market due to their ignorance of technology.
4. Cost - since providing FinTech solutions incurs cost in technology and manpower institutions that are catering different services find it hard to inject huge capital given extreme competition in the market and limited customer base.

(iv) Scope for further adoption of Digital Financial services:

1. High mobile penetration can lead to use to mobile financial services especially mobile wallet
2. Streaming high volume and recurrent payments in digital channel will increase the use case of digital payment services.
3. Digital lending is still in infancy in Nepal. Thus there is huge opportunity for digital lending
4. Cross border payment is major issue. Nepal is highly reliant on remittances for foreign exchange.

(v) Existing impediments:

1. Digital exclusion between the citizens with access to information communication technology and those who live in far flung areas.
2. Poor infrastructure
3. Investment in Cyber security and data security is lacking because of cost factors.
4. Lack of interest in customers on digital finance due to various reasons, primarily habit and reluctance to bring informal transaction to the formal channel due to taxation issues.
5. Lack of interoperability between service providers.

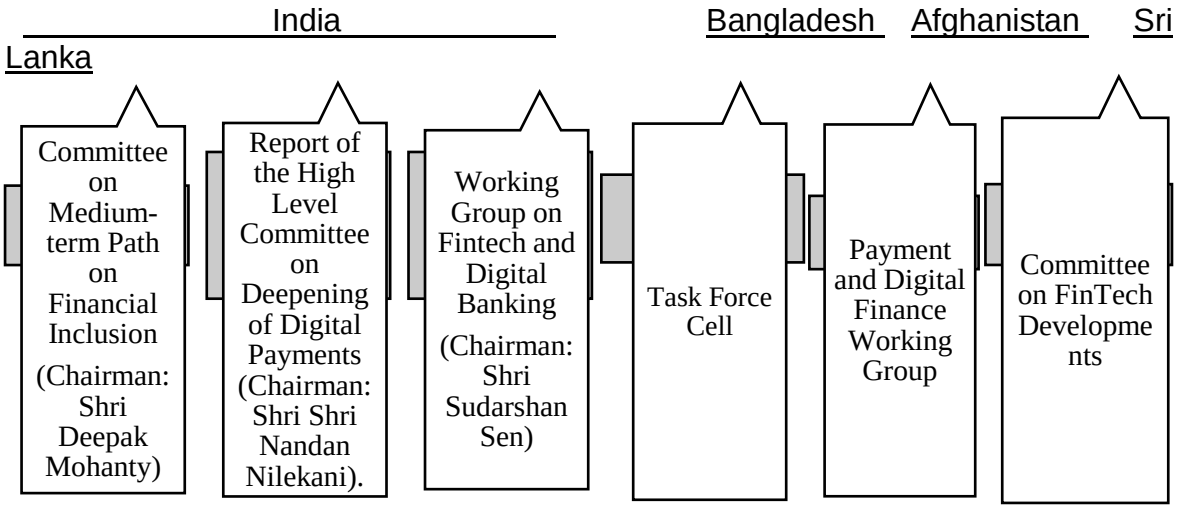
(vi) Major risks identified, faced and foreseen:

1. Cyber Risk
2. Concentration of services by few service providers.
3. Customer grievance leading to discontinuation of digital finance on customers part
4. Digital exclusion where vulnerable section of society would be left out of the financial services because of the technology involved and less cash scenario.

Annexure

I. Official Committee/Working Group to Look into Fin-Tech issues

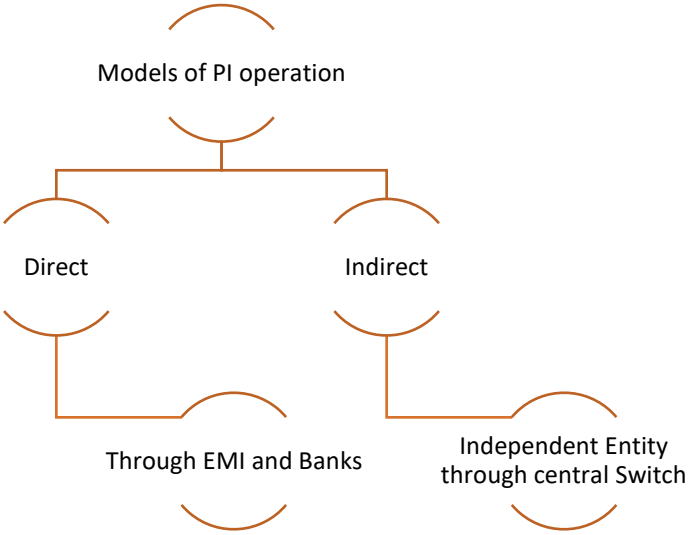
India had set up three major committees in last five years. Similarly, Bangladesh, Sri Lanka and Afghanistan had set up committees. The major committees set up by the SAARC central banks are given in figure 1.



II. Major initiatives by SAARC countries

i. Creating Unified Payment Channels and Services (UPCS) in Afghanistan

The National e-Payment Switch of Afghanistan in collaboration with the Central Bank undertook an initiative to encourage the operation and activities of Fintechs in Afghanistan in order to increase financial inclusion in Afghanistan. Bringing these Fintech companies into the financial market provides greater access to formal financial services, the initiative banks have failed to undertake that's mainly due to the poor agent network, limited branches and lack of investment in e-channels. The model brings payment institutions to a regulatory environment as independent drivers of financial inclusion. These institutions can with this model work independently, without relying on banks. Expand e-Payment channels acceptance, Accessibility to formal financial services, Gain Big Data



Taking the two models into account, in Afghanistan we suggest the Indirect Model for PIs integration with the eco-system. All payment institutions shall get integrated to other financial and non-financial institutions through a central switch that in case of Afghanistan is Afghanistan Payments System (APS), the National e-Payment Switch of Afghanistan.

Distribute Payment channels (Human agent & e-Channel), Do KYC , Provide payment services (utility bill payment, tax and revenue payment, cash in/out services, fund transfer, account inquiry services and etc. are the desired functions of PIs.

The major deliverables and advantages are, increased number of payment channels, increased number of payment instruments, broader banking services, increased number of banked population, financial Inclusion, cost savings through increased efficiency and speed (baseline) and transparency and security by increasing accountability and tracking. Data Privacy Concerns, Operational risk and Systemic Risk are major risks. To mitigate the risks, data privacy policy to address system and human agent related risks, regulatory innovation to address regulatory concerns on “Inter-bank domestic transactions”, dveloping AfPay Dispute Management Framework and develop “Infrastructure & Cyber Security” regulation are undertaken.

ii. United Payments Interface (UPI) – the India experience so far

UPI is an instant real-time payment for facilitating inter-bank transactions. Developed by the National Payments Corporation of India, the UPI was launched on a pilot basis in April 2016. The interface is regulated by the Reserve Bank of India and works by instantly transferring funds between two bank accounts on a mobile platform.

Features

Unified Payments Interface is a real time inter-bank payment system that allows sending or requesting money. The payment and transfer of funds from and to UPI enabled banks can be made using a mobile application. Any UPI client app may be used and multiple bank accounts may be linked to single app. Money can be sent or requested with the following methods:

(i) Virtual Payment Address (VPA) or UPI ID: Send or request money from/to bank account mapped using VPA.

(ii) Mobile number: Send or request money from/to the bank account mapped using mobile number.

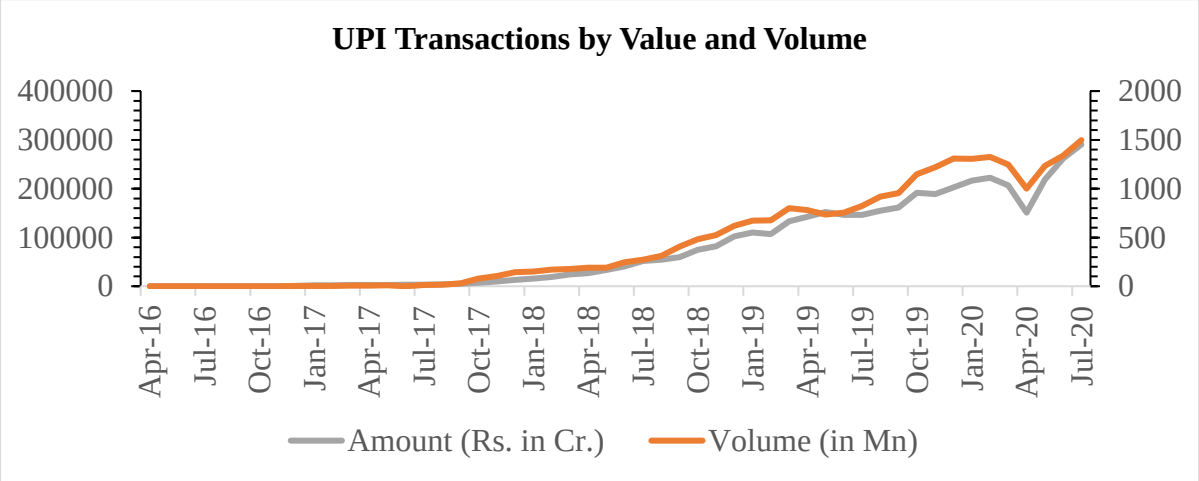
(iii) Account number & IFSC: Send money to the bank account.

(iv) Aadhaar: Send money to the bank account mapped using Aadhaar number.

(v) QR code: Send money by QR code which has enclosed VPA, Account number and IFSC or Mobile number.

UPI was introduced with 21 banks in April 2016. Since then many banks have been joining the platform. As of July 2020, 164 banks were live on the UPI platform growing from 155 banks in June 2020.

UPI transactions in numbers



The UPI transactions by volume and value have also been growing steadily over the years, gaining pace especially in the last two years. In July 2020, UPI-based payments clocked a record 1.49 billion transactions, as compared to 822 million transactions a year before. The transactions in value terms amounted to Rs 2.9 trillion in July 2020, compared with Rs 2.61 trillion in June and Rs 1.46 trillion a year ago. This data signals

a revival for digital payments which had declined due in April-May, 2020 due to the ongoing pandemic. With the ease in lockdown restrictions, the transactions had bounced back to pre-pandemic levels in June 2020.

Since its launch in 2006, UPI has been hitting many milestones of growth and is fast becoming the preferred mode of payment among Indians. Increasing developments to UPI has the potential to change the digital finance landscape in the country. Steps taken to enhance the number of financial services provided, increase interoperability and improve convenience and safety, is likely to increase adoption by users and bring more first-time users in its fold.

iii. National Financial Inclusion Strategy (NFIS) and National Payment Systems Strategy of Pakistan

National Financial Inclusion Strategy

To promote financial inclusion, the SBP adopted a five-year comprehensive National Financial Inclusion Strategy (NFIS) 2020 back in 2015 which pursued the target of opening of digital transaction accounts of 50% adult population by 2020. NFIS 2020 made significant developments on the front of digital financial inclusion including creation of enabling legal and regulatory environment, introduction of innovative products & services and initiation of capacity building & awareness programs. Some of the key initiatives taken under the **NFIS 2020** include:

- Issuance of Mobile Banking Interoperability Regulations and revisions in Branchless Banking (BB) Regulations.
- Development of National Payment Systems Strategy (NPSS)
- Development of Asaan Mobile Account (AMA) Scheme for interoperability of BB Accounts on the USSD channel.
- Establishment of DFS Innovation Challenge Facility (ICF)
- Development of a scheme for promotion of home remittances through Mobile Wallet (M-Wallet)
- Promotion of Govt-to-Persons Payments (cash transfers, salaries and pensions) through bank accounts
- Real-Time and hassle free opening of bank accounts through USSD / Mobile apps

- National Financial Literacy Program (NFLP) to impart basic financial education among low-income segment.
- Increased penetration of financial services in unbanked geographies through agent-assisted banking

As a result of these initiatives, unique account ownership in Pakistan has reached 60 million accounts with 60% active accounts as of December 2019, surpassing the headline target of NFIS 2020 well before the deadline. To continue SBP's commitment towards establishment of an inclusive financial system, the NFIS 2020 was further extended to 2023, which is focusing towards enhancing the usage of digital payments to the next level and create a behavioral shift towards adoption of digital financial services. The NFIS 2023 action plan places key importance towards leveraging technology for expanding digital access points and enhancing use of digital payments and financial services.

The implementation of these actions will not only facilitate the achievement of NFIS 2023 target of 65 million active digital transaction accounts, but it will also improve access to a host of financial opportunities in far flung areas to facilitate the development of a fully functional digitized eco-system in Pakistan.

National Payment Systems Strategy

With the core aim to increase adoption of digital payments in the country, State Bank of Pakistan launched the National Payment Systems Strategy on November 1 2019. The strategy provides a roadmap and makes recommendations to design a digital National Payments System that is in line with best practices and international standards such as the Committee on Payments and Market Infrastructures (CPMI), International Organization of Securities Commissions (IOSCO) and Principles for Financial Market Infrastructures (PFMI).

The World Bank estimates that by implementing the NPSS action items and migrating to electronic means, Pakistan's GDP will increase by 7 percent. Moreover, approximately 69.3 million more adults are expected to be provided with transactional accounts, and by digitizing G2P cash transfers, as many as 3.4 million new adults will become recipients of electronic payments. The NPSS identifies the six major areas of intervention, along with the number of recommendations in each area.


Legal & Regulatory Framework
National Payment System Infrastructure
Retail Payments
Government Collections and Payments
Remittances
Oversight & Cooperation
National Payment Systems Strategy