

Financial Inclusion in the technology-led globalization age

Cross-border retail payments and prospects for the Arab region

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Financial Inclusion in the technology-led globalization age

*From cross-border retail payments standpoint and
prospects for the Arab region*

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Acronyms and Abbreviations

AMF	Arab Monetary Fund
AFI	Alliance for Financial Inclusion
AML	Anti-Money Laundering
AISP	Account Information Service Provider
APIs	Application Programming Interfaces
ATM	Automated Teller Machine
BMGF	Bill and Melinda Gates Foundation:
B2B	Business-to-business
B2C	Business-to-consumer
BIS	Bank for International Settlements
BTCA	Better Than Cash Alliance.
CBDC	Central Bank Digital Currencies
C2B	Consumer-to-business
C2C	Consumer-to-consumer
CFT	Countering/Combating the Financing of Terrorism
CGAP	Consultative Group to Assist the Poor
CLS	Continued Linked Settlement
CIPS	Clearing House Interbank Payments System
CPMI	Committee on Payments and Market Infrastructures
CTF	Counter Terrorism Financing
DFS	Digital Financial Services
DLT	Distributed Ledger Technology
DNS	Deferred Net Settlement
DvP	Delivery versus Payment
EACHA	European Automated Clearing House Association
ECB	European Central Bank
e-KYC	Electronic Know-Your-Customer

EMEA	Europe, the Middle East and Africa
EMDE	Emerging Market and Developing Economy
EMI	Electronic Money Issuer
FATF	Financial Action Task Force
FIARI	Financial Inclusion for the Arab Region Initiative
FMI	Financial Market Infrastructure
FPS	Faster Payments Service
FSB	Financial Stability Board
FX	Foreign Exchange
G7	Group of Seven
G20	Group of Twenty
GDP	Gross Domestic Product
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPFI	Global Partnership for Financial Inclusion
Gpi	Global Payments Initiative
G-SIFIs	Globally Systemically Important Financial Institutions
GSMA	GSM Association
ICT	Information and Communication Technology
ICT	Information and Communication Technology
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
INN	Interbank Information Network
IOSCO	International Organization of Securities Commissions
IPFA	International Payments Framework Association
ISO	International Organization for Standardization
KYC	Know Your Customer
LEI	Legal Entity Identifier
MFS	Mobile Financial Service

PMI	Payment Market Infrastructure
PSP	Payment Services Providers
PvP	Payment versus Payment
RMA	Relationship Management Application
RTGS	Real Time Gross Settlement
RTP	Real-Time Payment
SEPA	Single Euro Payments Area
SLA	Service-Level Agreement
SWIFT	Society for Worldwide Interbank Financial Telecommunication
UETR	Unique End-to- End Transaction Reference
MNO	Mobile Network Operator
MPSP	Mobile Payment Services Provider
MSME	Micro, Small and Medium-sized Enterprise
MTO	Money Transfer Operator
NPCI	National Payments Corporation of India
PAFI	Payment Aspects of Financial Inclusion
P2B	Payment to Business
P2P	Person-to-person
PFMIs	Principles for Financial Market Infrastructure
PISP	Payment Initiation Service Provider
POS	Point of Sale
PPSP	Payment processing service provider
QR	Quick Response
RSP	Remittance Services Provider
SEPA	Single Euro Payments Area
SCT	SEPA Credit Transfer
SCT Inst	Instant SEPA Credit Transfer
SDG	Sustainable Development Goal

SME	Small and medium-sized enterprise
SSB	Standard Setting Body
TCH	The Clearing Houses
TPP	Third Party Provider
UPI	Unified Payments Interface
WBG	World Bank Group
WEF	World Economic Forum

1. Executive Summary

The importance of financial inclusion to development is nowadays widely recognized in the international development community and by policymakers in developed and developing economies. Globally, there is still an estimated of 1.7 billion adults do not have access to a transaction account that can be used to receive payments and make deposits. Given this fact, the Arab region's financial services industry and policymakers have taken over the past five years significant steps to recognize and address challenges to meaningful financial inclusion.

In this context and as the region refines its financial inclusion strategies and while many foundations and drivers exist for achieving financial access objectives, it appears that the potential impact of modernizing payments systems in the region and expanding digital financial services through a more extensive acceptance of electronic payments is substantial. This will particularly be welcomed as a proxy to promote financial inclusion across the Arab region and globally.

On another hand, cross border payments are becoming increasingly more prevalent in today's global economy at a time where the dynamism digital innovation has brought new opportunities. This is also acute for cross-border retail payments as we may soon live in a world where not only large corporates, but also retailers, SMEs, and individuals use international payments regularly, using a range of solutions and providers through integrated commerce or trade interfaces. Particularly, the continued expansionary growth in remittances flows and e-Commerce, both B2B and P2B further highlights the need for more attention to be placed on cross-border retail payment activities and how the ecosystem is evolving and finding efficiencies with which to facilitate such transactions.

In this regard, the need to diversify payments systems platforms and payment service providers to facilitate seamless cross-border payments at scale in the Arab region has never been greater, given that digitally enabled financial inclusion can help bring 63 percent of the

Arab region's individuals and MSMEs into the formal financial sector. Particularly the youth (79 percent of 15 to 24-year-olds), the poorest 40 percent in terms of income (72 percent), and women (74 percent); all of whom display the greatest potential in terms of access to and use of financial services.

Moreover, the region is home to a forecasted record-level of remittance flows of USD 58 billion in 2018, while this potential is facing several challenges as for instance the average cost of remittances to the region still stands at 7.4 percent, more than twice the SDG target of 3 percent. Therefore, there is further potential to explore business opportunities for regional remittances.

In addition, the economic and financial trends in the region point towards an acceleration of low-value payment flows, considering the growing international trade and labor & capital mobility within the region. This trend is expected to continue due to the multi-lateral policy initiatives aimed at enhancing intra-Arab regional economic growth. In fact, the Arab region presents an attractive hub for low value payments which comprise 70 percent of total transactions received in 2018, mainly originating from the European Union, European countries and North America. Moreover, the low value payments also comprise an important share of total transactions within the region, estimated at 60 percent in 2018, with the GCC being the main originator of such flows.

However, cross-border payments regionally are facing increasing pressure. Indeed, traditional channels and tools are facing increased stringency for compliance requirements but also risks and challenges from fast-growing technology companies who have developed new business models that are attracting new customers and increasing their market share, especially in the context of the emergence of disruptive technologies, which is, from another angle, challenging Central Banks' ability to trace and oversee cross-border transactions. In effect of the above challenges, high transaction fees, lengthy compliance

processes and long end-to-end transfer times are the main pain points associated with the current cross-border payments models.

To this end, new technology and regional arrangements may complement the traditional channels and provide a more inclusive and efficient gateway to payments and cross-border remittances for both individuals and businesses alike. In addition, technological infrastructure is developing, such as faster payment systems, along with the potential for more transparent and simpler product offerings enabled by richer data and lower-cost processing. These new building blocks may make a difference on their own and, more importantly, may be combined in powerful ways to bring end-to-end solutions to financial inclusion.

Although a single global payment area is not likely to emerge any time soon, parties should nonetheless be able to pay everywhere, despite varying standards and infrastructures. In this perspective, this study highlights some of the key channels through which cross-border retail payments are made, provides an overview of the various interactions and dimensions of cross-border retail payment in the Arab region, touches on developments in the industry and the ongoing efforts to promote cross-border funds transfer in the context of increasing role of regional cross-border payment and settlement platforms.

Finally, this study explores various prospects and opportunities that Buna Platform, an Arab regional payment and settlement platform, can provide in expanding access and usage of financial services, provides some high-level recommendations on what need to be implemented at both policy level and market players, including the development of mobile payment platforms as well as a regional digital settlement currency, all with ultimate objective of support to the financial inclusion agenda in the Arab region.

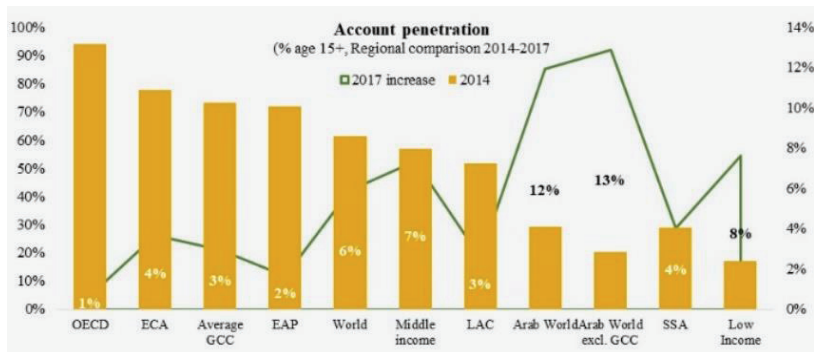
2. Overview of Financial Inclusion in the Arab Region

Financial inclusion of vulnerable and underserved populations, including small and medium-sized enterprises (SMEs), is a prerequisite for unlocking economic opportunities and enabling inclusive and strong development. Fostering financial inclusion has always been the core of the global community development agenda with a particular focus on vulnerable and underserved groups and on addressing their needs by leveraging digital and innovative technologies to boost the financial wellbeing of individuals. Despite significant progress over the past 10 years within the G20 to advance financial inclusion worldwide, challenges persist, as there are still more than 1.7 billion adults who are unbanked, most of which are disproportionately youth and women.

2.1 Arab financial inclusion at glance

Drawing from the World Bank Findex database for 2017, the Arab world has witnessed over the past few years tangible progress in financial inclusion, including substantial changes to legal and regulatory frameworks that lead to double-digit growth in account ownership in many Arab countries (Figure 1). The regional improvement is primarily driven by large-population countries that recorded a significant increase in account ownership (Iraq, Egypt) or those that are included for the first time in the database (Libya).

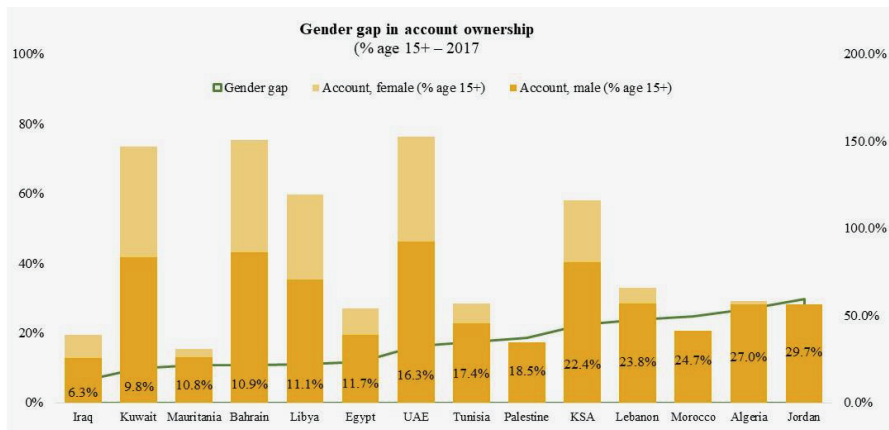
Figure 1: Account penetration – Regional comparison



Data source: Findex database 2014-2017 and AMF calculations

Even as account ownership continues to grow and despite progress compared to 2014 and 2011, gender gap persists in the region as only 35 percent of women have an account while 52 percent of men do (Figure 2). The 17-percentage points gender gap in the Arab world is the largest of any region.

Figure 2: Gender gap in account ownership in some Arab countries



Data source: Findex database 2017

Despite low participation in and access to formal financial services, robust participation in informal financial activities and in cash-based transactions points to a ripe opportunity to improve household wellbeing and bolster national economic activity by extending suitable formal financial services to individuals and small businesses. Certain nascent and emerging solutions are promising but also are currently undersupplied; these include Microfinance Institutions, postal networks, and robust DFS.

The combination of diverse national contexts in close proximity with certain shared commonalities, renders the Arab region uniquely positioned to pursue collaborative financial inclusion efforts. Despite this potential, the region has lagged compared to other regions, showing spotty access to payment infrastructures and systems. This places the Arab Region at the forefront of deriving new solutions to

these challenges. Innovations in cross-border payments and regional payments infrastructures offer promising solutions to the challenges faced by expatriates, for both individuals, SMEs and governments.

2.2 Transaction account: A proxy for financial inclusion

A transaction account, in addition to being a financial service in itself, can serve as a gateway to other financial services. It can particularly facilitate credit underwriting and non-financial services, such as supply chain automation, inventory management, customer loyalty programmes, data analytics and other business support services. But retailers who currently do not accept electronic payments may not see the benefits of doing so and/or perceive too many obstacles; thus, offering non-payment services that respond to their core business needs, coupled with a payment functionality, can be one strategy to boost financial inclusion. This would not only increase adoption and use of transaction accounts, but also enable access to other financial services.

Recognizing the transformational potential of financial inclusion for economic development, the AMF and its partners in the framework of the Financial Inclusion for the Arab Region Initiative (FIARI) put forward an ambitious goal of financial access in the Arab region by focusing on digital financial services. The goal envisions that all working-age adults have access to a transaction account held with banks or other authorized and/or regulated service providers (including non-banks), which can be used to make and receive payments and safely deposit funds.

2.3 The region digital-based financial inclusion policy objectives

Growing ranks of several stakeholders in the Arab region, including governments, non-governmental organizations, and commercial enterprises now recognize that the provision of financial products and services has historically excluded many of the most vulnerable populations, in particular low-income individuals and families, people

under difficult circumstances and small businesses. Not only has this exclusion threatened the personal wellbeing of individuals and households, but it has also impacted the robustness of healthy and sustainable economic growth. To address these repercussions, these same stakeholders have taken up the matter of financial inclusion in the region.

Then, in addition to overarching goals foreseen by the global community, the AMF and the Council of Arab Central Banks and Monetary Authorities' Governors, through a range of committees and initiatives including the Arab Financial Inclusion Task Force, Financial Inclusion for the Arab Region Initiative (FIARI) and the Arab Committee on Payment and Settlement Systems, have decided in October – November 2019 to reflect in their work programmes going forward the three priorities set by the Global Partnership for Financial Inclusion (GPII) under the Saudi Presidency, namely (i) advancing youth's digital financial inclusion, (ii), empowering women through digital financial inclusion, and (iii) promoting digital and innovative SME financing.

In this regard, intermediary goals, covering a wide range of relevant financial inclusion policy domains have been set, including among others: (i) Financial inclusion data and measurement to support evidence- based policy making; (ii) digital payments and e-money, (iii) Cross-border retail payments, connecting payment gateways and improving the processing of international remittances, (iv) Risk-based digital financial inclusion and tiered e-KYC, and (v) Effective financial consumer protection as well as strengthened digital and financial literacy.

3. Overview of Cross-Border Payments and Retail Market

To date, cross-border transactions accounted for \$24.8 trillion in value in 2019 and are expected to continue to steadily grow in the future by 5.5 percent per year to reach \$30.2 trillion in 2022, the bulk of which will consist of corporate payments¹. The value of global cross-border payments in the retail sector was predicted to increase from 1.9 trillion U.S. dollars in 2016 to 3.6 trillion U.S. dollars in 2022. The increase in cross-border payments volume is primarily driven by the rise of international trade, the internationalization of production, the growth of both B2B and P2B cross-border retail payments as well as cross-border e-commerce which exceeded \$3 trillion in 2017 (about 13 percent of global trade)². Moreover, the current global annual average for cross-border transactions is 0.7 per capita, up from 0.5 in 2014.

Furthermore, the average value of total cross-border payments is 1.8 times the global nominal GDP, although this multiple varies between geographies, ranging from 0.7 of nominal GDP in Latin America to 5.5 in Western Europe. Current trends suggest that the demand for cross-border payments will continue to grow, however, cross-border payments remain slow, expensive, and lack transparency relative to many domestic payment systems. As such, there are tangible disruptive opportunities for incumbents and emerging FinTechs to exploit and enable cross-border payments more specifically in emerging countries.

Indeed, new business models and service providers have begun to emerge, offering cross-border payments to retail market segments. At the same time, the number of active correspondent banks globally is in decline as we have witnessed an 8 percent decline in active correspondent banks globally between 2011 and mid-2017.³ These contrasting developments, which affect money transfers across

¹ Source: Statista, [here](#)

² CPMI-BIS, cross-border retail payments, 2018 [here](#)

³ Source: Correspondent banking data report, FSB, March 2018, [here](#)

markets globally, have positioned cross-border payments as a priority for businesses, commercial banks and regulators alike.

3.1 How cross-border payments work today

The cross-border payments market is complex, involving many different parties, use cases and underlying arrangements. Correspondent bank is defined as “a financial institution that provides services on behalf of another, equal or unequal, financial institution – It can facilitate wire transfers, conduct business transactions, accept deposits and gather documents on behalf of another financial institution”.

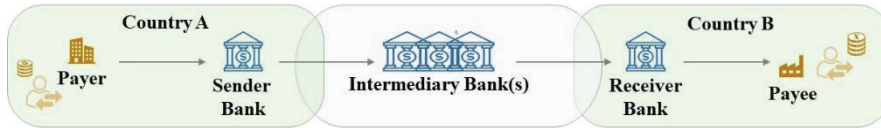
Typically, a cross-border payment is a transaction in which funds are sent from an entity in one country to a recipient in another country. It is generally settled via correspondent banking, which involves at least two banks establishing reciprocal accounts with each other. Most of the world’s major banks maintain correspondent banking relationships with local banks in each of the leading cities of the world. This two-way link between banks is one of many interbank relationships, such as nostro/vostro accounts⁴ and the selling of cash management and treasury services to other financial institutions. The institution providing the services is the correspondent bank or upstream correspondent, while the institution buying the services is the respondent bank or downstream correspondent.

For example, a French bank obtains correspondent banking services from an American bank that holds a nostro account on behalf of the French bank, where the funds in the account are denominated in USD. On the other hand, the American bank has a reciprocal account in the French bank, called the vostro account in which the funds are denominated in EUR. Essentially, financial institutions (FI) are

⁴ Nostro and vostro are two different terms to describe the same bank account, an account held by one bank to another is referred to by the holding bank as nostro account, and the same account is referred to as a vostro account by the counterpart bank

holding balances with each other, making correspondent banking relationships highly interdependent.

Figure 3: Standard model of cross border payment flows



Today, at least 80 percent of bank-to-bank cross-border payments currently take place through traditional correspondent banking arrangements or via intra-bank transactions.

3.2 Key trends and challenges of cross-border payments

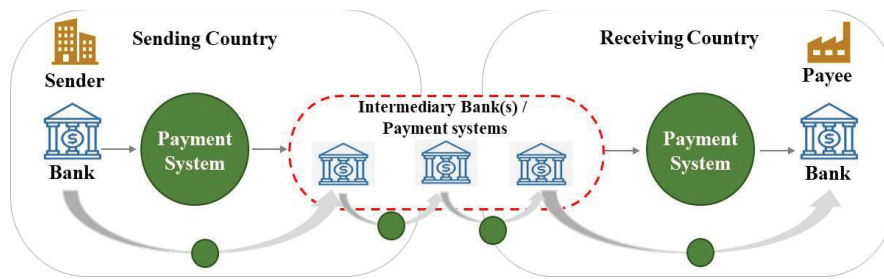
Payments sent from one country to another are less efficient in terms of cost and time than domestic payments, partly because cross-border payments are more complex, riskier, and more regulated than domestic payments, but also because they exhibit lower economies of scale and scope. Indeed, receiving money internationally is a complicated process since there is no single omnipresent system in place for routing money across borders. In addition to the multiple actors in settling cross-border payments, many other elements, arrangements and processes need to be in place to enable the settlement of cross-border payments.

3.2.1 Multiple actors add complexity to payment processes

Most cross-border transactions are made through a network of correspondent banks, which is the way most jurisdictions make cross-border payments and correspondent banking cross-border transactions can involve multiple banks during the transaction process. In the most basic terms, the correspondent holds deposits owned by other respondent banks and provides payment services to those banks. Essentially, this is a bilateral agreement between the two banks in which they provide services to each other.

In the article ‘There is no such thing as an international wire’, Glenbrook’s Erin McCune explains that “International correspondent banking is, in essence, a giant, decentralized network. Each bank makes a decision as to how it wants to handle cross-border payments for its customers. These decisions can be, and often are, different for paying and receiving funds, and for different countries/currencies, or categories of payments (e.g., B2B payments vs. person-to-person remittances).” Basically, payments executed through banks most typically require two transactions in two national payment systems.

Figure 4: Challenges of cross-border payments



While correspondent banking enables cross-border payments across jurisdictions, the ways these payments are made can be source of some key challenges. Payments are slow to process, entail high transaction costs and leave exposure to foreign exchange (FX). High-value cross-border transactions through correspondent banking are exposed to settlement risk because financial institutions often lack real-time visibility into the settlement process, which could possibly create a chain reaction that leads to a default. There is additionally a lack of harmonization as well as different operating hours in the various real time gross settlement systems operated by central banks and financial market infrastructure operators around the world.

On another hand, the global cross-border payment landscape is experiencing a number of key trends that could fundamentally change global competitive dynamics, including policy specific factors such as, shifting regulatory and sanctions frameworks, growing trade

restrictions, increasing compliance requirements, global policy pushing for lower cost and faster cross-border payments, all coupled with increasing global cyber-attacks and threats against banking payment infrastructure and increasing pressure from emerging and disruptive technologies, are all adding to the cost and complexity of offering cross-border payment services.

3.2.2 Increasing compliance requirements

Customer due diligence requirements in correspondent banking, mainly Know Your Customer (KYC) checks, entail a significant and periodic exchange of documentation, resulting in a costly and time-consuming process⁵. Furthermore, due to the uncertain regulatory environment, correspondent banks are conducting Know Your Customer's Customer (KYCC) checks on their respondent banks, further adding operational complexity to the customer due diligence and transaction monitoring process. As such, banks incur significant costs in infrastructure investments and staff training, in order to maintain correspondent banking relationships. As a result, new initiatives such as the Legal Entity Identifier (LEI), initially established to better identify parties to a financial transaction, are being proposed to enhance the due diligence and transaction monitoring activities of correspondent banks.

3.2.3 Emergence of disruptive technology

Less traditional payment solutions, offering multiple payment types, such as business-to-business, consumer-to-business, remittances, and foreign exchange are increasingly gaining ground with consumers. These providers may operate outside the primary bank channels, limiting Central Banks' oversight capabilities on regional payments, while also potentially disintermediating commercial banks. In addition, emerging disruptive payment solutions are further creating solutions that may generate flows outside of regulators' traditional

⁵ In response to this situation, several KYC utilities have been established such as Bankers Almanac, SWIFT KYC Registry, among others, to store all KYC related information in a single repository

oversight channels. Disruptive technology is expected to bring global economic benefits that are estimated to reach nearly \$3.1 trillion by 2030. One example of such technologies, distributed ledger technology (DLT), could have the potential to bring down operational costs of global banks by 30 to 70 percent by 2025. Furthermore, it is estimated that 10 percent of global GDP will be stored on Blockchain technology by 2025, driven by the increased use of these technologies.

3.2.4 Push for lower cost and faster payments

Global policy devisers are further pushing to lower global average remittance costs. For instance, the Group of Eight (G8) summit adopted, in July 2009, the goal of decreasing the global average remittance cost by 5 percentage points, from 10 percent to 5 percent.⁶ In addition, the United Nations (U.N.), as part of its Sustainable Development Goals (SDG target 10.c), set a target of decreasing migrant remittances cost by 3 percent of total amount value, while eliminating remittances channels with costs greater than 5 percent. Despite these policies, the average remittances cost remains well above the SDG target and stands at 6.8 percent in the second quarter of 2019.⁷

With respect to domestic payments, increasing efforts are being made towards instant payment in leading countries. Accordingly, key initiatives aimed at the provision of faster payments services have been developed by the European Union, the United States, and Singapore as well as the International Payments Framework Association (IPFA). The drive towards instant domestic payments is raising customer and regulator expectations for faster regional cross-border payments.

⁶ The endorsement was active from 2009 to 2014

⁷ Based on World Bank's Remittance Prices Worldwide Database for average cost of sending \$200 to LMICs

3.2.5 Growing cyber-attacks targeting payments infrastructure

Commercial and Central Banks are increasingly subjected to the risk of cyber-attacks, where hackers attempt to compromise the payments infrastructure used by the targeted banks. In recent years, major cyber-attacks on financial institutions were committed using weaknesses in payment systems communications networks. Despite the failure of some attempts, hackers were able to cause significant financial losses, amounting to up to \$100 Mn, in cases where the attempts were successful.

Figure 5: Major cyber-attacks on financial institutions

Global Cyber Attacks on Financial Institutions		
 Banco del Austro	 Tien Phong Bank	 Bangladesh Central Bank
<ul style="list-style-type: none"> ▪ Ecuadorian Banco del Austro (BDA) was attacked in January 2015, over a period of 10 days ▪ USD 12 Mn were routed to more than 20 companies in Hong Kong ▪ BDA recovered USD 2.8 Mn after the breach was uncovered 	<ul style="list-style-type: none"> ▪ Vietnamese Tien Phong Bank was attacked by hackers in December 2015 ▪ Hackers attempted to siphon EUR 1 Mn from the bank ▪ However, the bank succeeded in interrupting the cyber attack 	<ul style="list-style-type: none"> ▪ Bangladesh Central Bank (BCB) was the victim of a fraudulent transfer in January 2016 ▪ Hackers managed to transfer USD 101 Mn to various accounts ▪ Nevertheless, BCB managed to halt the transfer of an additional USD 850 Mn

Source : AMF-ARPS design document

3.2.6 Consumers are spending more and more abroad

On another hand and beyond corporates, consumers are also transacting more on a global basis, buying from foreign eCommerce sites; traveling, living, and working abroad. For the payments industry, the result is higher volumes of payments, in terms of both currency value and number of transactions. Interestingly, this is also leading to a consequent shift downwards in the average value of these payments. Given this outlook, there will be many more cross-border payments in the coming years than today, and new players are expected to upend some of the industry’s fundamentals.

3.2.7 Multidimension of cross-border payments challenges

The above-mentioned challenges for global cross border payments are not simply those of commercial banks or resulting from volume

variation, but also have consequences for the end-user experience in trying to pay recipients in other countries. Indeed, from a consumer standpoint, cross-border payments also present a number of challenges in terms of fees, and remittance information visibility into the transaction life cycle; including knowing what stage in the transfer process the payment is in and when the funds transfer is completed. This is due to lack of consistent payment standards, reliance on multiple intermediaries, time zone differences and subsequent varying operating hours between jurisdictions. Consequently, cross-border payments are expensive (compared with domestic payments), can take multiple days and lack transparency, regarding both costs and delivery times.

Figure 6 below lists the key challenges associated with cross-border payments and settlements. It describes the impact each of these has on the different participants in the payments value chain, i.e., the end-users (senders and beneficiaries), commercial banks and central banks. In addition, the figure lists the underlying root cause of the challenge outlined. The purpose of identifying the root cause is to help identify the capabilities required to address the root cause and the associated challenge.

Figure 6: Multidimension of cross-border payments challenges

1 Raised concerns	Description of impact on different participants	Impact on financial markets
Lack of a standardized payment status notification capability across the common payment messaging network used by banks.	End-users (Sender and Beneficiary)	Lack of transparency regarding payment status, visibility and certainty of outcome: <ul style="list-style-type: none"> • End-users and banks cannot see the status of the payment in the value chain. • The exact route of the payment is not known upfront because routing is not determined by the originating bank but by correspondent banks along the chain
	Commercial Banks	
	Central Banks	
	• N/A	

2	Description of impact on different participants	Impact on financial markets
<p>Raised concerns</p> <ul style="list-style-type: none"> Mismatch in the operating hours of RTGS systems and commercial banks systems across different jurisdictions and time zones, driven in part by legacy infrastructure Reliance on multiple intermediaries (with associated cost and complexity) for cross-border payments and settlements spanning multiple jurisdictions 	<p>End-users (Sender and Beneficiary)</p> <ul style="list-style-type: none"> Limits the availability (and perceived flexibility) around when payment transactions are completed, and funds credited Reduces the efficiency of working capital and the optimization of cash flows <p>Commercial Banks</p> <ul style="list-style-type: none"> Must ensure adequate liquidity in correspondent bank accounts to meet payment obligations within cut-off times (if same day) May limit effective deployment of bank liquidity as funds are tied up longer Limited overlap of service times with other jurisdictions Increased associated operational costs (e.g., balance sheet management) <p>Central Banks</p> <ul style="list-style-type: none"> Limited windows to extinguish settlement risk between banks may cause risks to build up in the system during limited operation windows Potential drag on overall economic activity due to in-efficient deployment of liquidity and reduced efficiency of working capital 	<p>Limited availability of cross-border payment services:</p> <ul style="list-style-type: none"> Cross-border payments are subject to cut-off times, which reduces the likelihood that payment instructions will be received and processed, and payment sent to the beneficiary or correspondent bank the same day. Payment instructions received after the cut-off time are processed the next working day. Cross-border payment services may not be available on weekends.
<p>Raised concerns</p> <ul style="list-style-type: none"> Regulatory requirements to undertake processes such as sanctions screening, collateral requirements, payments message details (clearing codes, purpose of payment), etc., can prevent straight-through processing of payments. Requirements are often duplicated across multiple entities and jurisdictions. Lack of consistency or interoperability across jurisdictions for common payment standards and regulatory requirements. Lack of local-language processing capability may be mitigated through the adoption of ISO 20022 standards. Reliance on multiple intermediaries (with associated cost and complexity) for cross-border payments and settlements. 	<p>End-users (Sender and Beneficiary)</p> <ul style="list-style-type: none"> Delay crediting funds to the beneficiary Requests for additional information to satisfy due diligence or regulatory requirements <p>Commercial Banks</p> <ul style="list-style-type: none"> Inability to straight-through process payments Increased cost of end-to-end payments processing through manual intervention e.g. sanctions screening for exceptions, payment repairs, reconciliation etc. Inefficient in message mapping protocols between different payment networks The longer payments take, the longer participants are exposed to Herstatt risk from their correspondents <p>Central Banks</p> <ul style="list-style-type: none"> The drivers -in particular, limited interoperability between payment systems -can reduce financial resilience 	<p>Impact on financial markets</p> <p>Time taken for payment processing</p>
<p>Raised concerns</p> <ul style="list-style-type: none"> Reliance on multiple intermediaries (with associated cost and complexity) for cross-border payments and settlements Lack of consistency across jurisdictions for common payment standards and regulatory requirements Challenges associated with legacy payments infrastructure across networks, central banks and commercial banks Restrictive central bank policies on access 	<p>End-users (Sender and Beneficiary)</p> <ul style="list-style-type: none"> Significant cost of cross-border payments passed on to end-users <p>Commercial Banks</p> <ul style="list-style-type: none"> Increased costs (explicit and implicit) These costs are a result of: <ul style="list-style-type: none"> Opportunity cost of liquidity trapped in nostro accounts maintained with correspondent banks (the counter to this is pre-funded vostro accounts) Periodic KYC and customer due diligence(CDD) on correspondent banks Counterparty credit risk and settlement risk Costs are relatively higher for local banks due increased reliance on correspondent banking arrangements <p>Central Banks</p> <ul style="list-style-type: none"> High costs are causing banks to consider the viability of correspondent banking, lowering financial resilience by concentrating services in a smaller number of systemic firms. 	<p>Impact on financial markets</p> <p>High costs associated with the correspondent banking model</p> <ul style="list-style-type: none"> Costs can be separated into (i) balance sheet costs, such as trapped liquidity; and (ii) operating costs, such as managing diverse messaging standards, dealing with complex infrastructure and complying with regulatory requirements

5 Raised concerns	Description of impact on different participants	Impact on financial markets
<p>Cost and capacity to incorporate new technology and changes to current systems</p>	<p>End-users (Sender and Beneficiary)</p> <ul style="list-style-type: none"> • Risk to business operations arising from payment system outages • Limited availability of innovative new services and business models 	<p>Challenges associated with legacy payments infrastructure across networks, central banks and commercial banks.</p> <ul style="list-style-type: none"> • There is an increase in the scale, nature and sophistication of new types of risks to payment systems like RTGS (e.g., cyber-attacks) • There are technical barriers to entry to central banks for smaller banks and non-bank payment service providers
	<p>Commercial Banks</p> <ul style="list-style-type: none"> • Risk to operations arising from payment system outages • Significant cost and complexity of incorporating new technology into existing architecture estate 	
	<p>Central Banks</p> <ul style="list-style-type: none"> • Risk to financial sector stability resulting from payments system failure • Restrictions on ability to enable innovation at industry level due to technical restrictions imposed by existing infrastructure 	

The challenges and trends described above emphasize the difficulties of developing a safe, efficient and inclusive international system considering the divergence in the regulatory approaches of different jurisdictions and, therefore, further highlight the need for an accelerated process to build alternative solutions and channels for cross-border payments.

This need is further to be emphasized for low income users and vulnerable population in the current context of technology-led globalisation age. Indeed, because low-income individuals rely on remittances for basic needs like food, health care, heating, and education, high transaction costs have a disproportionately negative effect on the well-being of the poorest. Remittances travel across national boundaries to support hundreds of millions of people, significantly contributing to the GDP of some emerging economies.

Cross-border retail payments are generally slower, less transparent and more expensive than domestic retail payments and then, money is usually sent across borders on legacy payment rails or informally. Efforts to advance them contribute to the achievement of a range of Financial Inclusion objectives and meet the United Nations' Sustainable Development Goals (SDGs).

4. Cross-Border Retail Payments

4.1 Segmentation of cross-border retail payments

End users of cross-border retail payments are not a homogenous group. Their preferences, experiences and challenges depend on their circumstances and requirements, which naturally vary. Firstly, users may lack access to transaction accounts altogether, relying fully on cash, and may not benefit from the possibilities of digital payments on a cross-border level. Secondly, individuals, Micro-, Small- and Medium- Enterprises (MSMEs) and other entities who make relatively small or more sporadic payments (so-called low value-high volume streams of remittances) face transparency and cost issues in making cross-border payments. Thirdly, overall user expectations of cross-border payment services have increased as they have become accustomed to faster, cheaper and more convenient domestic payments. Yet, difficulties persist in terms of transparency, pricing or speed of cross-border payments.

A cross-border retail payment can take a variety of potential paths, with a significant number of actors potentially involved in just one payment. “Front-end” (i.e. end user-facing) payment service providers (PSPs) vary in the range of services they provide, addressing the different needs of end users they target. There is also a variety of “back-end” payment infrastructure providers, but correspondent banking arrangements currently perform the majority of clearing and settlement functions, including foreign exchange transactions, for cross-border retail payments.

As per CPMI, cross-border retail payments refer to payments by individuals, business or entities across jurisdictions and typically classified into three broad segments, each with its own competitive landscape, fee structure and independent delivery mechanisms:

- *Business-to-business (B2B) payments* relate to international trade finance and are made when one enterprise pays another. These

payments may be made to regular, well-known parties or to occasional or one-time suppliers.

- *Person-to-business (P2B) payments* include but are not limited to eCommerce purchasing such as the purchase of physical goods (with all of the challenges of shipping, customs, and taxation) but also the travel and entertainment, digital services, and digital goods domains.
- *Person-to-person (P2P) payments* are payments made by foreign workers to family members in home countries (International remittances). As any given worker is apt to make payments to only one country, this domain is measured by country pairs, or “corridors.”

The chart below illustrates this segmentation.

Figure 7: Cross-border retail payments drivers of financial inclusion

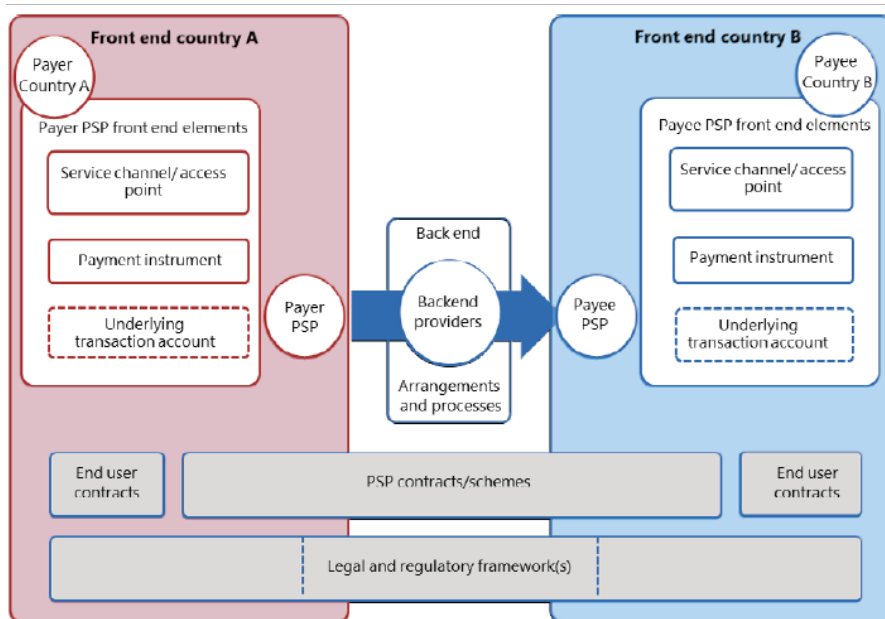


Other payment types, such as payments between governments and individuals or businesses, can arise in certain situations⁸. However, these payment types seem to contribute less significantly to demand for cross-border retail payments than the payment types noted above.

⁸ P2G and B2G payments are typically made to fulfil an obligation to a public authority (eg payment of taxes, fines or fees). B2P or G2P payments usually stem from an obligation (eg payment of salaries) or an entitlement (eg payment of pensions or social benefits).

As per CPMI, figure 8 below is a stylized overview of the cross-border retail payments market. Although it omits certain details⁹, it depicts the demand side, i.e. the end users (the payer and payee), and the supply side, comprising the “front” and “back” end.¹⁰ The front end is made up of the interfaces provided to end users to initiate or receive cross-border payments as well as the payment service providers (PSPs) that interact with end users. The back end comprises the providers, arrangements and processes that affect those transfers, including associated foreign exchange transactions. The underlying support for these transfers consists of the contracts, schemes and legal and regulatory frameworks.

Figure 8: Overview of the cross-border retail payments market



Source: CPMI

⁹ For example, as described in CPSS-World Bank (2007, Annexes 3 and 4), a variety of steps, involving a number of possible intermediaries, may be involved in a cross-border retail payment. The current report abstracts from such details to provide a broad overview of the market.

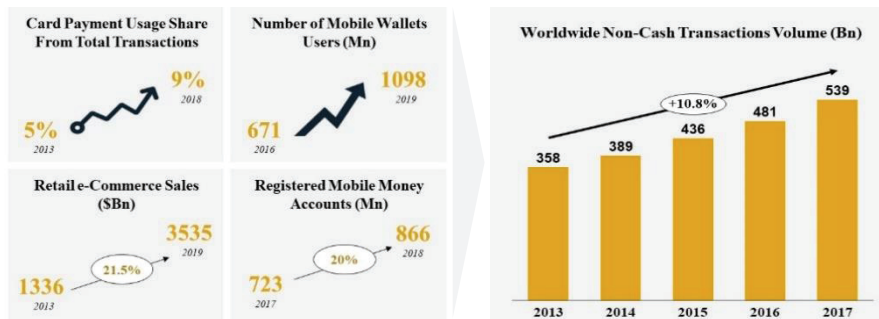
¹⁰ The use of front-end and back-end distinctions is based on the analytical framework used by the previous CPSS/CPMI reports on retail payment innovations (2012) and non-banks in retail payments (2014).

4.2 Global Retail Payment outlook

Retail payments usually involve transactions between two consumers, between consumers and businesses, or between two businesses. Wholesale payments are typically made between businesses. Although there is no definitive division between retail and wholesale payments, retail payment systems generally have higher transaction volumes and lower average dollar values than wholesale payment systems.

Over the past 5 years, low value non-cash transactions have increased to reach volume of 539 billion transactions worldwide in 2017¹¹, driven by the increase of e-commerce sales, card payment usage, and number of mobile wallets, as shown by figures below:

Figure 9: Global retail payment outlook

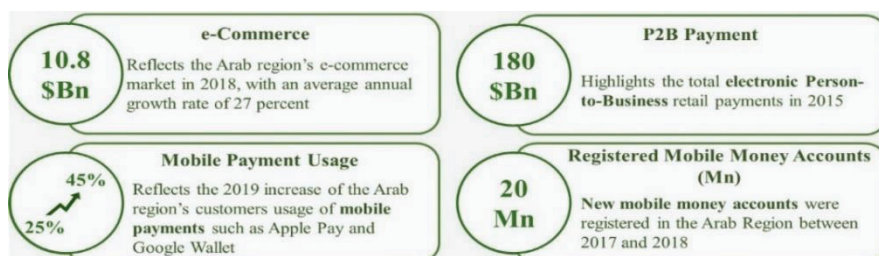


Data source: Capgemini website, McKinsey website, Fintech website, Statista website, GSMA website and Author analysis

Regionally, trends mirror the global payment landscape with consumers increasingly adopting mobile, electronic and e-commerce payments. Indeed, more than 20 million new mobile money accounts were registered in the Arab region between 2017 and 2018, and the region’s customers usage of mobile payments such as Apple Pay and Google Wallet increased from 22 to 45 percent between 2018 and 2019.

¹¹ Source: Capgemini Website, McKinsey Website, Fintech Website, Statista Website, GSMA Website, Author Analysis

Figure 10: Key features of cross border retail payment



Data source: Bain website, World Bank website, GSMA website, the National website and Author analysis

4.3 Cross-border e-commerce: Increasing adoption¹²

4.3.1 Overview

Fifteen to twenty percent of e-commerce transactions are international. E-Commerce has already reached enormous sales volumes. Indeed, statistics show that the total amount of worldwide retail e-commerce sales will likely reach \$3.5 trillion in 2019. This represents nearly 14 percent of all worldwide retail sales for this year. In addition, this trend is steadily progressing across B2B and C2B use cases, driven by low-cost transport, small-item purchases, increasing comfort with transaction security, and the general easing of red tape. Cross-border payments growth is particularly compelling in marketplace payments and the gig economy.

Predictions are, that by 2040, nearly all retail purchases (95 percent) will be made online. If these predictions are accurate, the global retail e-commerce level will reach \$24 trillion. A big part of the benefits of e-commerce for retailers will be from the online sales and purchases of e-commerce financial services. finally, fintech applications for e-commerce will allow retailers to capture a big share of fintech products sales.

¹² Data sources: OMD Arabnet; eMarketer; E-commerce Foundation; Euromonitor; BMI Research; PayPal Insights; PAYFORT; Author analysis. Countries covered in this report include Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE, Egypt, Algeria, Iraq, Jordan, Lebanon, Libya, Mauritania, Morocco, Syria, Tunisia and Yemen. More details could be found [here](#).

4.3.2 Trends and outlook in the Arab region

In 2018, the Arab region e-commerce market reached \$10.8 billion. With an average annual growth rate of 27 percent, e-commerce in the region has been growing slightly more than the global average. The GCC and Egypt account for 81 percent of the e-commerce market, and they have been growing at a 30 percent annual rate, more than twice as fast as the rest of the region.

Figure 11: Arab e-commerce market size, 2018, growth since 2014.¹³

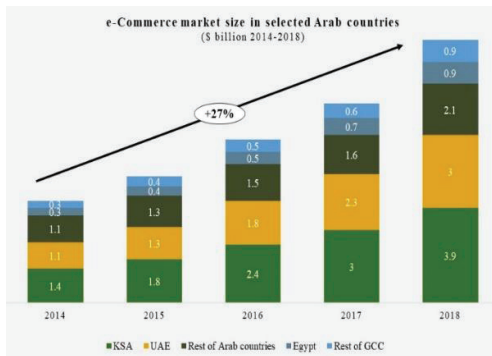
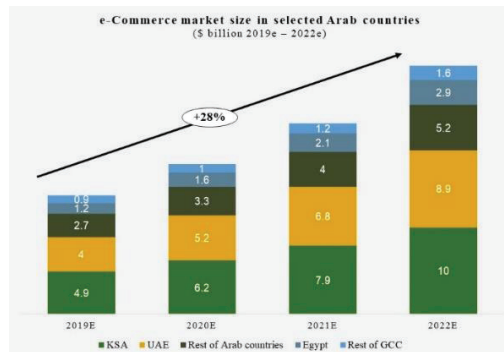


Figure 12: Arab e-commerce market size, 2019-2022.



Data source: Bain & company and Author analysis

With the right basis in place, *the e-commerce space in the Arab region is expected to grow by 2022 to reaching a total market size of \$28.6 billion* and a penetration rate of 7 percent of total retail sales, mirroring the industry in continental Europe today.

By 2022, e-Commerce sales in the region are projected to increase two-fold compared to 2019. The two largest markets are Saudi Arabia and the UAE, with Egypt leading in terms of the growth rate. Mobile shopping is one of the key drivers for online retail sales development

¹³ Notes: this includes all business-to-consumer E-commerce sales for fashion, personal care, beauty, electronics and groceries and excludes business-to-business and consumer-to-consumer - E-commerce, food delivery, travel, entertainment, services and auto; GCC stands for Gulf Cooperation Council and includes Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE; MENA includes all GCC countries and Egypt, Algeria, Iraq, Jordan, Lebanon, Libya, Mauritania, Morocco, Syria, Tunisia and Yemen.

in the region, with more than one in two online consumers shopping with their mobile phones. Key growth enablers of e-commerce in the region are the increased internet penetration, the entry of new players and innovation in business models, the expansion of the middle class, the growing role of women in the workforce and improvements in logistics and payment infrastructure.

4.3.3 Potential impact of e-Commerce on financial inclusion

E-commerce highly impacts financial services. Indeed, trips to banks are no longer necessary due to the vast array of online services offered by most banks, including direct deposits of paychecks, online bill payments, and several other banking services.

In a region characterised by a young population and widespread smartphone usage, rapid technology migration is fuelling greater financial inclusion and the expansion of e-commerce in the Arab region. Mobile wallet continues to increase in the region, having 20 different services in 10 markets. Mobile wallet has enables efficient and convenient payments as well as international money transfer, particularly for the 60 percent of the population which doesn't have access to proper financial services. Furthermore, Payment infrastructure and financial regulations are key aspects to expand the usage of mobile wallet services.

4.4 Retail remittances as a means to expand financial inclusion

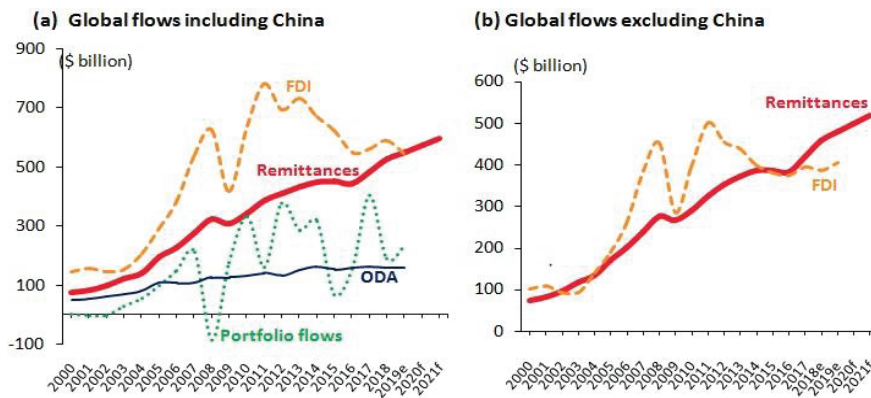
4.4.1 Overview

For many, remittances represent a steady income stream, used for housing, healthcare, education and other activities. Remittances, both cross-border and domestic, are a type of low-volume and recurrent payment stream that can be leveraged to advance financial inclusion.

Based on World Bank data, around 272 million people work outside their home country, generating global remittances flows of about \$715 billion by the end of 2019, and contributing to the welfare of 800

million people worldwide¹⁴. A significant fall in the average remittance fee rates, i.e. from 10 percent to 6.82 percent (as of Q4 2019) has allowed expats to send home a substantial portion of their income. Money sent by expats to their home country has become a significant source of external aid, and an essential element of economic growth for many developing nations. The remittances flows exceed official aid by a factor of three since the mid-1990s, and they are in track to overtake foreign direct investment (FDI) flows to low- and middle-income countries (LMICs) (figure 13).

Figure 13: Remittances on track to overtake FDI flows



Source: World Bank-Knomad

4.4.2 Global trends

Cross-border retail payments have been rapidly changing, ever since digitized money transfer methods were invented and acknowledged worldwide. Indeed, mobile wallet acts as a gateway to financial inclusion for both remittance senders and receivers, allowing them to join the digital financial ecosystem and to access a broad range of digital financial services beyond remittances, such as storing money in a secured account or performing digital payments. Today, mobile wallet can be used to both send and

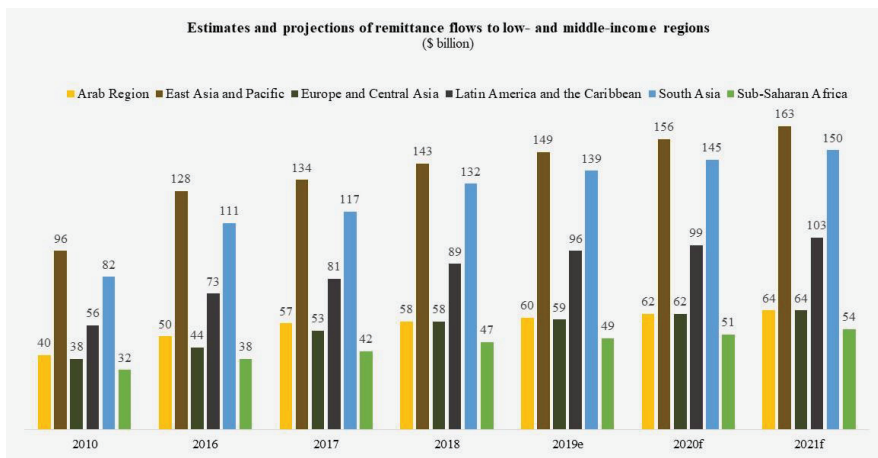
¹⁴ IFAD estimates that 200 million senders send money home to family, or around 800 million people.

receive remittances across 53 corridors, connecting 15 sending countries to 16 receiving countries.

In 2018, inward remittances contributed to almost 10 percent of the GDP in the Philippines as a majority of the country’s expats are in Qatar, the UAE, Singapore, Japan, and the US. This growth was also facilitated by the Philippine government, which encouraged the financial contributions made by expats abroad by implementing financial awareness programmes and supporting the resolution of the ‘International Day of Family Remittances’.

The Arab region has also experienced a positive growth over the past years. In 2018, the number of workers abroad reached 31 million, representing almost 12 percent globally, which transferred 58 billion US dollars to their home countries, a total of 8 percent of global cash transfer flows. This trend is expected to grow at a sustainable rate of up to 3.4 percent until 2021.

Figure 14: Remittance flows to low and middle-income regions



Data source: World Bank-Knomad



	2010	2016	2017	2018	2019e	2020f	2021f
	(\$ billions)						
Arab Region	40	50	57	58	60	62	64
East Asia and Pacific	96	128	134	143	149	156	163
Europe and Central Asia	38	44	53	58	59	62	64
Latin America and the Caribbean	56	73	81	89	96	99	103
South Asia	82	111	117	132	139	145	150
Sub-Saharan Africa	32	38	42	47	49	51	54
World	470	589	634	682	707	739	768

Data source: World Bank-Knomad

4.4.3 Regional trends

The remittances market in Arab countries, similar to other countries across the world, is not controlled by banks, and remains prodigiously dominated by a small number of Money Transmitter Operators (MTOs). These companies charge fees and exchange rate commissions, which greatly differ among locations and destinations. This suggests that a significant portion of remittances goes to the operators as monopolistic or oligopolistic rents rather than to the families of migrants (Alberola and Salvado, 2006).

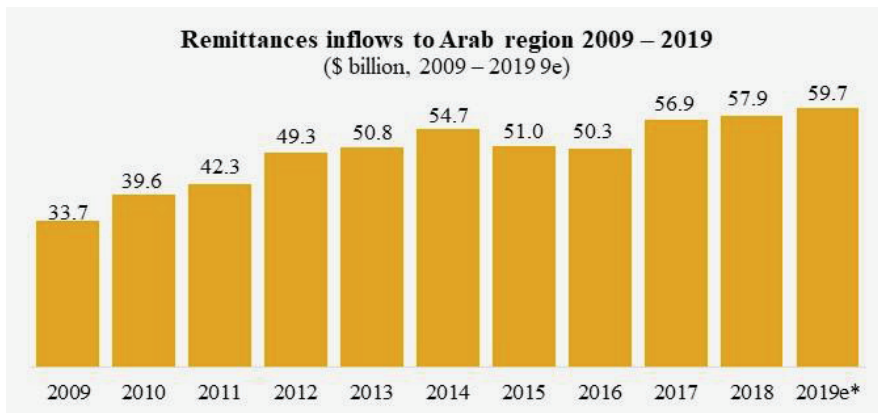
Moreover, most low-income groups in remittance-receiving Arab countries, who are more likely to receive remittances, have a low degree of formal financial inclusion and hence limited access to financial services. In Egypt for instance, despite the significant remittance inflows to the country, only 14% of the adult population and a mere 5% of the poorest 40% of the population had a bank account in 2017. The case is similar in other major remittance-receiving Arab countries such as Jordan, Lebanon, Algeria, Morocco, Tunisia, Palestine and Yemen. These facts accentuate the low level of financial inclusion and emphasizes the need to strengthen channelling remittances into formal financial sector as it represents an important

lever to promote financial inclusion in receiving countries, especially to low-income population.

This paper has used World Bank data to rebuild a visualization of regional remittance flows, to help convey both their magnitude and their necessity for both senders and receivers around the Arab region.

Given the disparities in income levels, economic structures, and labor market features among Arab countries, the Arab region is both a major source and a major recipient of remittances. Over the past decade, remittances sent from and to Arab countries have increased progressively, gaining substantial socio-economic impact in the region. With a total migrant population estimated at 31 million, remittance inflows to Arab countries reached \$57.9 billion in 2018, while outflows stated at \$125.6 billion in 2017 and expected to increase further in 2018.

Figure 15: Value of remittances inflows to Arab region 2009 – 2019



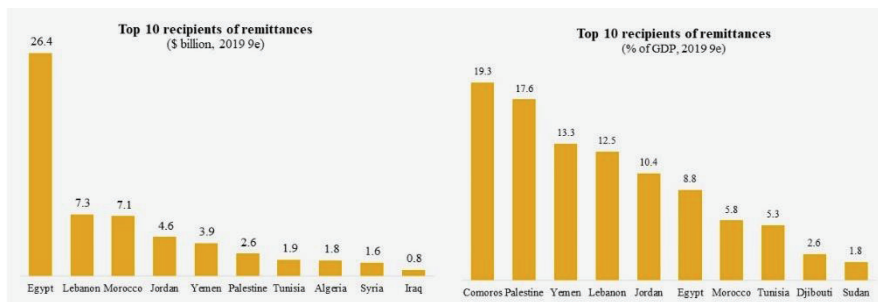
Data source: World Bank-Knomad

Estimation for 2019 (figure 16), shows total remittances received by the major labor exporting Arab countries¹⁵ amounted to nearly \$57.8 billion, and represented 7.9 percent of their combined GDP, 96.8 percent of total remittance inflows to the Arab region. Remittances

¹⁵ Eleven labor-exporting Arab countries, namely Algeria, Djibouti, Egypt, Jordan, Lebanon, Morocco, Sudan, Syria, Tunisia, Palestine, and Yemen are included in this study

reached around \$26.4 billion in Egypt (45.5 percent of total remittance inflows), \$7.3 billion in Lebanon, \$7.1 billion in Morocco, and \$4.6 billion in Jordan. In fact, Egypt ranked in the top 10 list of remittance recipients worldwide in 2018. As a share of gross domestic product (GDP) for 2019, the top ten recipient countries would be the same, except for Algeria, Syria and Iraq. Countries such as Comoros, Palestine, Yemen and Lebanon’s remittances flows have a significant contribution to the GDP and to the well-being of families and households.

Figure 16: Top ten recipients of remittances, 2019



Data source: World Bank-Knomad

4.4.4 Intra-Arab remittances

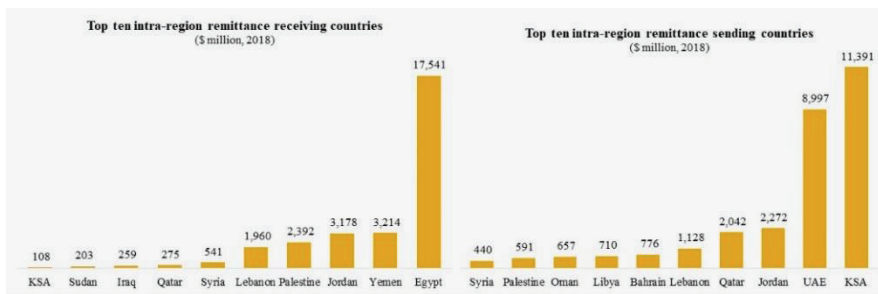
Intra-Arab abroad workers and expatriate represent 13.6 million (44 percent) of the total 31 million abroad workers and expatriate from the Arab region, where 56 percent are hosted by non-Arab countries in various parts of the world.

Intra-Arab remittances, especially outward remittances from the GCC, are a major source of regional payment flows as millions of Arab workers migrate across the region. In Fact, intra-Arab remittances flows accounted for approximately \$30 billion in 2018. Figure 17 illustrates the top ten sending and receiving countries in terms of remittance in the Arab region in U.S. dollar.

On the other hand, the top remittance-sending Arab countries are the following GCC countries: KSA, UAE, Kuwait, Qatar, Oman and

Bahrain, as well as Lebanon, and Jordan. In 2017, total remittances sent from GCC countries amounted to \$119 billion, representing around 6 percent of their combined GDP and 95 percent of total remittance outflows from the Arab region. UAE ranked second (behind the United States), followed by Saudi Arabia. Additionally, five other GCC countries joined the top 20 list of remittance senders worldwide in 2017.¹⁶

Figure 17: Intra-region remittances receiving and sending countries



Data source: World Bank-Knomad

4.4.5 Arab region: top ten of remittances' corridors

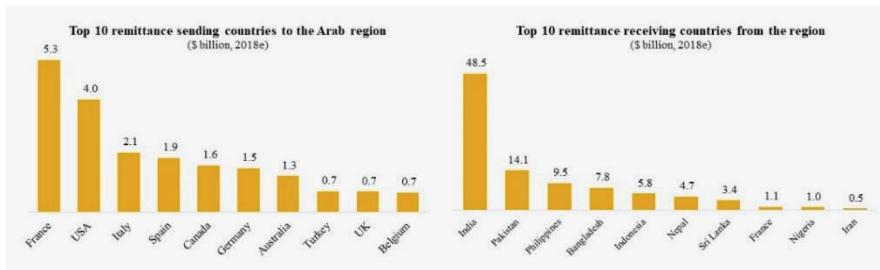
On one hand, in terms of remittance inflows to the Arab region, France and the United States are the most recurring remittance sending countries, respectively with roughly \$5.3 billion and \$4 billion in 2018, in addition to Italy, Spain and Canada. While most Arab countries with large remittance inflows are dependent on GCC countries, the North African countries (Algeria, Morocco and Tunisia) are an exception. This is due to the historically strong economic ties between these countries and European countries, especially France.

On another hand, the main force behind the robust economic growth of most of the Gulf Cooperation Council (GCC) countries, as well as some other Arab countries is the strong labor force, composed mainly of expatriates. Largely due to its geographical proximity, the Gulf has been a preferred destination for workers from South Asia for years.

¹⁶ Rank of GCC countries in the top ten 20 list of remittance outflows worldwide in 2017: UAE 2nd, Saudi Arabia 3rd, Kuwait 9th, Qatar 12th, and Oman 15th.

More recently, however, the GCC has attracted foreign labor from all over the world, which have made it one of the top remitting regions in the world. Though extraordinarily diverse, expatriate workers share one common goal: to send as much money home as possible. The data analysis shows that India is the major recipients of remittances flows and main corridor for the Arab region with roughly \$48.5 billion yearly transfers in 2018, far away from Pakistan, Philippines and Bangladesh (Figure 18).

Figure 18: Remittances’ sending and receiving countries



Data source: World Bank-Knomad

4.4.6 Global remittance outlook for 2020

Transformation has been constant within the remittance industry in 2019 and is likely to facilitate moderate growth in 2020. As is with any other industry, supply alone cannot rescue a business if demand is lacking. And so, as a new decade starts, a modest improvement of 3.4 percent in global economic growth is predicted for 2020.

The World Bank also estimates the global remittance market to touch US\$746 billion in 2020, at a growth rate of 4.5 percent.

Over the last few years, the remittance industry has introduced digital innovations to cater to the needs of its evolving customers. The rampant adoption of mobile wallets and other technologies will play a pivotal role in fostering the growth of the remittance industry.

Money transfer organisations such as Xpress Money are looking to bring in competitive pricing and greater transparency to be in – sync with the targets set by the UN’s Sustainable Development Goals for 2030. With the promise of enabling an inclusive community, 2020 is expected to see the remittance industry grow even stronger.

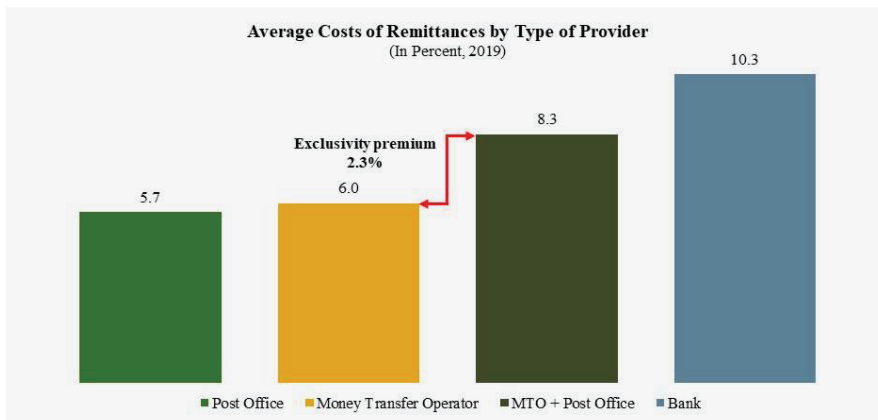
Despite reforms carried out in several Arab countries, large volumes of remittances are still processed through alternative channels. In addition, the market remains highly fragmented, through a disparate network of providers with differing facilities in terms of time, cost, and overall efficiency. This situation has significant implications on reporting and coverage of statistics on remittances, with differing data sets in some instances and complete lack thereof in others. Further efforts are needed to streamline remittances and enhances Central Banks oversight while ensuring requisite checks (e.g., KYC, AML/CFT, and sanctions screening) are in place.

Despite this potential, there are challenges, however; cross-border remittances are typically slower, costlier, more opaque than domestic payments, given historically loosely grown domestic payment systems and the broad range of intermediaries that are required to bridge those. Indeed, the global average cost of sending remittances has remained nearly stagnant, at 6.8 percent in the second quarter of 2019, more than double the SDG target of 3 percent by 2030 (SDG target 10.c). Factors contributing to high costs include de-risking measures taken by commercial banks and exclusive partnerships between national post office systems and a single money transfer operators (MTOs).

Banks are the costliest channel for sending remittances, with an average cost of 10.3 percent in 2019, while post offices are lowest at 5.7 percent. Also, in an apparent example of policy incoherence, remittance costs tend to include a premium, a cost mark-up, when national post offices have exclusive partnership arrangements with a dominant money transfer operator (MTO). Such premia average 2.3

percent of the cost of transferring remittances worldwide and are as high as 4.6 percent in the case of India, the largest recipient of remittances (figure 19). Opening up national post offices, national banks, and telecommunications companies to partnerships with other MTOs could remove entry barriers and increase competition in remittance markets.

Figure 19: Average costs of remittances by type of provider, 2019



Data source: World Bank-Knomad

Generally, migrants and their families back home are among those less likely to be financially included. In this regard, there would appear to be space to leverage the periodic and ongoing use of remittance services to foster financial inclusion, at least among these population groups. However, this potential remains largely untapped. This is due, in part, to a lack of robust analysis of the dynamics between the remittance services market, which is largely served by non-bank remittance services providers (RSPs) and often subject to a different regulatory regime, and the broader domestic retail payments space. As a result, there is limited understanding of factors that perpetuate this fragmentation of the payments market. However, it also reflects some of the same factors that affect the adoption of transaction services in the first place, including the accessibility and reliability of points of access and product design.

Moreover, remittance services, both domestic and cross-border, are largely initiated as well as paid out in cash. Even remittance service users who use banking services tend to avoid the use of bank-provided, account-to-account remittances services in favour of less costly and more convenient cash-to-cash or card-to-cash services (or other arrangements offered by non-bank RSPs). Some of the largest RSPs report that, even where their services enable competitively priced delivery of remittances to a transaction account, such as a prepaid card or mobile e-money account, such service options gain little traction unless there is a robust merchant POS network in the receiving community.

Box 1: Remittances Models

- In Europe, the Single Euro Payments Area (SEPA), considered the most ambitious cross-border arrangement, created a unified payment experience in 33, mostly middle-income, countries. While the Euro is the common currency shared by most of the SEPA countries (cross-border but single currency payments), this effort also included the standardization of payment methods and regulatory frameworks as well as the harmonization of the legal underpinnings of payments-related law.
- In Africa and the Arab region, the development of such systems is now starting to occur, as intra-regional trade and population patterns have stimulated the creation of regional payments arrangements to improve cross-border payments exchange. The Southern African Development Community Integrated Regional Electronic Settlement System (SIRESS), driven by the Committee of Central Bank Governors and BUNA Platform driven by the Arab Monetary Fund and the Council of Arab Central Banks' Governors. Further, other regions in Africa as well as Latin America either have already developed or are starting to develop similar arrangements. Although each of these initiatives have been / being established to handle cross-border payments, increasing consideration is being given to the potential of allowing settlement of cross-border retail payments. In the case of SIRESS for instance, non-bank providers of digital financial services are playing a critical role in the creation of the retail payments developments. Globally, many private sector companies are also working to facilitate and lower the overall cost of cross-border payments. While PayPal should be considered an early pioneer in these efforts as it made it possible to transfer money across borders from a digital wallet, other companies have also used different aspects of fintech and business process specialization to improve cross-border payments. One example is U.K.-based TransferWise, which focuses on matching payment flows in common payment corridors to avoid currency conversion. There are many competing cross-border payment providers emerging from fintech, all contributing to increased competition in cross-border payments.
- The SWIFT global payments innovation (gpi) initiative: The global banking community together with SWIFT have put in place in 2017 a new standard for handling cross-border payments, mainly for B2B. SWIFT-gpi ensures that cross-border payments are fast, trackable across multiple banks in real time, and deliver confirmation when the beneficiary account is credited. It allows banks to provide their corporate customers with an all-around improved payments experience enabled through easy to use and simple to set up digital tools. gpi allows corporates to significantly improve their cash forecasting and liquidity optimization, gives transparency over the bank fees charged and FX rates applied to cross-border payments.

4.5 SMEs, a dynamic force in the global economy

Small and medium-sized enterprises (SMEs) have long comprised a lower share of cross-border payments than their share of GDP would indicate. Although scale will continue to pose challenges for the international presence of SMEs, breakthroughs may be on the horizon as SME's access to affordable international payments improves. The SME segment stands to benefit the most from cross-border payments' convergence and simplification, given that larger corporates have long had access to most of these capabilities. Solutions of cross-border payment platforms, such as BUNA, SWIFT's gpi and Mastercard's B2B Hub are providing more flexible and SME-appropriate payments options.

4.5.1 SMEs, a growing source of cross-border payments

This is especially true in emerging markets, where SMEs account for 60 percent of employment and 40 percent of national income. This picture is more contrasted in the case of the Arab region, as SMEs are accounting for over 97 percent of all businesses, providing a major source of new job creation and its contribution to GDP of the region ranges between 4 and 40 percent¹⁷. Although the de-risking trend in emerging markets has hampered international finance, new payments technologies are increasingly providing SMEs with opportunities to source talent and supplies abroad and expand into foreign markets.

It is not surprising to see a notable growth in the business-to-business (B2B) cross-border payments market. According to McKinsey & Company¹⁸, the market exceeded \$125 trillion in 2017. An increase of 9 percent by 2022 in the B2B market is expected, reaching almost \$3 trillion.

SME cross-border payments is a significant portion of this market comprising at least \$10-15 trillion annually. It's composed of around

¹⁷ Source: IMF Paper to the Council of Arab Finance Ministers, November 2019

¹⁸ Global payments 2018: A dynamic industry continues to break new ground, McKinsey & Company, October 2018, [here](#)

50% of payable accounts and 50% of marketplace pay-outs. It's also worth noting that SME B2B markets are out-pacing C2B (consumer-to-business), B2C (business-to-consumer, including wages and payouts) and C2C (consumer-to-consumer remittances) markets, at a rate of 5-10 percent per year. Financial institutions stand to gain a lot from tapping into the SME B2B cross-border payments market.

4.5.2 SMEs need easier access to international payments.

Despite recent growth, the SME B2B cross-border payments market is stunted by lack of traditional financial services. SMEs need to be able to move small amounts of money internationally at high speed and with certainty, but this isn't how cross-border payments operate today. According to the international Chamber of Commerce (ICC) Banking Commission's 2015 Global survey, of 482 respondents from 112 countries, SMEs made up almost 53 percent of all rejected trade finance transactions.

The needs of SMEs sending cross-border payments have dramatically evolved. These customers have traditionally been served by retail banks, which are not meeting their cross-border payment needs. SMEs are now demanding real-time, low-cost and fully trackable payments on a global scale. Further, traditional global payments systems involve a lot of intermediaries, not only does this slow down payment, it also introduces more margin for error. Any lag-time between paying these suppliers and employees really impacts SMEs' ability to maintain their businesses, growth and scale. To compete, SMEs need to be able to focus on their businesses, rather than focus on whether their supplier receives payments or not.

Box 2: Average cost of B2B Payments

- 2-5 days to settle on average
- \$30-\$100+ cost per transaction
- 4-6% international payment error rate.

Today's inefficient system involves high costs for banks and payment providers that are transferring money around the world. Their working

capital is locked up in nostro and vostro accounts¹⁹, pre-funding local currencies on each side of a transaction, which carry exorbitant fees and foreign exchange (FX) costs. Yet, fees for international payments for SMEs are extremely high, and 71 percent of SMEs believe cross-border payments are problematic.

Moreover, even in the corporate space, the end-to-end experience has gained importance relative to individual factors such as price, speed, and time. E-Commerce is a key channel for smaller retailers, either directly or through platforms such as Rakuten or Amazon. Unlike these large players, smaller retailers seldom have on-the-ground infrastructure that utilizes local payments, relying on international payments channels (including credit cards).

Finally, new technologies and processes that can reduce overhead costs and lag-time are key to tapping the growing cross-border SME B2B payments market.

4.5.3 Opportunity in emerging markets

SMEs across the globe understand that one of the fastest routes to growth is through exposure to new markets and more customers, and globalization is a key component in this process. Research commissioned by Ricoh in 2016²⁰ reveals that SMEs in the Europe, the Middle East and Africa (EMEA) region are confident in their expansion plan, 74 percent of small and 86 percent of medium sized businesses plan to expand into another country during 2016-2021. 2017 global research from American Express²¹ found that 27 percent of SMEs in the US believe that expansion into new international markets will be a contributor to financial performance.

¹⁹ Source [here](#)

²⁰ Source: Ricoh, March 2016, [here](#)

²¹ Source: American Express, Feb 2017

SMEs across the world are looking beyond traditional financial institutions to meet their evolving needs. A report by Thomson Reuters²² highlighted the fact that SMEs and corporates across the world, on average, have to maintain relationships with more than 10 banks to run their business. A report from McKinsey reveals that FinTechs already control almost 10-15 percent of the supply chain finance market with SMEs²³. Another McKinsey report, 'Global Banking Annual Review 2015', reveals that as much as 40 percent of revenues and up to 60 percent of the profits in retail banking businesses, consumer finance, mortgages, small business lending, retail payments and wealth management, are at risk from a combination of factors such as dwindling margins and competition from FinTech start-ups²⁴.

Box 3: Cross border SME business opportunities

- 82 percent of SMEs in the GCC rely on cross-border trade as a primary revenue generator (*UPS Survey 2019*).
- Globally, \$10-15 trillion: SME cross-border payment flows. (*Ripple estimation*)
- \$100-150 billion is the revenue opportunity in largest emerging market corridors. (*Ripple estimation*)

The opportunity in SME B2B cross-border payments is especially strong in emerging markets, where profitability and growth are twice as high in as in the developed world. Furthermore, SME cross-border payments revenues in emerging markets have reached as much as \$100-150 billion annually, according to Ripple's analysis with data from FXC Intelligence and Kapronasia. The majority of this revenue opportunity is found in Asia Pacific and Eastern Europe.

²² Thomson Reuters, February 2016

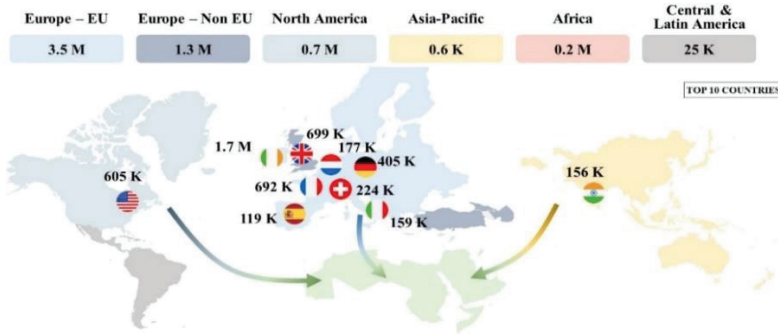
²³ Source: McKinsey, October 2015

²⁴ Source: McKinsey, September 2015

4.6 Cross border low value payments: Growing trends

The Arab region presents an attractive hub for low value payments²⁵ which comprise 70 percent of total transactions received in 2018, mainly originating from the European Union, European countries and North America.

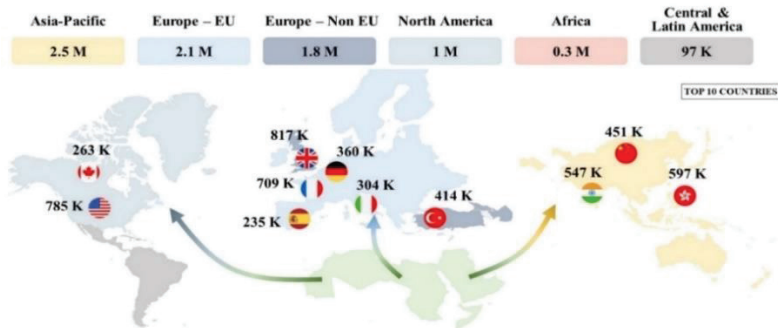
Figure 20: Cross-border retail payments inflows to the Arab region



Data source: Swift Data and Author analysis

The Arab region was also an important originator of low value payments in 2018, mainly towards the Asia-Pacific, the European Union and the European countries, estimated at 50 percent of its total transactions sent.

Figure 21: Cross-border retail payments outflows from the Arab region

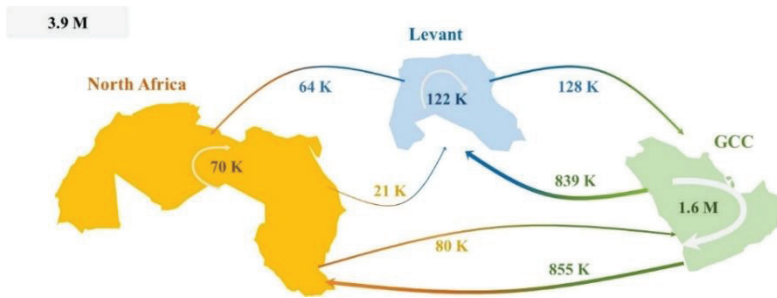


Data source: Swift Data and Author analysis

²⁵ For the purpose of this analysis, Low value payments are defined as transaction < \$10 K

Low value payments also comprise an important share of the total transactions within the region, estimated at 60 percent in 2018, with the GCC being the main originator of such flows:

Figure 22: Intra-Arab cross-border retail payments



Data source: Swift Data and Author analysis

This global and regional shift towards digital payments is mainly driven by the different benefits it provides to the end user such as convenience, efficiency, transparency, lower cost and security.

5. Buna: The Regional Payments Platform with Opportunities for Cross-Border Retail Payments

Regional payments systems have existed for years; the EU SEPA systems and the global card network systems are examples. Recent years have seen increased interest in this architecture, again, for reasons of both efficiency and inclusion; in Africa, SADC and Western Africa are examples, and in East Africa, work is also underway. Buna is an important development in this space. Although some of these systems exist only to handle cross-border payments, increasing consideration focuses on domestic payments processing handled by regional processing centers. Financial inclusion is important because higher volume processing (by sharing across countries) can lower costs, making affordable products for the poor more feasible.

5.1 Overview and purpose

The economic and financial trends in the Arab region point towards an acceleration of payment flows related to greater trade, labor and capital mobility within the region. With this trend expected to continue due to the multi-lateral policy, initiatives aimed at enhancing intra-Arab regional economic growth. Arab Central Banks and other financial authorities have expressed interest in facilitating cross-border payments across the region. In this context, Buna Payment Platform, previously known as the Arab Regional Payment and Settlement System (“ARPS”), was designed as a cross-border payment platform for the Arab region. Buna is envisioned as a simple, low-cost and risk-controlled payment clearing and settlement system. It will adopt a centralized model, consisting of a single, multi-currency and pre-funded platform used by participants across Arab countries, transacting in eligible Arab and international currencies. Moreover, Buna will ensure compliance with AML/CFT requirements and is designed to be in line with international guidelines, such as CPMI-IOSCO PFMI and other relevant international standards.

Figure 23: Buna topology



The purpose of Buna is to support the usage of local Arab currencies by providing an alternative to the current correspondent banking channels used for intra-Arab payments. Buna seeks to facilitate trade and other economic activities among all Arab countries and beyond through a low-cost, risk-controlled payment clearing and settlement system, that is in line with international standards.

In this context, the key objectives of Buna are:

- Increase efficiency of cross-border payments and reduce transaction duration
- Decrease liquidity requirements and reduce banks' costs associated with existing channels
- Enhance and standardize the level of compliance
- Enhance the level of Central Bank oversight
- Ensure minimal disruption to market participants to promote and facilitate market uptake

In the future, Buna was designed to be potentially linked in the future to international payment systems outside the Arab region to enable clearing and settlement of cross-border transactions thereby, promoting more efficient cross-border payments with key trading partners. Payments would be directly processed between Buna and the linked system through the established link. BUNA can also establish

links with other regional ancillary systems who can become participants in BUNA and conduct end of day settlement for their respective participants.

5.2 Key features

The system is designed to operate via a centralized model that consists of a single cross-border payments platform shared by all participants. The system supports both direct and indirect participation, where the Central Bank in each market has the flexibility to determine whether local financial institutions connect indirectly through them or directly to the system. Direct participants are expected to be central and/or commercial banks that meet Buna eligibility and participation criteria²⁶ and submit their intra-Arab cross-border transactions directly to Buna.

Buna operates as a single central institution which holds pre-funded accounts for all direct participants. Buna will clear and process payments through real-time gross settlement within its operating window: payments will be settled on a real-time gross-basis when sufficient liquidity exists, and will be queued otherwise. Additionally, the system supports future-value dated payments; these payments are netted prior to the opening of the settlement day.

To promote uptake and ensure an attractive business case, Buna is a multicurrency system, supporting the processing of payments in regional currencies that meet the defined pre-requisites, as well as the USD and EUR. The system offers the ability to configure support for additional currencies. For each onboarded currency, BUNA maintains an independent closed circuit. Each currency circuit is managed independently, with each payment in any supported currency backed by funding in that same currency. BUNA participants have the

²⁶ Buna participation criteria Stringency is similar to participation criteria for participants to connect to their local Central Bank's RTGS and has been standardized for all ARPS participants to ensure no exposure of participant risk from one Arab country to another.

discretion to elect which currencies they transact in and will hold accounts in said currencies accordingly²⁷. Over time, a cross-circuit facility would be introduced.

A key design feature of the settlement model is the potential use of a single Buna account per currency. As a rule, single Buna accounts in Arab currencies are maintained at the Central Bank of issue. Having Buna single account with the Central Bank of issue for each currency supported by the system eliminates credit risk and ensures payment system stability, in line with principle four of the CPMI-IOSCO Principles for Financial Market Infrastructures.

Buna design supports instant payment, and participants can submit payments 24/7. However, at the onset, the system will provide a 14/6 availability window to maximize the time for participant transactions for both local Arab currencies supported by Buna and international currencies, such as USD and EUR. This window covers the operating hours of all local RTGS for each currency potentially supported by the system and an eight-hour working day for participants across the Arab region. Payments made outside this window are queued for the next business day.

Figure 24: Main features of Buna platform



²⁷ It should be noted that a country does not need its currency supported by ARPS for its participants to make use of the system.

5.3 Opportunities

Below are some opportunities for Buna system to take advantage of the platform technology capabilities as currently being implemented.

5.3.1 Laying the foundation

Prior to the go-live of the system, Buna platform has defined its priority payments stream to launch a high-value, bank-to-bank payments system across borders. The exchange of priority payments necessitated the need for a settlement mechanism where the value of the transactions is recorded and finalized between the counterparties in the different countries.

As seen in the above description of Buna, the platform is designed to be the foundation of the new payments landscape for the region and the enabler of real-time settlement among banks' participants in the Arab region and beyond. The shared settlement platform serves to create a common denominator among the countries and reduces risk by simultaneously settling cross-border credit and debit obligations between banks.

Once this foundation is in place, Buna will turn its focus to the next phase: the development of a regional low-value retail payments system. The retail payments messages contained different characteristics and service levels, but still will require utilizing Buna as the common means to settle cross-border retail transactions.

5.3.2 Low-value, high-volume payments

After the go live, the next phase of Buna work will focus on extending the priority payments system to enable intra-Arab credit transfers. Around the same time, the need to improve regional remittances, which as noted previously are costly and often cleared outside of the formal payment system, became even more urgent.

Other changes are taking place in the market. The growing-scale adoption of mobile phones and the expanding presence of telco

subsidiaries into mobile money services provide powerful incentives to determine how to bring non-bank providers into the bank-based retail payments project in order to more quickly achieve the objectives of lowering the cost of remittances and increasing financial inclusion. Financial inclusion was also assuming a prominent position on the regional policy agenda, and by 2016, the Arab region began taking steps to utilize the payments platform to help facilitate the realization of these goals.

Today, in some Arab countries' payments scheme, authorized non-bank providers of financial transfer services are referred to as Mobile Payment Services Providers (MPSPs)²⁸. Additionally, payment processing service providers (PPSPs) are a part of the scheme and can act on behalf of the MPSP in varying ways. Exchanging low-value payments among participating financial institutions in the Arab region and beyond requires the introduction of a clearing mechanism.

Bringing non-bank providers into the payment scheme, to promote "mobile-enabled" credit push transfers, highlights the need to include MPSPs in the process, as well as, to examine the rules, regulations, or technical applications in order to determine whether modifications would be needed. The move to align, as well as, combine bank and non-bank efforts will mark a significant inflection point in the Buna platform going forward.

Mobile wallet is not a payment system but is rather a channel used to connect sending and receiving end users. Nevertheless, because banks and telco systems and business models tend to be different, it is necessary to define how the two players would interact in the new payment platform. It is notable that in some of the early discussions, the MPSPs had not been in the same room with their industry competitors and this is one step forward where banks, mobile money providers, and regulators could be collectively discussing opportunity to collaborate.

²⁸ Terminology specific to Jordanian case

Given that Buna payment platform is being in the process to work towards implementing the low-value credit-push cross-border payments stream, it is premature to make any definitive reflections, however, it is foreseeable to break down some key elements of Buna payments scheme as a way to examine their effect on the goals of reducing the cost of cross-border retail payments and increasing financial inclusion.

5.3.3 Adapting the settlement model

Many aspects of Buna scheme will evolve seamlessly or prove adaptable with certain revisions. Perhaps the biggest gap, from the requirements of the original scheme to including more players and remittances, is settlement. The keys learning here is that Buna model was designed for banks, which are direct participants in the system and cannot be directly transposed onto the non-bank participants. The MPSPs typically finalize transactions by using a bank as their settlement agent or a hub called "payment processing service providers (PPSPs)" which acts on their behalf to settle payments. Additionally, finalizing transactions in an intermediary account necessitated the evaluation of the new models to ensure its workability and security within Buna.

The presence of additional hubs in the settlement flow adds complexity to Buna scheme and perpetuates inefficiencies in the current system of correspondent relationships for these players. This will likely have a negative effect on both liquidity and cost compared to the ideal scenario. These intermediary players will be needed in the foreseeable future because there are currently no plans to allow MPSPs to have a settlement account under Buna.

The second area where the original Buna design doesn't necessary promote low-value, high-volume retail payments is related to its operational model: It will settle in near real time, simultaneously providing payment finality to obligations, but does not operate

continuously. The impact for retail payments is that settlement obligations potentially increase over the course of the day and are only finalized on the morning of the next business day. There is also a liquidity implication for MPSPs that may limit the amount of funds they can transfer or require access to intra-day credit. This issue is likely to become a concern over time, as most successful retail payments exchanges operate, at a minimum, throughout the business day. An evaluation on how to increase the availability of BUNA settlement is a must, a move that would bring the system closer in line with the evolving best practice of real-time settlement among financial service providers.

5.4 Expected benefits

The proposed BUNA platform, as cross border regional clearing and settlement system has several key benefits that are critical enablers for future financial inclusion initiatives.

- **Facilitating regional harmonization:** the BUNA platform lays the foundation for future regional financial inclusion initiatives by facilitating a cost-effective exchange of cross currency payments. The sustainability of an inclusive financial ecosystem hinges on scale. Countries looking to increase financial inclusion aim to create a system where low-value, high-volume transactions can occur. However, it can be cost prohibitive to implement such a system for a country with low payment volume. Even countries with enough transaction volume to sustain such a system could benefit from further cost savings driven by economies of scale. BUNA enables regional financial inclusion initiatives that can benefit from volume driven savings and the reduction of infrastructure friction.
- **Promoting cross-border trade and commerce:** the BUNA platform reduces both the cost and complexity of making an intra-Arab payment transaction. The elimination of this barrier is expected to boost regional trade and commerce. Historically, such efforts

have positively impacted the investment in productive assets as well as employment-generating activities in rural areas.

- Increasing the number of transaction accounts: the number and frequency of usage are key measures of financial inclusion. Easy and affordable remittance can drive the creation of account openings generate frequent usage. Buna facilitates remittances by lowering the cost of cross-border transfers and making them more accessible.

6. Harnessing Further Prospects

This section attempts to shed some additional perspectives for Buna system to take advantage of the growing low-value, high-volume cross border payments in the Arab region. The outcomes are insightful not only for those interested in the Arab region, but also for other regions that have a shared perspective to support low value cross border retail payments with the Arab region.

Basically, Buna platform is not the first regional payments integration effort nor the most ambitious in scope. Nevertheless, it is a challenging initiative if only for the vast differences in payments system development among the Arab countries. Additionally, there are other notable characteristics at play: The initiative is implemented in the framework of Arab Monetary Fund mandate and is operating with multilateral rules, multiple payment streams are under contemplation, and both central banks and commercial banks providers of payment services are participants. The combination of these factors, alongside the financial inclusion objectives, most certainly qualifies the Buna Platform initiative as a noteworthy undertaking.

As stated above, the Buna platform was designed to enhance financial market infrastructure to better support inter- and intra-regional trade. At the core of this initiative are two key concepts: interoperability and the cooperative space (i) Interoperability of the new payments system serves to bring all participants from different countries together using the same platform to exchange payments across borders; (ii) the cooperative space reinforces the shared aspects of the platform by focusing efforts on the development of industry improvements that players in all the countries can leverage. The end-state vision for the regional payment initiative is a series of options for banks and their customers in the Arab region and beyond to safely and securely transact electronically.

The potential impact and results of the Buna platform initiative will most certainly be of interest to the growing interest for digital payment solutions in particular those targeting cross-border retail segment among others, where some local initiatives are currently on the journey to integrating non-bank payment providers into the formal payment system, and to exploring options to build payment system volume and scale with the end goal of increasing financial inclusion.

6.1 Emerging technologies: increasing openness for Buna in cross-border retail payments

The emergence of FinTech holds promise for financial inclusion and economic development outcomes especially in introducing a long-awaited transformative structural change. At the same time, FinTech raises many new questions around financial stability, protection, and integrity as well as compliance with increasing regulations.

With the success of mobile money in East African countries and the advent of crowdfunding around the globe as well as regulatory sandboxes in emerging markets and developing economies (EMDEs), new technology and innovations in the financial sector as alternatives to traditional financial services have driven the financial integration of the unbanked and the financially underserved at faster and more efficient pace.

FinTech includes multiple facets and, as widely accepted, can be defined to cover Artificial Intelligence, Blockchain, Cloud Services, and (Big) Data (the ‘ABCD’

“We’re on the cusp of another breakthrough innovation, including the poorest, in a financial system that increases instead of limiting the value of their assets. Transforming the underlined economics and financial services through digital currency will help those who live in poverty directly.”

Bill Gates, Co-chairman of the Bill & Melinda Gates Foundation.

of FinTech). The emergence of FinTech – that ranges from value added niche services by the GAFAs (Google, Apple, Facebook, Amazon) to the break-through stand-alone solutions of Alipay and WeChat Pay – fosters the convergence of traditional industries and

drives the rapid change of financial markets and institutions. Indeed, Fintech companies are increasingly focused on providing payment services, given the revenue opportunity these services represent to financial and banking institutions²⁹.

On top of, the savings made due to the reduction of money transfer costs and the improvement in the efficiency of payment and settlement systems, the use of disruptive technologies, such as Blockchain, is estimated to further bring down the global banks' operational costs by 30 to 70 percent by 2025. Further, it is estimated that 10 percent of the global GDP will be stored on Blockchain technology by 2025. In this context, the banking sector is witnessing an unprecedented transformation in the payment systems landscape. Traditional channels and tools, including banking services, are now facing risks and challenges from fast-growing technology companies looking to increase their market share.

Undoubtedly, the expansion of Fintech companies will leave a positive impact on cross-border payment systems by offering innovative and cost-effective services. As these services expand further, it is expected that they will also have a greater impact on the financial market infrastructures across the world. Furthermore, innovative technologies and solutions will play an active role in enhancing financial inclusion and supporting economic growth of economies across the world.

On a different note, technological advancement introduces major challenges to countries, central banks and regulators. Indeed, as financial services expand beyond the borders of conventional financial institutions, one key question is raised: how can authorities monitor the financial activities of those companies within their shadow banking system and how can they ensure that these companies comply with regulatory standards? Addressing this question is becoming paramount, especially with the growing concerns that these

²⁹ Atilla Kaiser Yucel, GIZ

new technologies might hinder the capacity of central banks to track and oversee cross-border transactions.

6.1.1 Mobile money

Overview

Mobile money has revolutionized the way financial services are provided across the globe. Mobile platforms change lives by reducing costs, increasing transparency, and creating the opportunity for economic empowerment for people and businesses alike.

The mobile money industry is now fast evolving thanks to the increasing internet access and smartphone adoption. Top tier providers are moving towards and adopting the 'payments as a platform' approach by expanding their value proposition to a full range of third-party products and services to meet their diverse customers need. This signals the start of a major shift in the mobile money industry towards adopting digitization more broadly: mobile money customers will not just have access to an account, but rather have a full suite of services that are more relevant to their daily lives.

In 2018, following a decade of momentous growth, the mobile money industry is still getting the fundamentals right. Mobile money accounts continue to provide a gateway to life-enhancing services, such as healthcare, education, financial services, employment and social protections and thus reaching customers who have been traditionally underserved by the overall financial system. Many industry players have reached scale with the steady and continuous increase of account registrations, activity rates and transaction values.

Although, cash-in and cash-out transactions still represent the majority of mobile money flows in 2018, however, digital transactions have been growing at twice the rate, driven largely by bill payments and bulk disbursements. Additionally, top tier providers are now looking to strengthen their value proposition with a full suite of use cases that serve diverse customer needs. This shift towards a

'payments as a platform' approach is at the heart of the industry's new targets and objectives.

In 2018, the mobile money industry added another 143 million registered customers globally with the total number of accounts reaching 866 million, which translates to a 20 per cent year on-year increase. Year 2017 have also witnessed tremendous growth where most of this growth came from Asia, with 90 million newly opened accounts. Furthermore, the East Asia and Pacific have experienced the highest year-on-year account growth that reached 38 per cent, it is important to note that the region currently represents 11 percent of registered accounts globally.

Over the past few years, mobile money services have evolved to become the leading platform for domestic payments in a number of emerging markets. More recently, the number of mobile money services have expanded to facilitate cross-border transfers and today, there are 184 unique corridors where mobile money can be used to send and/or receive international remittances, across 35 sending countries and 40 receiving countries³⁰, representing 21.1 percent of total official transfers in 2017, at a value of \$74.2 billion. This rise of mobile money services represents a major revolution as it drove down remittance costs significantly and thus positioned mobile money as a key tool to achieve the Sustainable Development Goal target 10.c which aims at reducing the cost of remittances below 3 percent by 2030. Cross-border mobile payments presents much promise in promoting financial integration as well as financial inclusion at the national level.

In terms of challenges, India and Africa's experiences are good examples to leverage in order to highlight on the most critical challenges and derive best practices.

³⁰ Nika Naghavi and Scharwatt, C., (2018). Mobile money: Competing with informal channels to accelerate the digitisation of remittances. GSMA.

Finally, alternatives to the traditional corresponding banking model based on linkages between national payments infrastructures currently account for a small amount of cross border retail payments. Meanwhile, proprietary/closed-loop solutions (where both payer and payee must open an account in or otherwise use the same closed-loop system) that offer a bridge between jurisdictions are growing and thus limiting the complexities of connections between institutions and infrastructures. Results from a 2017 study conducted by the GSMA³¹ showed that mobile money is becoming a widespread channel for cross-border remittances; particularly, Orange Money that captured significant volumes of cross-border transactions along some remittance corridors in West Africa.

³¹ GSMA, Mobile money competing with informal channels to accelerate the digitisation of remittances, May 2018, [here](#)

Box 4: Mobile money model – M-Pesa in Kenya

In March 2007, Safaricom, Kenya’s leading mobile operator, revolutionized the way Kenyans manage money by introducing M-Pesa. Money transfer via SMS texting was the first service offered. Using a basic mobile phone, users could electronically send and withdraw funds. The actual exchange of money, the deposit and withdrawal, occurs through a network of agents that essentially act as ATMs. M-Pesa agents include small shops, gas stations, post offices, and even traditional bank branches.

Today, there are more than 110,000 M-Pesa agents, 40 times the number of banks’ ATMs in Kenya. Since 2007, M-Pesa services have continued to expand. At first, it was limited to buying airtime for mobile calls or paying utility bills and schools fees. In 2012, M-Pesa launched a service enabling users to open interest-paying saving accounts and to obtain short-term loans. In 2017, Safaricom launched a platform that enabled small-holder farmers to use mobile phones to connect with suppliers (for such things as fertilizers, seeds, animal feeds), agronomists, information services and even outlets to sell their harvest. On its tenth anniversary, M-Pesa was serving 30 million customers across 10 countries. Today, 96 percent of households outside the Kenyan capital of Nairobi have at least one M-Pesa account. Studies have found that households using M-Pesa are better able to withstand sudden declines in income because they can more easily receive remittances and are saving more money.

Moreover, M-Pesa led to financial empowerment of women and helped them gain control over their income. This translated into some women graduating from agriculture into more productive jobs. The adoption of M-Pesa has had a tremendous effect on Nairobi’s startup scene. Over the past few years, the startup ecosystem in Nairobi grew very actively with business models building on M-PESA’s foundations. Kenyan startups raised a total of US\$32.8 million in 2017, according to the most recent African Tech Startups Funding Report, the third largest amount raised by any one country on the continent. There are now 38 fintech start-ups active in Kenya.

The Long-Run Poverty and Gender Impacts of Mobile Money” provides evidence that the widespread use of mobile money services in Kenya lifted 194,000 households, or 2 percent of Kenyan’s households out of poverty.

Increasing adoption of mobile money in the Arab region

Mobile phone penetration has grown significantly across the Arab region, reaching 89 percent of non-GCC Arab adults, which can help bring 59 percent of the region’s individuals into the formal economy and offer them access to finance. Promoting the usage of digital-based financial services is becoming of growing interest for Arab

policymakers, given its potential impact in expanding alternative channels for financial system access and usage.

Box 5: The increasing adoption of mobile money in the Arab region

Mobile money provides a convenient and secure way to send and receive remittances for low income families back home.

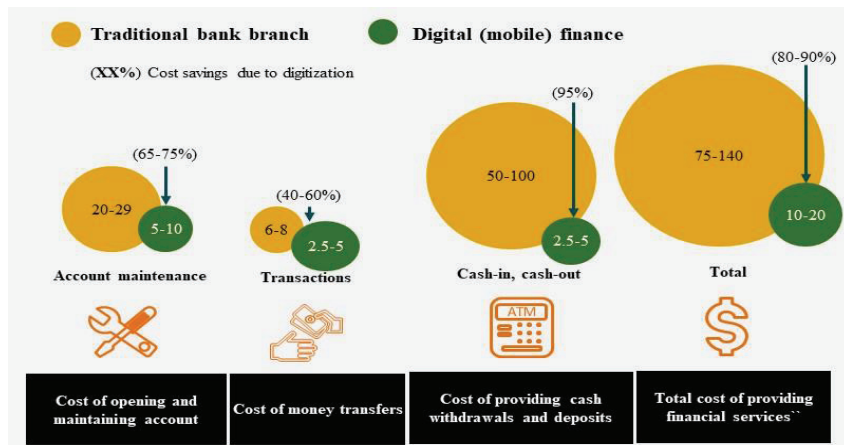
Mobile money services are increasingly being used to aid some of the 65 million forcibly displaced people across the globe.

In Jordan, the top hosting country for displaced persons, Zain Jordan has partnered with UNHCR, Refunite and Red Crescent, to deliver humanitarian aid. In Iraq, UNHCR has partnered with Zain Cash to deliver cash assistance via mobile money.

In Qatar, Ooredoo partners with MoneyGram to allow mobile money users (largely migrant workers) to send money across Asia and Africa. Over 50,000 international transfers are sent every month via Ooredoo Mobile Money, primarily to Bangladesh, India, Kenya and the Philippines.

Mobile network operators have started working with financial institutions to provide innovative financial services and products, which could reduce the cost of financial services by 80 to 90 percent, as described in figure 22 below.

Figure 25: Costs of providing financial services by channel

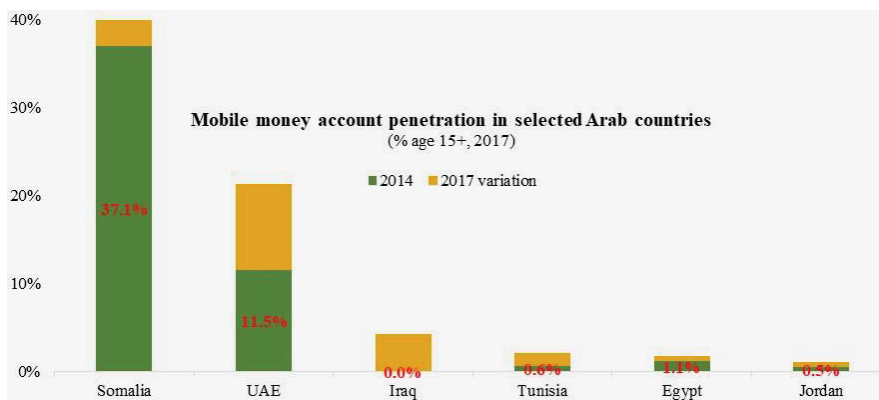


Data source: AMF calculation based on Global Findex Database; GSMA & Fighting poverty, Profitably (2013).

This new trend elicits a great potential to expand financial inclusion in the Arab region, by amplifying effects of technological reach; however, it requires adjustments in the regulatory framework in order to establish an enabling environment to promote innovation at the junction of the telecommunications and financial sectors.

In the Arab region the mobile penetration rate is considerably larger than that of the financial services. With the exception of Somalia (Figure 23), the impact of mobile money accounts in the Arab region is still relatively low, in fact, Arab authorities could benefit from new technologies to overcome the barriers that prevents unbanked adults from accessing financial services. Arab authorities can benefit from the fact that 116 million unbanked adults in the region own a mobile phone, of whom, half have internet access. Exploring these new delivery channels might expand the range of possibilities and can potentially open access to financial services, by lowering the cost of financial services and increase their affordability.

Figure 26: Mobile money account penetration in some Arab countries



Data source: World Bank-Findex 2014-2017.

Advancement in digital financial services, starting with digital payments and including savings, credit and insurance products

delivered through digital platforms, are key to achieving inclusive financial inclusion, in the Arab world, given that:³²

- Nearly 45 million banked adults pay utility bills in cash, 91 percent of whom have a mobile.
- 7 million banked adults and nearly 20 million unbanked adults receive private wages in cash, nearly all of whom have a mobile.
- Nearly 2 million banked adults and 4 million unbanked adults receive government payments in cash.
- Nearly 4 million banked adults receive agricultural payments in cash.
- 7 million unbanked adults receive agricultural payments in cash, 72 percent of whom have a mobile phone.

As a stand-alone, digital technology would not be enough to increase and further enhance financial inclusion. In fact, to ensure that people benefit from the digital offerings, financial services requires a well-developed payments system, strong infrastructure, appropriate regulations, and vigorous consumer protection safeguards. On top of that, financial services should be tailored to the meet needs of the disadvantaged groups such as women, poor people, and first-time financial services users, whom may have low literacy and numeracy skills.

6.1.2 Blockchain and distributed ledger technologies (DLT)

The emergence of blockchain and other distributed ledger technologies (DLT) have been met with expectations that their applications to the financial sector could help address, or ease, some of the long-standing challenges to enhancing access to financial services. These expectations originate from the features of DLT such as decentralisation

“DLT will become pervasive if the value proposition is compelling, particularly if it removes friction relating to transparency, speed and cost.”

³² Data source: 2017 Global Findex Database

and disintermediation, and automation and programmability, among others³³, that can be associated with efficiency gains (e.g., greater

Box 6: Definition of Distributed Ledger Technologies

“Distributed ledger technologies (DLT) encompass the processes and related technologies that enable nodes in a network (or arrangement) to propose, validate and record state changes (or updates) to a synchronised ledger that is distributed across the network’s nodes. In the context of payment, clearing, and settlement, DLT enable entities, through the use of established procedures and protocols, to carry out transactions without necessarily relying on a central authority to maintain a single “golden copy” of the ledger.” (CPMI (2017a)).

transaction speed), cost reductions, and enhanced reliability and resilience, as well as new business opportunities³⁴. In specific country contexts, DLT can be used to foster financial inclusion and facilitate cross-border payments and remittances. As a result, DLT has been subject to strong interest by the public sector and has led to substantial investments. Gartner predicted that DLT solutions would create an added value of \$3 trillion in 2030,³⁵ whereas a recent survey conducted by the World Economic Forum concluded that 10 percent of the global GDP is likely to be stored on DLT by 2025.³⁶

Among other DLT-based applications, is the emergence of crypto-assets, bitcoin being the most prominent application of blockchain-based DLT so far. Crypto-assets have primarily been a source of concerns to financial authorities mainly in terms of their implications for financial stability, consumer protection, and financial sector integrity and money laundering/terrorism financing – among others. Recent reports further indicate that the volume of crypto-assets could be inflated by as much as 95 percent, thereby corroborating the notion that crypto-assets are mostly used for speculation and not as means of

³³ World Bank, “Distributed Ledger Technology (DLT) and Blockchain”, Fin Tech Note No.1, 2017. [here](#)

³⁴ According to studies by the leading consulting agencies, DLT is deemed to positively impact transaction speed, reduce risk and costs and create new business opportunities and will eventually scale to mainstream adoption.

³⁵ Source [here](#)

³⁶ Source: Building Blockchains for a better planet, WEF, Sept. 2018, [here](#)

payment³⁷. In terms of disadvantages, crypto-assets are also highly volatile, and hence exposing their holders to market risk, although their volatility has become smaller in time. The recent development of so-called “stablecoins” attempts to overcome the volatility drawback of existing crypto-assets by claiming to exhibit a stable value through a flexible coin supply (i.e. algorithmic money) or backing the crypto-asset with collateral (i.e. collateralised stablecoins). However, so far stablecoins seem to be used mostly by crypto-asset traders to hedge against market movements. Notwithstanding these shortfalls, crypto-assets appear to have enabled new business models in international remittances that aim to provide services for, or explicitly focus on, the financially excluded.

More recently, with the emergence of crypto-assets sparked the debate around the possibility that central banks use DLT to issue their own “digital currencies”. A recent BIS survey³⁸ shows that the central bank community maintains a strong interest in exploring the option of issuing central bank digital currencies (CBDC), financial inclusion featuring as the second most important motivation to issue CBDC in developing countries and emerging economy³⁹. Even though interest is high and conceptual development is ongoing, so far CBDC has not been issued on any operating or live network. Over 85 percent of all central banks indicated they are either somewhat unlikely or very unlikely to issue any type of CBDC on the short term.

Generally, the possible benefits and challenges related to DLT and crypto-assets are often conflated, given that both are often conceptually intertwined. Nonetheless, these two phenomena must be differentiated into a technology layer, represented by the DLT, and the asset layer, to which any assets recorded by DLT belong, including but not limited to crypto assets. CBDC, on the other hand is

³⁷ Source: Bitwise Asset Management.

³⁸ C. Barontini, H. Holden, “Proceeding with caution, a survey on central bank digital currency”, BIS Papers No. 101, January 2019, [Web-link](#)

³⁹ When, however, looking at advanced economies or wholesale CBDC, financial inclusion is considered the least important reason to issue CBDC.

technology-agnostic and not dependent on DLT. In particular and for the purpose of this paper:

- DLT describes a set of tools for recording data, such as asset holdings or financial transactions, allowing a network of computers to verify and store updates without a single central management system⁴⁰. DLT arrangements can vary substantially with regard to their technical design and institutional structure⁴¹. Generally speaking, DLT can be differentiated into un-restricted, or public, and restricted, or private networks. Unlike unrestricted networks, restricted networks only grant access to a specified set of users that may additionally receive differing rights (i.e. read or write) on an individual basis. This is oftentimes perceived to facilitate the conduct of business relations within a set of known entities. The content of unrestricted networks, on the other hand, is publicly available, with every user having similar rights.
- Crypto assets, on the other hand are assets, as indicated by their associated naming, deployed on this new technology. A crypto-asset can be defined as any asset recorded in digital form that is not and does not represent either a financial claim on, or a financial liability of, any natural or legal person, and which does not embody a proprietary right against an entity⁴². Because crypto-assets lack fundamental value and do not benefit from the protection of institutions such as a central banks or monetary authorities, their use as a form of money (i.e., as a store of value, means of payment, and unit of account) is inherently limited. With some exceptions, crypto-assets are unregulated.

⁴⁰ ECB-BOJ first Stella report, “Payment systems: liquidity saving mechanisms in a distributed ledger environment”, Sept. 2017, [here](#)

⁴¹ CPMI, “Distributed ledger technology in payment, clearing and settlement. An analytical framework”, Feb. 2017, [here](#)

⁴² ECB characterisation of crypto assets. There is currently no international agreement on how crypto assets should be defined. Some analyses may refer to crypto assets more broadly as any asset recorded using DLT that is not backed by any government or other authority, even when that constitutes e.g. a (privately issued) financial or payment instrument. See in particular FSB, 2018, EBA, 2019 and ESMA, 2019. Conversely, the Financial Action Task Force (FATF) in its Recommendations (updated October 2018) excludes from the scope of “virtual” assets digital representations of fiat currencies, securities and other financial assets.

- CBDC is the liability of a central bank that is issued in a digital form. It is either implemented as a wholesale CBDC or a general purpose CBDC. It could be issued in manifold ways, amongst which is the usage of DLT.

Following this approach, it is suggested to avoid discussing any hypothetical potential of DLT in general terms, but rather focus on specific DLT applications, with a view to determining if and how they address identified barriers to access to transaction accounts and use of payment services. In a second stage, it could be considered whether it is possible and/or appropriate to extract some “DLT (applications) design features” that allow DLT arrangements/applications to effectively meet financial access/inclusion objectives.

DLT applications may help enhancing access and usage of transaction accounts

Applications of DLT may help address some of the identified barriers to transaction accounts access and usage, particularly those related to: (i) high fees and low-income levels, and (ii) design of transaction accounts and related payment services that do not meet the needs of end-users. It should be also noted that the role of DLT, as the underlying technology, is to enable the business model that may allow addressing these issues. In fact, this section will discuss selected DLT applications. It should be also noted that, throughout this section, DLT is neither considered as the “silver bullet” for broadening access to accounts nor as the only alternative.

DLT applications may support lowering the cost of remittances

Today, cross-border payments through correspondent banking channels may be subject to various fees throughout the process, e.g. fees charged by the sending institution, the receiving institution, and the intermediaries in between them, that are passed down to end users, in addition to the restriction to the banks’ business hours within different time zones. On this basis, money transfer operators (MTOs)

have developed proprietary frameworks involving pre-funding and bulk settlement to enable faster disbursement of remittances. DLT could be used to create a distributed system for cross-currency funds settlement (to replace the correspondent banking network) that allows removing intermediaries and cutting down settlement times⁴³. In turn, lower costs and increased efficiency may translate into lower remittance prices.

Despite some promising developments in cross-border retail payments, improvements in the market for domestic retail payments have been more far-reaching (e.g. fast payments). Although remittance costs have been decreasing lately, nonetheless, they remain inherently high: as of Q3 2019, the global average cost for sending remittances was 6.84 percent of the amount sent – 3.84 percentage points above the 3 percent UN Sustainable Development Goal.⁴⁴

In fact, higher costs in part reflect higher complexities and risks to be managed. The prevalent arrangement for cross-border retail payments is correspondent banking, where large transaction banks frequently offer correspondent banking services to smaller and/or domestically focused PSPs. In practice, a series of correspondent banking relationships might be involved in a single payment transaction, thereby increasing the complexity, cost and processing time of the transaction.⁴⁵ There have been some projects aiming at improving the functioning of correspondent banking with relevance to cross-border retail payments, particularly ISO 20022 message standardisation and SWIFT global payments initiative (gpi).

DLT-based solutions (peer-to-peer model) cut out the intermediary steps that generate complexities and costs faced un correspondent banking. Using DLT solutions could also bring down compliance

⁴³ Applications of DLT could further benefit international remittances by lowering the impact of de-risking, which could in turn increase service availability and help lower prices.

⁴⁴ As of Q2 2019, the International MTO Index stands at 7.32 percent. Source: World Bank

⁴⁵ CPMI (2018), cross-border retail payments, [here](#)

costs and improve the transparency and traceability of transfers, thereby easing the impact of the de-risking phenomenon, or bypassing it altogether (if DLT solutions enabled remittance services providers to operate without the need for a correspondent bank).⁴⁶ In addition, there have been projects around exploring how DLT could link payment systems and hence removing the need for an intermediary correspondent bank.

Still, because payments to emerging markets often require pre-funding in the local currency accounts banks still face high liquidity costs remains. In this context, crypto-assets can offer on-demand liquidity and thus optimize the liquidity costs. In fact, remittance services providers may use crypto-assets in the business-to-business (B2B) cross-currency leg (i.e., neither the sender nor the recipient of funds holds crypto-assets). In this model, the risk of adverse exchange rate moves between crypto-asset or payment token and fiat currencies is borne exclusively by the RSP. As for the second model, the Ripple's DLT-based solution xRapid, that uses crypto-asset XRP to enable remittance services providers to lower foreign exchange costs and ensure faster settlement. Alternatively, RSPs can provide users access to the crypto-asset or payment tokens through wallets, from which money is transferred either directly from the sender's wallet to the recipient's wallet, or to an agent location for disbursement in cash. In this model, users could be exposed to exchange rate risk depending on the terms of the service (as well as to market risk and the lack of legal protections for unregulated assets and services).

⁴⁶ R. Mejia-Ricart, C. Tellez and M. Nicoli, Paying across borders, Can distributed ledgers bring us closer together?, 26 March 2019, [here](#)

Box 7: Models of DLT based solution in cross-border retail payment

Santander One Pay FX uses Ripple’s xCurrent blockchain-based software solution to enable its clients’ cross-border transfers (Ripple has (at least) two blockchain solutions for cross-border payments, xCurrent and xRapid, the main difference between them being that the former uses fiat currencies, whereas the latter uses XRP, the company’s native crypto-asset). xCurrent is described by Ripple as the first global real-time gross settlement (RTGS) system across RippleNet network of banks and payment providers. xCurrent enables reduction of processing costs through: (i) increased STP rates; (ii) elimination of SWIFT fees; (iii) lowered reconciliation costs (as a result of instant confirmation and real-time liquidity monitoring), among others. Ripple estimates cost savings per payment by 60 percent (See Ripple’s xCurrent solution overview available [here](#)). At the moment, OnePay FX is only available to Santander’s clients in Spain, Poland, Brazil, and the UK, and is free-of-charge (The transaction may still be subject to receiving banks fees). SBI Remit, the largest money transfer in Japan, in collaboration with Siam Commercial Bank (SCB), is also using Ripple’s xCurrent to facilitate remittances between Japan and Thailand.

Another (DLT-based) model is possible, where crypto-assets are used instead of fiat currencies. In this second model, either remittance services providers (RSPs) use crypto-assets in the business-to-business (B2B) cross-currency leg, but neither the sender nor the recipient of funds holds crypto-assets, or RSPs provide crypto-assets wallets, from which value is transferred either directly from the sender’s wallet to the recipient’s wallet, or to an agent location for disbursement in cash. In the “B2B crypto model”, the risk of adverse exchange rate moves between crypto-assets and fiat currencies is borne by the RSP. In the “P2P crypto model”, the users could be exposed in part or solely to this risk depending on the service (as well as to other crypto-assets risks). Launched in 2013, Circle is an example of the first (B2B) model. Their Circle Pay service is currently available in 29 countries and allows seamless transfers between US Dollars, British Pounds, and Euros. Their website reports that they charge zero fees and zero exchange rate mark ups.

Recent global stablecoin initiatives have aimed to address shortcomings in the cross-border payments ecosystem. Stablecoins can be used for cross-border payments without incurring the complexities and costs of (legacy) FX arrangements, as stablecoin arrangements could rely on established large customer bases that are often cross-border. Users of stablecoins are not required to have a transaction account to send or receive stablecoins – within or across country borders. For these reasons, global stablecoin arrangements may enable faster cross-border retail payments and remittances at

competitive costs compared to existing services. With that being said, depending on the stablecoin design and ecosystem, users (senders and receivers) may be urged to exchange their holdings for sovereign currencies (and vice-versa) to continue to cater to the full range of their payment needs, and as such may bear additional costs (e.g., cash-out fees, idle balances) and risks (e.g., custody of stablecoin holdings, FX risk albeit limited). Moreover, end-user interfaces comprising wallets and payment services – among others – do not necessarily include a high-level governance entity or protocol;⁴⁷ as a result, prices and service levels are not directly determined and/or influenced by the governance body of the stablecoin arrangement.

If stablecoin wallets enabled a wide range of payments, they could in principle play the role of transaction accounts. To this end, stablecoin should safely store value and ensure high levels of protection for their users. Therefore, users must be given confidence that stablecoins will in practice be as stable as advertised, and that they have the option to redeem their holdings at all times. Transaction accounts are a stepping-stone to broader financial inclusion; therefore, stablecoins must also serve as a gateway to access other financial services. This function may ultimately depend on the roles that existing intermediaries may decide to undertake within the stablecoin ecosystem. Regardless of any decision, appropriate regulation and oversight of stablecoin arrangements is a necessary condition to benefit the end-users, particularly the excluded and the underserved.

6.2 New business models evolves new opportunities

In the field of cross-border payments, new providers offer correspondent banking hubs, with messaging and settlement services aiming at decreasing costs and improving service levels compared to traditional corresponding banking. Correspondent banking hubs, like Earthport, allow PSPs to centralize their international payments hence avoiding the need to establish many bilateral correspondent banking

⁴⁷ G7 Working Group on Stablecoins, “Investigating the impact of global stablecoins”, October 2019.

relationships. Thus, presenting an option that might be attractive especially for smaller PSPs and/or for less common corridors. RippleNet, J.P. Morgan Interbank Information Network (INN) and IBM Blockchain World Wire (BWW) are software solutions for the secure messaging of financial information between financial institutions. From a technology perspective, RippleNet combines APIs and encryption with DLT, whereas the INN and BWW network are based on DLT. Similar to the SWIFT global payment initiative (gpi), those alternative messaging solutions include enhanced functionalities like end-to-end tracking of transactions and prior confirmation of the receiver's information. From an operational and legal perspective, the operational consistency and legal clarity is ensured by a Rulebook to which network participants have to subscribe. In addition to their messaging services, IBM and Ripple include a settlement functionality.

6.2.1 Drivers of financial inclusion and features of CBDC

CBDC may be relevant for financial inclusion both as a means of payment and a store of value, as CBDC would fulfil these functions depending on its specific design. In fact, the specific CBDC design would determine its implications on payments, monetary policy, financial stability, and AML/CFT compliance, among others. From a financial inclusion perspective, two key dimensions should be looked into (i) how CBDC initiatives may “meet the bar” (e.g., by matching 24/7/365 availability of current instant/fast payment solutions or mobile money, both at domestic and cross-border levels) and (ii) how best they may support financial inclusion, i.e., what features, and in which combination, would they maximise financial inclusion gains (e.g., by ensuring fungibility with deposits and e-money accounts). However, certain features (e.g., anonymity) may not be consistent with the financial inclusion objectives (to the extent that fully anonymous CBDC may raise concerns from an AML/CFT perspective as well as restrict other design choices, such as the possibility to impose limits on CBDC holdings and/or transactions). Other features that do not appear to have a direct impact on financial

inclusion objectives in fact may have important indirect implications: for instance, while limits on CBDC holdings may not matter as long as CDBC allows to safely store “some” value, CBDC are found to be crucial to minimise any adverse impact on financial intermediation and for financial stability. As such, regardless of its design, CBDC carries the unique feature of a public good: as, it neither incentivise nor deter by profitability considerations. On the other hand, similarly to other forms of transaction accounts, access to CBDC would presumably imply digital connectivity, and hence it is dependent on a smoothly working ICT network with broad coverage.

As a general remark, whether or not financial inclusion objectives warrant the issuance of CBDC (i.e., require that the central bank provides direct claims in digital form to the general public) would depend on country-specific circumstances, including the barriers to financial inclusion that CDBC is intended to address, and the respective roles of the public sector and the private sector in pursuing financial inclusion. Depending on these circumstances, the same barriers could as well be addressed by the private sector initiative, or CDBC may complement existing solutions with a focus on the “last mile”.

To this extent, CBDC initiatives could be focused on groups and/or areas that banks and PSPs deem unprofitable or unviable to serve. For instance, in the Bahamas, in spite of relatively high levels of access to savings accounts (80 percent) and debit cards (70 percent), the coverage of banking infrastructure is sporadic due high fixed costs to deploy such infrastructure across a disperse geography. In fact, banking services are completely absent altogether on some islands. Moreover, although the use of electronic payments is on the rise, anecdotally the costs of settling transactions remains high. In this context, the Bahamian project “Sand Dollar” was launched mainly to cater for the access inequalities and inefficiencies caused by the country’s geography. This project aims at achieving greater levels of access and inclusion beyond what the private sector can achieve in

these conditions, when serving as a tool to assist persons in remote communities to establish and maintain deposit accounts and other services at banks. For this purpose, the Bahamian CBDC is a blockchain-based solution that acts as a digital version of the Bahamian dollar issued by the central bank, that bears no interest, and is available for use across all existing payment platforms and private wallets.⁴⁸

As cash usage generally wanes, CBDC could help ensure continued access to the digital equivalent of cash. Without access to cash, there is a risk that some people will be left further behind. The groups that are most vulnerable to this risk may include: older persons; persons with functional limitations, including individuals with disabilities; undocumented migrants; people living in, or moving out of, extreme poverty or homelessness; the inhabitants of underserved rural and remote areas, and; the “financially illiterate”. For a reason or another, including outstanding barriers to access to transaction accounts, these groups rely on cash and would have difficulty coping, or may not be able to cope at all, in a cashless society. Yet, CBDC per se may not alleviate the types of barriers by which these groups are affected, to the extent that technology and connectivity represent these barriers. Still, certain features of CBDC may be leveraged to mitigate the effects of such exclusion. It should be noted that, while the demand for cash may be expected to decrease over time and is already decreasing in some countries, Sweden being the most striking example, the current situation may not warrant short-term action in most jurisdictions.

6.2.2 Fast payment, a new global landscape

The Committee on Payments and Market Infrastructure (CPMI) defines fast payments as “payments in which the transmission of the payment message and the availability of final funds to the payee occur

⁴⁸ See J. Rolle, The Bahamian payment system modernisation: advancing financial inclusion initiatives, Central Bank of the Bahamas blockchain seminar, 18 March 2019, [here](#)

in real time or near-real time and on as near to a 24-hour and 7-day (24/7) basis as possible”.⁴⁹ Other definitions may set a specific threshold for the time by which the funds must be available. While in many ways terms such as instant payments, faster payments and real-time payments are used interchangeably, three distinct official regional systems have been established: Instant Payments for the SEPA area, Faster Payments for the UK and Real-Time Payments in the US.

The trend of fast payment development is particularly evident over the past few years, as new major real-time payments schemes worldwide went live. As such, these new systems are allowing consumers and enterprises to make and receive instant electronic transfers. Payment systems permitting real-time settlement of retail payments, launched in the 2000s, have allowed other innovations to flourish at the consumer level, including the introduction of mobile, internet and peer-to-peer payments. According to BIS analysis, fast payment systems are likely to become the dominant retail payment system by 2023⁵⁰. As for cashless payments, these are becoming ever faster and more convenient.

Domestic implementations of fast payments are quick to be adopted, as indicatively shown by the amount of countries operating fast payment systems that rose from 25 in 2017 to 40 in 2018.⁵¹ Some are central bank-driven (e.g., Mexico), some are industry-driven (e.g. United Kingdom) and some are the result of a joint approach (e.g., Australia, where the central bank subscribed as a participant in the development of the New Payments Platform). In Europe, the journey toward instant payments formally begun with the launch, in November 2017, of the SCT Inst scheme. As of April 2019, 2,057 payment service providers have joined the scheme in 20 countries, representing 50 percent of European PSPs. To ensure that the demand

⁴⁹ CPMI, Fast payments, enhancing the speed and availability of retail payments, 2016, [here](#)

⁵⁰ See M Bech, Y Shimizu and P Wong, “The quest for speed in payments”, BIS Quarterly Review, March 2017, pp 57–68.

⁵¹ FIS, Flavors of fast report 2018

for instant payments is met at European level to further facilitate integration in the euro area, in November 2018, the Eurosystem launched TIPS (TARGET Instant Payments Settlement), a service to enable the real-time settlement of instant payments on a 24/7/365 basis.

Depending on the country context, some implementations have experienced significant uptake. In India, UPI processes five times the volumes of RuPay,⁵² India's domestic card scheme. The Indian UPI (Unified Payments Interface) provides an API interface to enable the initiation (push transactions) and collection (pull transactions) of payments through the IMPS (Immediate Payments Service). There are now over 90 UPI apps provided by banks or third-party providers to customers of 130 banks. Similarly, the Singaporean FAST payment scheme has almost caught up with card payments in terms of value of transactions (85 percent)⁵³. Other initiatives have experienced less adoption so far or still in development.⁵⁴

⁵² At the physical POS and online.

⁵³ Source: Monetary Authority of Singapore

⁵⁴ For instance, Kenyan PesaLink was initiated as a response to M-Pesa mobile money scheme, and is currently connecting the customers of 28 banks, its user base being roughly 10 percent of mobile money users. People's Bank of China operates the Internet Banking Payment System that connects the online banking systems of the participating commercial banks and handled around 8.46 billion payments with a total value of \$9 trillion (2017) as compared to \$15 trillion (2016) of third-party online payment providers.

Box 8: Models of fast payment

In the Single Euro Payments Area (SEPA), the Instant Credit Transfer (SCT Inst) is a payment instrument for the execution of credit transfers in euro within 10 seconds, and available 24 hours a day and on all calendar days of the year. There is a 15,000 EUR transfer limit. Instant Payments are always single payments, and every transfer is irrevocable.

In the US, the oldest banking association and payments company, The Clearing House (TCH), has been developing the real-time system. RTP is available 24/7 and works in the background, processing payments in real time. There is a \$35,000 transaction limit. In addition to fast payment processing, RTP also enables participants to send messages. The system is set up in a way that technically allows all participants to make Real-Time Payments to each other: companies, consumers and public authorities. The system launched in 2017 and is open to all payment service providers. The aim is to provide access to the RTP network for all financial institutions by 2020.

In the UK, the Faster Payments Service (FPS) is a quasi-real-time system that was introduced by Pay.UK, in May 2008. It is the UK's 24/7 payments solution, with confirmations being issued within 15 seconds and the transaction completed within two hours maximum. FPS covers single payments, scheduled transfers, direct debits or bulk payments by companies with a direct connection to the service. Payment orders can only be processed in GBP. The limit for any one transaction is GBP 250,000 and can be lowered further by participating banks. Faster Payments transfers are also irrevocable.

Fast payments may help enhancing access and usage of transaction accounts

Fast payment solution will impact the design of transaction accounts and payment services, enhancing the access and usage of transaction accounts. Notably, fast payments encourage users to make and receive time-sensitive payments whenever necessary. Moreover, fast funds verification could reduce the chance for end users to make unintentional overdrafts and help them avoid costly short-term financing. On the receiving side, the close-to-immediate availability of funds may be helpful for emergency spending. If faster payment solutions are designed to process payments on a 24×7 basis, end users may benefit from the additional flexibility to quickly complete transactions and monitor accounts at any time. From a merchant perspective, fast payments allow mitigating credit risk, i.e., there is no

need for the merchants to issue any payment guarantees because there is no risk of a payment failing to come through. Moreover, businesses can reconcile their incoming payments more efficiently, thereby optimising their end-to-end payment process. Small and medium-sized businesses would benefit from having faster access to their working capital and seeing their cash flow more freely.

However, speed is not the only consideration for the financially excluded and/or underserved. Fast payments that fulfil the needs of excluded and/or underserved individuals are those that (i) serve as a close substitute for cash with many of the same advantages that could be valuable for the unbanked or underbanked and (ii) act as a gateway product towards other financial services (see CPMI). The latter condition is rather dependent on the type of payment instrument supported by fast payment implementations and would require a separate discussion. With regard to the former condition, in principle, fast payment implementations already allow the immediacy of cash to be matched. However, to serve as (close) substitute for cash, fast payments would have to also be as widely accepted, fungible, and easy to use.

To this end, fast payment implementations would need to fulfil certain requirements / characteristics, as they emerge from selected country experiences:

- First, fast payment implementations would have to ensure broad coverage by allowing PSP access on a fair and open basis. Closed-loop systems would not meet the requirements/characteristics, although they might be equally ubiquitous as open systems if they can secure significant market share (e.g., tech giants' solutions). In the United Kingdom, the Faster Payments Service (FPS) enables a wide range of financial institutions, from banks to fintechs and PSPs, to connect either directly or indirectly to the Faster Payments Central Infrastructure. Since 2014, the Faster Payments Access Programme has more than tripled direct participation in the

scheme.⁵⁵ 2018 also saw the first non-bank join Faster Payments as a Direct Participant, making use of new rules which allow non-banks to open a settlement account at the Bank of England.

- Second, fast payment implementations should not be limited to any specific transactional device or access channel. Rather, they should enable the use of a wide range of devices and channels that are readably accessible by users. In India, bank customers can scan a QR code on their mobile devices to make fast payments at the point of sale. A QR code consists of black squares arranged in a square grid on a white background, which can be read by an imaging device such as a camera. NPCI, in collaboration with the international card schemes, developed common standard QR code specifications – Bharat QR or BQR – for merchant payments. The NPCI has subsequently made it mandatory for all UPI-based apps in the market to offer Bharat QR code scanning.
- Third, fast payment implementations would have to support multiple use cases. While the current focus of fast payments is on retail use with person-to-person transactions, fast payment implementations, they should be flexible to accommodate a wide range of use cases and emerging user demand. The implementations of fast payments cater merchant payments through so-called request to pay messages, which can result in push payments and pull payments (e.g., UPI collect request⁵⁶, LankaPay). In this regard, the Better than Cash Alliance (BTCA)

⁵⁵ In particular, there are three types of participants/ways to connect: (i) Directly Connected Settling Participants (DCSPs) – connect directly into the Faster Payments Central Infrastructure to send and receive payments in real-time, 24 hours a day; (ii) Directly Connected Non-Settling Participants (DCNSPs) – connect directly into the Faster Payments Central Infrastructure via a sponsoring Participant that performs Bank of England settlement on the PSP’s behalf; (iii) Indirect Agency – This option enables a PSP to connect to Faster Payments via a sponsoring Participant which manages the direct connection on its behalf.

⁵⁶ A Collect Request transaction is initiated by the beneficiary to pull funds from the payer by using Virtual Address. The payer will receive the collect request on his PSP UPI App which is to be authenticated using 4 - 6-digit MPIN to complete the transaction.

and the Global Partnership for Financial Inclusion (GPII)⁵⁷ recommended that fast payments be implemented as push payments only in order to limit the risk of unauthorized debits through the use of stolen payment credentials – that is, unless the risk can be managed appropriately. In the United States, The Clearing House, which launched its real-time payments system, RTP, in November 2017, is considering use cases ranging from P2P transfers to business supply chain payments, cash-on-delivery services, and the replacement of check payments for corporate and business clients – among others. Fast payments implementations with cross-border reach could cater to (low-cost) international remittances. For example, several members⁵⁸ of the Asian Payment Network have agreed on connecting their respective payment infrastructures with the goal to enable “real-time cross-border payments”.⁵⁹

- Lastly, fast payments require adequate security arrangements, as well as fraud mitigation and consumer protection frameworks to be in place. As the security of payments defines the confidence users have in the payment system, security is of particular importance. However, immediate fund availability and a short time between payment initiation and execution render fast payments particularly exposed to security risk. Fraudsters might attempt to quickly withdraw funds before the fraudulent activity has been noticed. Potential risk mitigation strategies include the attempt to decrease the attractiveness of fast payments by imposing limits on the amount of individual transactions.⁶⁰ Alternatively, fast payments may leverage additional technology

⁵⁷ BTCA-GPII “Achieving Development and Acceptance of an Open and Inclusive Digital Payments Infrastructure”, 2018, [here](#); See also BMGF’s Level One Project [here](#)

⁵⁸ The respective members are: National ITMX Co. Ltd (ITMX) of Thailand, National Payment Corporation of Vietnam (NAPAS), Network for Electronic Transfers (Singapore) Pte Ltd (NETS), Payments Network Malaysia Sdn Bhd (PayNet), and PT Rintis Sejahtera (Rintis) of Indonesia.

⁵⁹ See also [here](#)

⁶⁰ CPMI, “Fast payments – Enhancing the speed and availability of retail payments”, November 2016.

such as cloud services and data analytics to increase payment security. Advanced data analytic tools such as big data processing and machine learning make it possible to detect fraud in real-time. If this detection is performed by the payment processor the management of fraudulent operations can be possible in real-time.⁶¹

The implementation of fast payments, under certain conditions, may also provide the basis for value-added services and innovative business models, subject to third party providers gaining access to customers' account information and acquiring payment initiation capability (open banking).

Real-time payments will continue to develop globally, but the focus will shift to new value-added services built on top of the basic infrastructure. An example of this is Singapore and Thailand implementing real-time cross-border payments between the two countries. Both countries have launched real-time payment systems and are now building on top of them to create more value for the customer and open up new revenue opportunities for the organizations.

In Europe, the Second Payment Services Directive aims to increase Pan-European competition and enhance the level playing. Under PSD2, account servicing PSPs must give licensed third-party providers (TPPs), including Account Information Service Providers (AISP) and Payment Initiation Service Provider (PISP) – access to payment account information via open APIs. Services based on access to a payment account have huge potential, for example where TPPs offer competitive payment initiation services to merchants. In this context, the combination of PSD2 and instant payments has a significant disruption potential on traditional business models, provided all European banks subscribe to the SCT Inst scheme and APIs can be successfully harmonised. In other jurisdictions, open banking may not be backed by legislation; its scope may also vary from country to country.

⁶¹ Naturally cloud service providers might be at an advantage to detect fraudulent behaviour as they have access to a bigger data pool. See also [here](#)

Still, consumers may not be willing to pay a service charge for making a payment if they perceive their alternatives (using cash, if available) to be free (see GPFI). Therefore, cost is a crucial consideration. A first component is the cost charged to PSPs for using the fast payment infrastructure. A second component is PSPs' end-user fees, although these are not typically controlled by central banks. In general, infrastructure may be designed so that PSPs can incorporate fast payment functionality and other services at relatively low cost (CPMI). Providers like KlickEx show that it is possible to substantially reduce costs for international remittances. Sending money from Australia and New Zealand to various countries in the Pacific, for example, decreased from 22 percent–29 percent to under 3 percent⁶². Nonetheless, fast payment arrangements should manage business risk adequately.

While currently the fast payment implementations are mainly focused on domestic payments, linking them across borders could provide an attractive payment channel for international remittances and other cross border retail payments. However, interlinking of traditional payment systems has already proven to be difficult in practice and may create other operational and financial risks that would need to be managed. The harmonisation of legal, technical and operational aspects is complex. It requires political will, commitment from participants in both payment systems, and substantial business case to be made for each jurisdiction.⁶³ Nevertheless, ongoing initiatives for cross border fast payments are under development.

⁶² For further information [here](#)

⁶³ CPMI, "Fast payments, Enhancing the speed and availability of retail payments" Nov. 2016

7. Evolving Policy and Regulation Framework Drives Change

The effort to bring cross-border retail payments into Bana payments scheme highlights key differences in regulations among the different countries. For example, countries may have different definitions of authorized providers, different licensing bodies, and different limits on transfer amounts. While none of these differences are insurmountable obstacles, the variations highlight the need for participants to understand and comply with the different legal parameters in each of the 22 countries in which they choose to do business.

In contrast, Europe, which has the Single Euro Payments Area, has a Payments Services Directive that provides a common legal basis to exchange cross-border payments throughout the area. Regulators in the Arab region are invited to evaluate a model payments law to promote as a baseline for each country to adopt. Completion of this type of process will surely take a long time. In the interim, cross-border payments within Arab region will have operational, but not legal or regulatory harmonization.

For Bana to support retail payments across the Arab countries to realize their potential and contribute to financial inclusion, policymakers have to choose their models and regulate cross border payments in line with national economic and financial sector development strategy along with regional integration policy objectives. A look at payment system programs reveals that a sound ecosystem for sustaining cross border retail payments includes the following critical success factors, but not limited to:

7.1 E-money to expand access to low-cost transaction accounts

At the moment, banks are under some competitive pressure from other financial institutions, because if earlier banking business has used about 70% of the world's financial assets, today it controls only 30% (Hilorme et al., 2019). Schemes for the electronic money are growing

and using the Internet as a medium of turnover allows such electronic money to instantly cross the borders of the states, it is easy to exchange for electronic money from other issuers and for electronic money denominated in other currencies (Drobyazko, 2018).

A key regulatory enabler for building inclusive digital financial services is to support access and usage of low-cost transaction account, which includes e-money and held with banks or other authorized and/or regulated payment services providers. It can be used to make and receive payments and store value and is considered an essential financial service in its own right (CPMI and World Bank 2016). The World Bank's Global Findex shows that 21 percent of adults in Sub-Saharan Africa have a mobile money account, half of which do not have any other account. In 10 Sub-Saharan African countries, more adults have a mobile money account than a bank account. In Haiti, the share of adults with a mobile money account rose from 4 percent in 2014 to 14 percent in 2017 (Demirgüç-Kunt et al. 2018).

“As regulators, we are excited about the new solutions and technologies coming on stream because they will eventually help us as regulators. Technology will help all of us to deliver what we want in a more efficient way”.

H.E. Mubarak Al Mansoori,
Governor of the UAE Central Bank
at CBK International Banking
Conference, Sept. 2019.

E-money can be broadly defined as an electronic prefunded payment instrument issued against the prefunded real balances in the official currency of the monetary authority of that particular country that may be widely used for making payments to entities other than the e-money issuer (Committee on Payments and Market Infrastructure, Bank of International Settlements and the World Bank, Payment Aspects of Financial Inclusion, April 2016). E-money is accessible through digital wallets or online money, mobile money wallets, or card-based instruments which can be provided by licensed banks, mobile network operators (MNOs), non-banks, non-MNOs, and

narrow or mixed banks. Deposits to e-money accounts can be made through cash (typically through an agent or kiosk) or by receipt of a

“Banks are under tremendous pressure because they know that if they are not providing new services, we the Central Bank will allow non-banks to provide that service. We are not waiting for banks to wake up and move forward because it’s about the future of the economy”.

H.E. Rasheed Al Maraj,
Governor, Central Bank of Bahrain
 at CBK International Banking
 Conference, Sept. 2019

transfer from another client (domestic or cross-border peer-to-peer), transfer from bank account, business (payroll, incentives) or government entity (government-to person (G2P) payments). An e-money client is defined as any person/entity who uses e-money to make payments for goods and services as well as to access

financial products such as savings, credit, remittance, insurance and investments. Generally, e-money is utilized by all segments of the population, both banked and unbanked. For the banked, it enhances convenience and safety in transactions, while for the unbanked, it provides access to financial services which hitherto could not be accessed via regular brick and mortar facilities⁶⁴.

“There is a need to look further on the trends of the use of Fintech with a view to increasing their impact on the efficiency of cross-border payments that benefits creating a more inclusive financial system on one hand and mitigating the associated risks, on the other. Towards this end, it is important to focus on adapting regulatory and oversight frameworks which would further promote the development and growth of such technologies and encourage innovation within a regulated environment that can expand financial inclusion, strengthen stability and enhancing the efficiency of banking industry and financial markets. Obviously, AMF is engaged toward supporting this endeavour”.

Dr. Abdulrahman bin Abdullah Al-Hamidy
Director General and Chairman
of the Arab Monetary Fund
 at AMF-ARPS conference, March 2019.

A key regulatory enabler for building inclusive digital financial services is introducing a new licensing window for electronic money issuers

⁶⁴ Policy model for E-money, Alliance for Financial Inclusion, September 2019

(EMIs) (Staschen and Meagher 2018). Creating special licensing categories to allow newcomers to specialize in niches of the financial sector is not a new regulatory approach to advancing policy goals. Because EMIs have a lower risk profile than banks, they require less regulatory oversight. A special licensing category that recognizes that their role is to store customer funds converted into e-money held in basic transaction accounts, rather than extend credit based on such funds, can open the DFS market to new providers. While many countries have created non-bank e-money licenses to cater for this business, at least three countries have introduced a special banking licensing category, the payments bank license.⁶⁵

E-money can be issued under three types of licencing models:⁶⁶

- **Bank-led:** A licensed bank or financial entity is the service provider. The role of third parties or partners is more peripheral, limited to providing communications infrastructure and/or agency services.
- **Non-bank e-money provider:** a licensed non-bank e-money issuer, such as an MNO or a private technology business that signs up clients to use their product. Examples of a non-bank e-money issuer include a mobile money service that is run by an MNO, and an e-money wallet by a financial technology business. Under this model, a supervised financial institution acts as the trust account if required under the regulations governing the operations of the service in the jurisdiction.
- **Mixed or narrow-bank model:** A variant of the bank-led model, where a specialized institution is established and licensed under existing banking laws of the jurisdiction. The resulting entity is afforded some flexibility around some elements of the banking law, such as tiered know-your customer (KYC) requirements and has a more limited services offering to its clients; for example, it

⁶⁵ Dias, Denise, and Stefan Staschen. 2019. "Nonbank E-Money Issuers vs. Payments Banks: How Do They Compare?" Technical Note. Washington, D.C.: CGAP

⁶⁶ GSMA Mobile Money Policy and Regulatory Handbook, September 2018

may not be permitted to offer credit services. Such applications are commonly seen in Mexico, Colombia and in countries such as India and Nigeria, under the Payment Service Banks model.

On the other hand, regulators continue to invest in establishing tiered KYC programs for both consumers and SMEs. In particular, efforts should be made to link these programs to biometric national identity programs. Even in countries where permissions and plans are in place to provide access to traditional transaction accounts, and to connect those accounts to settlement platforms, there is a potential to maximize the usage of these services. In many markets, providers see dormant accounts and merchants face low volumes at their electronic points of sale. Many innovative programs are underway worldwide to counter this trend and create incentives for consumers and for their counterparties.

7.2 Promote mobile payments platforms

With increasing interest to use retail agents and communications technology, bank-led and non-bank led models are converging to banking-beyond-branch arrangements, also known as branchless banking. Some experts argue that technology could not replace bank staff and banks would not operate without branches in the short run, say before 2020⁶⁷. Operating in a banking-beyond-branch environment would require a sound regulatory framework which presently does not exist in many Arab countries.

Lessons learnt from global experience showed that many countries have issued legal acts on regulation of mobile banking and payment systems. However, the acts have proved inadequate in:

- Defining the conditions under which non-bank third-party agents can conduct cash transactions on behalf of mobile financial service (MFS) providers and possibly initiate account opening

⁶⁷ Prof. Kinandu Muragu, Executive Director, Kenyan School of Monetary Studies: *Promoting Mobile Money Development in Kenya and the region*, 2012.

(as this would be a key driver for increased outreach under a branchless banking initiative)

- Defining less stringent ‘Know Your Customer’ (KYC) requirements to avoid burdensome procedures for low-value accounts and small transactions, given the low level of money-laundering-related risk
- Defining e-money, protecting the funds deposited in e-money accounts and adapting legal account features (such as KYC and ceilings for account balance and transactions).

Under a slightly more liberalized environment, some mobile payment programs would have performed satisfactorily. There would be little hope of success if regulations made it difficult for poor people to open bank accounts. It makes sense that if people want to initiate a banking relationship, they should not be hassled into bringing documents they do not have; and their bank should not be hassled into transporting and storing paper copies they do not need. However, there are legitimate concerns about money laundering, but all those regulatory safeguards do not need to kick in upfront when the risks are low. As some experts would argue, “give people first an opportunity to try the service with low amounts. Let clients present documents only after certain account activity thresholds are met.” (Ignacio Mas⁶⁸, 2012).

There will also be little hope of success if banking regulations unnecessarily limited the range of providers who could compete effectively in the market for poor people’s savings, or if regulations did not offer a level playing field across authorized providers. Financial exclusion will arise when there is too little competition at the base of the pyramid. Some experts would argue that as mobile operators are now helpfully stepping in, regulations should allow them to play but without favoring them over banks (Ignacio Mas, 2012). An

⁶⁸ Similar thoughts can be found in his earlier papers, such as “Regulating New Banking Models that can Bring Financial Services to All”, by Claire Alexandre, Ignacio Mas and Dan Radcliffe (BMGF).

explicit policy objective should be to increase market competition at the base of the pyramid.

In order for mobile payments to realize their potential and contribute to financial inclusion and integration, policymakers have to choose their models and regulate mobile payments in line with national economic and financial sector development policies. Nonbank-led models may suit low-income Arab countries, where banks' failure to facilitate financial inclusion requires regulators to intervene in the market to promote financial innovation and competition for outreach and accessibility. Banking sectors that are relatively sound and efficient may prefer bank-led models as a way of stimulating additional services, particularly those operating in countries that are already reasonably well banked and have the necessary infrastructure.

Adopting the right models, however, does not guarantee the success of mobile payment programs. Other factors also account for mobile payments' performance in facilitating financial inclusion and integration. This means that even correctly selected models may still bring disappointing results if the ecosystem lacks in critical success factors. Analysis of mobile payment programs across the world reveals that a sound ecosystem is essential for sustaining domestic and cross-border mobile payment programs. The regulators should not focus exclusively on regulation, they should instead focus on risk-based and proportionate regulation that balances innovation, competition and protection of customers, but is not limited to that. Governments also need to promote policy-led inter-operability among different payment systems, improve both 'soft' and 'hard' ICT infrastructure in order to ensure growth in mobile payments, build strategic partnership with different stakeholders involved in the ecosystem, including with regulators in sending and / or receiving countries. It is also recommended that remittance hubs are encouraged to support international money transfers via mobile phone, as it facilitates the reconciliation and reporting process and ensures compliance with regulatory controls more easily. The remittance

center model operates in many markets in different regions, including Latin America, Africa, and Asia. This model is characterized by the rapid expansion of the use of mobile payment services as a competitive service to the traditional official channels.

7.3 Introducing Arab e-money as a regional digital currency

The emergence of digital currencies and assets has spurred interest by Central Banks in this space, as a potential tool for monetary policy and transformation of payments infrastructure. According to CPMI, digital currencies, and especially those which have an embedded decentralized payment mechanism based on the use of a distributed ledger are an innovation that could have a range of bearings on various aspects of financial markets and the wider economy. These bearings could include potential disruption to business models and systems, as well as facilitating new economic interactions and linkages. In particular, the potential implications of digital currencies and distributed ledgers on retail payment services seem to be especially important, as these schemes have the potential to facilitate certain retail payment transactions (e.g., e-commerce, cross-border transactions and person-to-person payments), and possibly make them faster and less expensive for end users such as consumers and merchants.

Shifting payment systems into DLT and peer-to-peer architecture can become the foundation for what will be a significant investment in payment industry infrastructure that has to serve emerging needs over the next 20 years. This is the direction that thought leaders such as the Bank of England are already taking in designing a replacement for traditional RTGS systems.

On the other hand, private sector has also taken many steps in migrating into new technology-led payment solutions. Over the past years, several financial intuitions around the world have already embraced DLT-based solutions, developed specifically as new interbank rails that will enable financial institutions, both banks and

non-banks, to connect seamlessly to each other for cross-border payments.

The Bank of England defines⁶⁹ Central Bank Digital currency ('CBDC') as any electronic, fiat liability of a central bank that can be used to settle payments, or as a store of value. Some parameters that may distinguish between 'types' of CBDC include the following and can be used to design the most appropriate CBDC platform. A second paper⁷⁰ from the Bank of England elaborates on access models for CBDC. The Bank for International Settlements also offers a useful framework⁷¹ for assessment. Borrowing from these papers, a regional e-money project can be seen as a strategic initiative by the Arab policy makers in the region to lead regional banks and other financial institutions into a global digital world. The concept is to set a core foundation to introduce an e-money model platform that enables Buna⁷² to issue a digital account "e-money" against the purchase of an official and accepted stable regional reporting currency and establish a secure, simple, fast and resilient e-money settlement platform for wholesale transactions between participants in Buna, be it financial institutions or non-banking financial institutions.

Moving ahead, it is important to assess the feasibility of such a project from a business point of view and considering the market adoption of a regional e-money as a settlement currency. More importantly, the policy and regulatory point of view needs to be evaluated, particularly in adopting one single e-money definition among Arab countries and developing specific legislation that regulates e-money. In the case of the EU, the legal definition of e-money requires that the balances be a claim on the issuer, issued on receipt of funds. Given this, units of

⁶⁹ 'Broadening narrow money: monetary policy with a Central Bank digital currency', Staff Working

Paper No. 724, Bank of England, May 2018.

⁷⁰ Central bank digital currencies, design principles and balance sheet implications', Staff Working Paper No. 725, Bank of England, May 2018.

⁷¹ AMF Digital Currencies', Committee on Payments and Market Infrastructures, Bank for International Settlements, March 2018.

⁷² In this case Buna will be an e-money issuer

digital currencies in some schemes will not be considered e-money in a legal sense, as they are not issued in exchange for funds (even though they can be subsequently bought and sold), and may not be issued by any individual or institution.

Glossary

Agent: Any third party acting on behalf of a bank or other financial services provider (including an e-money issuer or distributor) to deal directly with customers. The term ‘agent’ is commonly used even if a principal agent relationship does not exist under the law of the country in question.

Application Programming Interfaces: Functions and procedures that allow the creation of applications that access the features or data of an operating system, application, or other service.

Bank-based Model: A mobile financial services business model (bank-led or nonbank-led) in which (i) the customer has a contractual relationship with the bank and (ii) the bank is licensed or otherwise permitted by the regulator to provide the financial service(s).

Bank-led Model: A mobile financial services business model (bank-based or nonbank-based) in which the bank is the primary driver of the product or service, typically taking the lead in marketing, branding, and managing the customer relationship.

Banking beyond branches / branchless banking: The delivery of financial services outside conventional bank branches. Banking beyond branches uses agents or other third-party intermediaries as the primary point of contact with customers and relies on technologies such as card-reading point-of-sale (POS) terminals and mobile phones to transmit transaction details.

Cash-In: Cash exchanged for e-money

Cash-Out: E-money exchanged for cash

Customer due diligence: Often used synonymously with Know Your Customer (KYC) measures, but generally refers more broadly to a financial institution’s policies and procedures for obtaining customer information and

assessing the value of the information for detecting, monitoring, and reporting suspicious activities.⁷³

De-risking: It refers to the phenomenon of financial institutions terminating or restricting business relationships with clients or categories of clients to avoid, rather than manage, risk.

Digital Financial Services: The broad range of financial services accessed and delivered through digital instruments, including payments, credit, savings, remittances, and insurance.

Digital Payment: A form of digital financial service where the financial service is a payment. This includes payments where either the payer or the payee uses a digital instrument but does not include payments that are initiated and collected in cash (e.g., cash to cash services), even where the agent transacts electronically.

Electronic money (e-money): A type of monetary value electronically recorded and generally understood to have the following attributes: (i) issued upon receipt of funds in an amount no lesser in value than the value of the e-money issued; (ii) stored on an electronic device (e.g. a chip, prepaid card, mobile phone, or computer system); (iii) accepted as a means of payment by parties other than the issuer; and (iv) convertible into cash⁷⁴. Subsequent definitions of e-money have widened the concept to include a variety of retail payment mechanisms, possibly extending to digital currency schemes.

Electronic payment (e-payment): Any payment made with an electronic funds transfer.

E-money account: An e-money holder's account that is held with the e-money issuer. In some jurisdictions, e-money accounts may resemble conventional bank accounts, but are treated differently under the regulatory

⁷³ Pierre-Laurent Chatain et al, 2011

⁷⁴ SSBs paper

framework because they are used for different purposes (for example, as a surrogate for cash or a stored value that is used to facilitate transactional services).

E-money issuer: The entity that initially issues e-money against receipt of funds. Some countries only permit banks to issue e-money whereas other countries permit nonbanks to issue e-money.

Interoperability: Payment instruments belonging to a particular scheme or business model that are used in other systems and installed by other schemes. Interoperability requires technical compatibility between systems but can only take effect when commercial interconnectivity agreements have been concluded.⁷⁵

Know Your Customer (KYC): A set of due diligence measures undertaken by a financial institution, including policies and procedures, to identify a customer and the motivations behind his or her financial activities. KYC is a key component of AML/CFT regimes.⁷⁶

Mobile Banking (m-banking)⁷⁷: The use of a mobile phone to access banking services and execute financial transactions. This covers both transactional and non-transactional services, such as viewing financial information on a bank customer's mobile phone.

Mobile Financial Services (MFS): The use of a mobile phone to access financial services and execute financial transactions. This includes both transactional and non-transactional services, such as viewing financial information on a user's mobile phone.

⁷⁵ World Bank, developing a comprehensive retail payment strategy, Oct. 2012

⁷⁶ Pierre-Laurent Chatain et al, 2011.

⁷⁷ Chatain, Pierre-Laurent, Andrew Zerzan, Wameek Noor, Najah Dannaoui, and Louis de Koker, 2011, "Protecting Mobile Money against Financial Crimes: Global Policy Challenges and Solutions." Washington, D.C.: The World Bank.

Mobile Money: A mobile-based transactional service that can be transferred electronically using mobile networks. A mobile money issuer may, depending on local law and the business model, be an MNO or a third party such as a bank⁷⁸. Often used synonymously with ‘mobile financial services’.

Mobile Network Operator (MNO): A company that has a government-issued license to provide telecommunications services through mobile devices.

Mobile Payment: A form of mobile financial services in which payments are initiated through a mobile phone (both smartphones and digital feature phones).

Mobile Payment Services Providers (MPSP): Terminology specific to Jordanian case. An MPSP is an e-money issuer licensed by the Central Bank of Jordan to issue e-money and connect to the JoMoPay national payment switch. Also referred to as a payment services provider.

Mobile Wallet: A type of e-wallet which is accessed through a mobile phone. Often used synonymously with mobile money account

Nonbank-based model: A mobile financial services business model (bank-led or nonbank-led) in which (i) the customer has a contractual relationship with a nonbank financial service provider and (ii) the nonbank is licensed or otherwise permitted by the regulator to provide the financial service(s).

Nonbank-led model: A mobile financial services business model (bank-based or nonbank-based) in which the nonbank is the primary driver of the product or service, typically taking the lead in marketing, branding, and managing the customer relationship

Payments Channel: See Payment Instrument

⁷⁸ SSBs paper.

Payments Instrument: The product (service) used by the consumer at the point of payment (e.g., cash, debit card, mobile wallet). Often used interchangeably with payment product and payment channel

Payments Processors: Third-party services providers that handle the details of processing card transactions between merchants, issuing banks, and the merchants' bank (also called acquiring bank).

Payment Services Providers (PSP): An entity providing services that enable funds to be deposited into an account and withdrawn from an account; payment transactions (transfer of funds between, into, or from accounts); issuance and/or acquisition of payment instruments that enable the user to transfer funds (e.g. checks, e-money, credit cards, and debit cards); and money remittances and other services central to the transfer of money.

Prepaid Card: A payment card in which money can be preloaded and stored

Real-Time Gross Settlement (RTGS): The continuous settlement of interbank payments on a real-time (instant) basis. Usually through accounts held in central banks and used for large-value interbank funds transfers.

Remittances: A person-to-person international payment of relatively low value

Remittance Service Provider (RSP): An entity, operating as a business, that provides a remittance service for a price to end users, either directly or through agents

Risk-based approach: A method for complying with AML/CFT standards set forth in FATF Recommendation 1. The risk-based approach is based on the general principle that where there are higher risks, countries should require financial services providers to take enhanced measures to manage

and mitigate those risks. Where risks are lower (i.e. no suspicion of money laundering or terrorist financing), simplified measures may be allowed.⁷⁹

Scheme (or Payment Scheme): A body that sets the rules and technical standards for the execution of payment transactions using the underlying payment infrastructure.

Society for the Worldwide Interbank Financial Telecommunication (SWIFT): A messaging service for financial messages, such as letters of credit, payments, and securities transactions, between member banks worldwide. SWIFT remains the primary means for interbank communications cross-border. Note that SWIFT does not provide settlement and clearing for bank transfers.

Third-party provider: Agents and others acting on behalf of a mobile financial services provider, whether pursuant to a services agreement, joint venture agreement, or other contractual arrangement.

⁷⁹ FATF, Asia/Pacific Group on Money Laundering, and World Bank, 2011, “Anti-money laundering and terrorist financing measures and Financial Inclusion.” Paris: FATF.

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