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Migrant Money

Regional Harmonization of Remittance Policies in the Intergovernmental Authority on Development (IGAD)

SOUTH SUDAN PAYMENT INFRASTRUCTURE ASSESSMENT REPORT

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ABOUT THIS REPORT

The scope of this report draws from the policy diagnostic assessment in South Sudan, which identifies key policy areas that require attention to enhance remittance flows to South Sudan, including the modernization of payment system infrastructures. In this context, the following four key areas have been assessed for the development of modern and efficient payment system infrastructures to enhance remittance flows using digital payment channels:

- Availability of access points for sending and receiving remittances, including automated teller machines (ATMs), merchant point of sale (POS), and cash-in/cash-out agents.

- Access to the national payment system (NPS) infrastructures by non-bank remittance service providers (RSPs), including mobile network operators (MNOs), money transfer operators (MTOs), and fintechs.

- Interoperability for key retail payment systems and instruments, including POS, mobile money services and agents (agent interoperability is currently not available).

- Connectivity with local, regional, and international hubs and gateways, as well as multilateral payment platforms

The report assesses the progress made under each of the four priority areas identified as crucial for national payments system (NPS) infrastructures and provides guidance for future action for both public and private stakeholders to improve the digital ecosystem for increased remittance flows through monitored and regulated digital channels.

ACRONYMS

ACH	automated clearing house
AML/CFT	anti-money laundering/combating the financing of terrorism
API	application programming interface
ATM	automated teller machine
ATS+	automated transfer system plus
BoSS	Bank of South Sudan
CDD	customer due diligence
e-KYC	electronic know your customer
FSB	Financial Stability Board
GDP	gross domestic product
IGAD	Intergovernmental Authority on Development
ILO	International Labour Organization
IMF	International Monetary Fund
IOM	International Organization for Migration
ISO	International Organization for Standardization
KYC	know your customer
MFI	microfinance institution
MFS	mobile financial services
MMO	mobile money operator
MNO	mobile network operator
NFC	near-field communication
NID	national identification
NPS	national payment system
PIN	personal identification number
POS	point of sale
PSP	payment system provider
QR code	quick response code
RSP	remittance service provider

RTGS	real-time gross settlement system
SIM	subscriber identity module
SSP	South Sudanese pound
STP	straight-through processing
SWIFT	Society for Worldwide Interbank Financial Telecommunication
TAWG	technical advisory working group
UNCDF	United Nations Capital Development Fund
UNHCR	United Nations High Commissioner for Refugees
USSD	unstructured supplementary service data

LANDSCAPE FOR CROSS-BORDER REMITTANCES IN SOUTH SUDAN

Remittance market overview

The total population of South Sudan in 2022 was 11.1 million. Of these, the population aged 0-14 was 43 percent and 54 percent for those aged 15-64.[1] South Sudan has many economic and voluntary migrants and displaced people. Inbound remittances to South Sudan in 2021 amounted to US$1.2 million, accounting for 23.9 percent of the gross domestic product (GDP).[2] These remittances came from 2.6 million remittance-sending migrants, primarily in Uganda, Sudan, and Ethiopia. The main destination countries are Chad, Ethiopia, Uganda, Sudan, Saudi Arabia, the United States, the United Arab Emirates, Australia, Kenya, and Canada.[3] At the household level, remittances represent a vital source of income for many individual recipients. The size and scale of remittances also create the possibility of harnessing these flows for productive investment, contributing to South Sudan's long-term development.

According to the World Bank's 2021 Global Findex Database, 5 percent of the population aged 15 and over have an account with a financial institution. Seven percent of males aged 15 and over have an account with a financial institution compared to 4 percent of females.[4] Fifty-nine percent of the population does not feel financially included and has unmet financial needs. Furthermore, the financial inclusion level is significantly lower in rural areas, with 65 percent of rural residents perceiving themselves as not financially included, compared with 48 percent of urban residents.[5]

The cost of sending money to South Sudan varies according to the sending country. The cost of sending $200 remittances to South Sudan from Europe in Q3 of 2022 was 10.5 percent, and 5.3 percent from the United States. The least costly corridors to South Sudan are from the United States, the United Arab Emirates, Saudi Arabia, the United Kingdom, and Kenya.[6]

There was an initial decline in remittance flows throughout sub-Saharan Africa in March 2020, including South Sudan, mainly because of the loss of wages of migrant workers in sending countries during the COVID-19 pandemic. However, many countries experienced resilience in the flow of remittances after the initial decline.[7] While country-specific data are unavailable for South Sudan, it was observed within sub-Saharan Africa that the overall costs of sending remittances did not increase during the pandemic. However, the volumes of remittance inflows were severely affected throughout the region, especially for cash-based remittances.

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[1] UNFPA, 2023. https://www.unfpa.org/data/world-population-dashboard (Accessed on 12 May 2023)
[2] KNOMAD, Remittances Data. (Accessed on 16 September 2022)
[3] Ibid.
[4] World Bank, 2021. Global Findex Survey: https://globalfindex.worldbank.org/ (Accessed on 16 September 2022).
[5] World Bank, 2019. *MOBILE MONEY ECOSYSTEM SURVEY IN SOUTH SUDAN Exploring the current and future potential of using mobile money for effective humanitarian and development cash programming*. https://documents1.worldbank.org/curated/en/460341563539588094/pdf/Mobile-Money-Ecosystem-Survey-in-South-Sudan-Exploring-the-Current-and-Future-Potential-of-Using-Mobile-Money-for-Effective-Humanitarian-and-Development-Cash-Programming-Executive-Summary.pdf (Accessed on 16 September 2021)
[6] World Bank, 2021. (Accessed on 16 September 2021)
[7] A recent International Monetary Fund (IMF) research paper published in July 2021, *Defying the Odds: Remittances during the COVID-19 pandemic*. Despite an unprecedented global recession triggered by the pandemic, the paper notes "remittances have proved to be an automatic stabilizer during the pandemic." The analysis is based on remittance data from 52 countries covering January to December 2020. (Accessed in August 2022)

On the other hand, where there was a high uptake of digital channels,[8] remittance flows have increased since the pandemic, bringing down the associated costs.[9,10] The use of digital channels is heavily dependent on access to transaction accounts as well as the ability of RSPs to provide digital solutions to participate in the NPS infrastructures as an extension to traditional cash-based channels.

Although improvements have been made in recent years to increase the flow of remittances through regulated channels, evidence suggests that informal networks remain a prominent way for South Sudanese people to send money to their country of origin. One of the reasons for this is the existence of several money transfer businesses that the central bank does not license and, therefore, operate informally. Licenses are only issued to forex bureaux and mobile money operators.

Efforts by the Government of South Sudan to improve remittance inflows

The Republic of South Sudan became the world's newest nation and Africa's 55th country on 9 July 2011. (World Bank 2021).[11] Therefore, the country is still setting up relevant laws and structures to support the seamless flow of formal remittances. South Sudan has a Technical Advisory Working Group (TAWG) on remittances and diaspora engagement. The International Organization for Migration (IOM) has helped TAWG's policy drafting task force to develop the first pro-gender diaspora and remittance policy, which was recently finalized and awaiting endorsement from relevant ministries. This policy was drafted following policy research conducted by IOM on remittances and diaspora engagement that highlighted the underlying challenges of limited records on inflowing and outflowing remittances and the high cost of remittances.[12]

In 2020, the International Labour Organization (ILO) noted that there do not appear to be government policies to foster remittance transfers or any attention paid to the costs paid by migrants or the diaspora to complete such transfers.[13] The ILO recommends studying the remittance systems and flows to South Sudan to understand their potential positive and negative effects and how remittances can be harnessed to positively impact the country's development.

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[8] Digital remittances must be sent via a payment instrument in an online or self-assisted manner and received into a transaction account, for example, a bank account maintained at non-bank deposit-taking institutions (such as a post office), mobile money account, or e-money account.

[9] According to the World Bank's Remittance Prices Worldwide database, the average cost of remittance to send $200 to Sub-Saharan Africa was 8.94 percent through cash-based channels versus 6.44 percent through digital channels.

[10] Remittance Community Task Force, 2020. *Remittances in Crises: Response, recovery and resilience*. https://gfrid.org/publications/blueprint-for-action_remittances-in-times-of-crisis-facing-the-challenges-of-covid-19/ (Accessed in August 2022)

[11] World Bank, 2022. https://www.worldbank.org/en/country/southsudan/overview#1 (Accessed on 16 November 2022)

[12] IOM, 2021. IOM, *Government of South Sudan Conclude Study Visit to Rwanda on Remittances and Diaspora Engagement*. https://southsudan.iom.int/news/iom-government-south-sudan-conclude-study-visit-rwanda-remittances-and-diaspora-engagement (Accessed in February 2022)

[13] Ibid.

KEY STAKEHOLDERS IN THE PAYMENTS AND REMITTANCE MARKET

The Bank of South Sudan

The Bank of South Sudan (BoSS) is responsible for licensing and supervising banks to provide remittance services, which includes approving partnerships with RSPs. The BoSS also oversees the payment system in which the keynotes, guidelines, and principles related to the payment settlement systems are established, and developments in the existing and planned systems are monitored and assessed against determined objectives. Within the BoSS, the National Payment Systems Department oversees the national payment and settlement systems. With support from the African Development Bank (AFDB), and the East African Community (EAC), a project to implement the first Real Time Gross Settlement System (RTGS) at the BoSS is underway, led by the Payment and Settlement Systems Integration Project (EAC-PSSIP). The project will also see the BoSS acquire hybrid automated transfer systems plus (ATS+), an instant transfer system that comprises three components, namely an RTGS, an automated clearing house (ACH), and a central securities depository (CSD).

Banks

There are 33 banks in the Republic of South Sudan, which include seven foreign banks, 15 national banks, and 11 joint-venture banks. There are 89 bank branches countrywide.

Banks offer remittance services, offering transfers via correspondent banking relationships (CBRs) using the Society for Worldwide Interbank Financial Telecommunication (SWIFT) messaging system. However, this is generally expensive for small amounts and is unsuitable for those who do not have bank accounts. Correspondent banks/SWIFT-based international remittances are used for larger business-to-business/ organizational transfers that do not require a cash pickup (non-governmental organizations, aid organizations, companies, etc.).

Non-bank remittance service providers

The 64 licensed foreign exchange bureaux and commercial banks provide remittance services in South Sudan. Of these, 58 forex bureaux have valid licenses.[14] Informal money transfer channels, which are available and quite popular, are provided by small companies transferring money between towns in South Sudan. Forex bureaux operations in South Sudan are governed by regulation No. 19, 2012, which guides the licensing and supervision of foreign exchange bureaux.[15] However, informal digital remittance services operate when sending regionally and internationally, for example, between South Sudan and Sudan.[16]

Microfinance institutions

Although there are currently no regulations in place for microfinance institutions (MFIs), there are a few microfinance institutions in operation, such as BRAC SS (a subsidiary of the Bangladeshi international non-governmental organization of the same name) and Finance Sudan Limited (FSL). According to respondents, MFIs cover only 5 percent of the available clients in the greater Juba region and less than 1 percent of the potential market in South Sudan.

[14] Bank of South Sudan, 2022. https://boss.gov.ss/list-of-forex-bureaus/ (Accessed on 19 November 2022)
[15] Bank of South Sudan: Regulation No. 19, 2012. The Licensing and Supervision of Foreign Exchange Bureaux: http://www.boss.gov.ss/reg/2012/14.pdf (Accessed on 19 November 2022)
[16] Stakeholder consultation, IGAD Workshop in Entebbe, Uganda, 14 to 18 March 2022.

Payment service providers

There are a few payment service providers in the country, including Mobile Network Operators (MNOs). MTN and Zain are the two predominant MNOs in South Sudan, whereas Vivacell ceased operations in March 2018, and DigiTel is the latest entrant in the market. The mobile network suffers from poor coverage in most of the country and is absent in many rural areas. Vivacell's licence was suspended in 2018 by the National Communications Authority (NCA).

In 2017, the Electronic Money Regulation (EMR) was adopted to provide regulatory oversight for banks and non-banks. In June 2019, the BoSS licensed Trinity Technologies and Lukiza (also known as Nilepay) to develop mobile money products. Trinity Technologies Ltd developed a mobile money product called m-Gurush in partnership with Zain. The use cases supported include P2P, payment for utilities, and P2B. There is cross-border interoperability between m-Gurush with MTN in Uganda and Safaricom in Kenya. However, informal Safaricom agents are operating in South Sudan without supervision.[17]

Agents

No agent regulations are in place, so the central bank does not record the number of agents.

NATIONAL PAYMENT SYSTEMS INFRASTRUCTURES

Large-value payments systems

The Bank of South Sudan oversees the national payment and settlement systems. With support from the African Development Bank (AFDB), and the East African Community (EAC), a project to implement the first RTGS at the BoSS is underway, led by the Payment and Settlement Systems Integration Project (EAC-PSSIP). The project will also see the BoSS acquire hybrid automated transfer systems plus (ATS+) that comprise three components (RTGS, ACH, and CSD). Implementing the (ATS) must consider international best practices and international messaging standards and be able to use delimited plain text files, CSV files, Excel files or XML files (e.g., the ISO20022 files) to transmit payment instructions.

Retail payments infrastructure

The BoSS received support from the World Bank in the form of technical assistance to develop a retail payments strategy. However, the BoSS is yet to receive support for acquiring and implementing a national retail switch.

Payment systems of private financial institutions

There are 30 commercial banks in South Sudan, and it is envisaged these will be granted direct access to the RTGS once implemented. Each of the 30 banks has branches concentrated in urban commercial towns such as Juba, and many have branches in the other IGAD Member States, such as Kenya and Uganda, and carry out correspondence banking in the case of remittances. However, branded ATM cards issued in South Sudan cannot be used in the other IGAD Member States even with the existing correspondence banking relationship. Correspondence banking dominates the remittances space, with Australia, Kenya, and Uganda being the inward remittance corridors.

[17] https://www.mtn.com.ss/ (Accessed on 9 February 2023)

Personal identification cards

South Sudan officially launched passports and NID cards for the first time in 2012. NID cards are mandatory for individuals aged 18 years and over, and applicants must produce a birth certificate or an age assessment certificate to obtain an NID. Furthermore, the NID enrolment process requires one witness and the applicant's biometrics. The NID card is a bar code card that contains biometric (fingerprint) and biographic information, and is presently used for civil and voting purposes. Although the NID and passport are required to open a bank account, the existing payment infrastructure is not integrated with identity systems, making it costly for customers to open accounts and use financial services.

Automatic teller machines

Few commercial banks have automated teller machines (ATMs). The card infrastructures for the banks have exclusivity conditions so that the debit cards can only be used at the issuing banks' terminals. In 2020, there were 0.7 ATMs per 100,000 adults.[18] Most ATMs number around 50 and are primarily concentrated in Juba, most of which are owned by foreign banks. The use of payment cards is limited by the lack of outreach of individual banking networks, the lack of interoperability across the card networks and the limited availability of POS networks to facilitate merchant payment.

Point of sale terminals and cards

There are 133 POS machines that are mostly owned by Equity bank South Sudan Limited, Stanbic Bank Kenya Limited, KCB Bank South Sudan Limited, Cooperative bank of South Sudan, and Ivory Bank.

REMITTANCE-LINKED PRODUCTS AND SERVICES

Products and services for sending and receiving remittances are available. It is common for South Sudanese people to travel to neighbouring countries such as Kenya and Uganda to receive remittances and purchase goods and services. The first mobile money service in South Sudan, mGurush, recently launched its international remittance service on its mobile money platform. The service will enable customers to easily send money across Africa and beyond using mobile phones. Customers will be able to send money digitally in the form of United States dollars (USD) or South Sudanese pounds (SSP) from their mGurush account from their country of origin.

[18] Knoema, 2020. South Sudan – *Commercial bank branches*. https://knoema.com/atlas/South-Sudan/topics/Economy/Financial-Sector-Access/Commercial-bank-branches (Accessed in February 2022)

ASSESSMENT OF THE PAYMENT SYSTEMS INFRASTRUCTURE FOR DIGITAL REMITTANCES

This section assesses progress made by the BoSS and market stakeholders in the four key areas identified in the scope of the study to address the NPS infrastructure gaps and remaining challenges.

Retail payment access points for sending and receiving remittances

Context

The usefulness of transaction accounts for payments or remittance services is augmented by a broad network of access points with wide geographical coverage and by offering a variety of interoperable access channels.[19] The existence of a national-level retail payment infrastructure, including ACH, payment cards, and mobile money switches, can effectively increase the network of access points (e.g., ATMs, POS, branches, or agent networks) for individual customers. Such centralized payment infrastructures act as hubs for processing interbank transactions, improving interoperability and exhibiting positive network externalities for all system participants. Any branch of a bank or other PSP participating in the ACH or switch can be used to initiate a funds transfer to a customer of another ACH or switch participant, supporting countrywide reachability, even if a particular bank does not have access points deployed in specific regions. The success of digital remittance services that use the rails of retail payment systems depends on the availability, quality, and reliability of customer service and access points.

Situation in South Sudan

South Sudan, banking networks and transaction infrastructures, such as ATMs and other potential networks of agents, are not very extensive, especially in rural areas, creating a severe physical access problem for many remittance recipients. More than 90 percent of banks and their branches and remittance service providers (RSPs) in South Sudan are in Juba. Even where agents exist, funds transfer to the disbursing agents is unregulated, slow, unreliable, and lacks adequate geographical coverage. South Sudan has not yet adopted its national retail payments switch.

Recommendations

The following recommendations could be considered to improve access points for remittances:

1. **The BoSS could establish agent regulation and issue targets for increasing the number of agents and interoperable access points for remittances.** Working with the banking and mobile agent network, the geographical reach of access points, particularly in rural and remote areas where coverage is low, will improve last-mile distribution channels and encourage customers to send and receive remittances through official channels. For this purpose, in addition to targeting the growth of bank branches, the BoSS can establish concrete, time-bound targets for increasing the number of ATMs, POS, and agent-based cash-in/cash-out agent locations. This effort should be taken in partnership and consultation with the industry.

[19] World Bank, 2017. *Payment Aspects of Financial Inclusion (PAFI)*. http://www.worldbank.org/en/topic/financialinclusion/brief/pafi-task-force-and-report

2. Related to the above recommendation, **the BoSS could consider developing an incentive structure for RSPs to expand the distribution of access points beyond urban areas and enable ATMs and POS to be leveraged for cross-border remittances.** In addition to establishing concrete targets, the BoSS could propose an incentive plan in collaboration with industry stakeholders to increase the uptake of digital payments with the existing regional banks, especially those with cross-border relationships.

3. The BoSS could prioritize establishing **a domestic retail payments infrastructure** interoperable with mobile money to have a central hub where RSPs can join the retail payments ecosystem.

4. The BoSS could **improve payment infrastructures** by developing retail payment systems that cover **wide geographical areas**. However, it would first be necessary to establish the national retail payments switch in the third recommendation above to reduce risks and costs associated with using cash and checks. This is in line with the central banks' goal of achieving financial inclusion with all geographic regions and income groups. The establishment of a national switch would be a step forward.

Access to national payment infrastructures by non-bank remittance service providers

Context

According to the FSB Stage Two report,[20] "there are clear advantages to promoting direct access to the national payment infrastructures by non-bank RSPs as this reduces the cost of remittance transfers and time it takes to settle these transactions. Lowering barriers to access improves the possibility for PSPs and payment infrastructures to become direct members of multiple payment systems across different jurisdictions. Similar access requirements in different payment systems can encourage PSPs to become global payment players, serving many jurisdictions. Lower costs and higher speed in cross-border payments with lower credit and liquidity risks would be the targeted outcome."

Situation in South Sudan

Non-banks rely on banks to settle their payments despite holding a large share of customers' liquidity. The BoSS has the exclusive authority to oversee the national payment systems in South Sudan as set in section 12(1), section 6 (4)(d), and section 16 (3)(a) of the BoSS Act. South Sudan's 2017 Electronic Money Regulation applies to all entities providing electronic financial services, including licensed banks, non-bank financial institutions and non-bank institutions such as MNOs. The National Payment System department is a newly created department in the Central Bank that will oversee payments in the country. An NPS bill is currently being drafted. Non-bank RSPs rely on banks to settle their payments, despite holding a large share of customers' liquidity.

ICT and power failures can cause frequent disruptions in ATM/POS availability. With greater participation from non-bank PSPs in the NPS infrastructure, the ability to effectively service the growing number of access points should also be monitored, and proper upgrades implemented to address this growth.

[20] Building Block 10 describes the importance of direct access. Committee on Payments and Market Infrastructures, 2020. *Enhancing Cross-Border Payments: Building blocks of a global roadmap*. www.bis.org/cpmi/publ/d193.pdf

Recommendations

The following recommendations could be considered to improve the quality of access to NPS infrastructures:

1. **Developing a regulatory framework** for payment systems to enable non-bank remittance service providers (RSPs) to offer services without going through banks. Enabling non-banks to access payment systems can improve the efficiency of retail payment systems by increasing competition that can potentially lower fees and broaden alternatives open to end-users. In other situations, non-banks can contribute expertise that the incumbents lack and cooperate with banks to provide innovative services such as mobile payments.

2. **Developing regulations for agents and agent banking.** Given its geographical and population size at 644,329 square kilometres[21] and 11.1 million[22] people, respectively, it would be challenging to serve rural areas. Yet, an agent network for banking and mobile money services could provide the required geographical reach. Issuing formal regulations for agents would enable supervising licensed agents and provide the BoSS with data regarding their services.

3. **Establish a national retail payment switch** and monitor support to non-bank RSPs to access the payment systems through the switch.

4. **Build resilience in critical retail NPS infrastructures.** The impact of operational incidents could be mitigated, in principle, by building resilience that withstands service disruptions and supports effective business continuity plans. NPS system operators could be required to do the following: (i) adopt rigorous risk management procedures in line with global best practices for the identification and mitigation of operational risk, including cyber-resilience; (ii) incorporate appropriate redundancy and business continuity arrangements to ensure the timely recovery of the services in the event of a major disruption; and (iii) establish procedures for timely communication to stakeholders of operational incidents. Furthermore, the BoSS could consider conducting periodic, regular disaster recovery drills (both announced and unscheduled) to ensure the effectiveness and resilience of systems operated by the BoSS and the other PSOs.

Interoperability and interconnectivity of domestic and regional payment infrastructures

Context

Interoperability is one of the most desirable characteristics of payments and financial market infrastructures to ensure infrastructure-sharing and the widespread availability of digital financial service access points. Although the widespread availability of digital solutions for remittances, payments, savings, and credit provides people with access to financial services, payment interoperability enables these targeted people to transfer their money to any other individual without the need for multiple transactions, thereby increasing the importance of transaction accounts and their usability.

ISO 20022 has become the key global standard for developing modernized financial market infrastructures. Currently, most payment systems follow the ISO 20022 standards, resulting in improved efficiency, lower costs and avoiding errors. ISO 20022 is a global standard for financial messaging that provides a standard model across business fields such as payments, securities, trade services, card services, and foreign exchange. The standard defines messages

[21] CIA Fact Book: https://www.cia.gov/the-world-factbook/countries/south-sudan/ (Accessed on 12 May 2023)
[22] UNFPA: https://www.unfpa.org/data/world-population-dashboard (Accessed on 12 May 2023)

with clarity of purpose and conveys information between parties within a payment chain. It also defines message specifications for each message type. Benefits of ISO 20022 include the following: (1) The **ability to share large amounts of information**, i.e., ISO 20022 can carry large data sets and messages. Users of the standard can choose the quantity of data to share for necessary insights; (2) **Integration between both domestic and cross-border payments**, i.e., ISO 20022 can integrate and standardize domestic and cross-border payments in market practices by rolling out standard guidelines; (3) **Interoperability and harmonization**, i.e., ISO 20022 enables previously known interoperable formats to be harmonized and simplifies data consumption and transmission. The underlying syntax of XML and the structured platform makes this standard more feasible for payments; and (4) **Efficiency gain and cost-savings**, i.e., ISO 20022 makes financial messaging more efficient by standardizing and harmonizing payment message formats, increases STP rates, and simplifies cost-intensive processes such as payment processing, investigations, data analytics and reporting.

Situation in South Sudan

Payment processing takes a long time due to the lack of standardization in transaction messages. Transaction notifications from different payment providers differ in the market, making it difficult for businesses to reconcile the payments. Other challenges faced by payment-messaging standards include the use of 'free-format' fields to convey supporting information, limiting the extent of data collection in a standard format, and performing contextual analysis. Applying different standardization formats results in technical failures, loss of information, and non-standardized reporting, and different applications, resources, and skillsets are needed to support various messaging standards. All these have a direct impact on costs incurred by RSPs.

The lack of an open and secure application programming interface (API), a software intermediary that allows two applications to connect, means that dominant players maintain their market position at the expense of smaller ones. Since no industry-wide standard open API arrangements exist, bigger participants become entrenched, and smaller ones are marginalized. Opening APIs has been bilateral among service providers, limiting competition, innovation, and choice. Mobile PSPs are yet to fully open access to their APIs with the intent of opening the industry, limiting innovation and the ability of new products to be rolled out at scale and affordable cost.

The lack of interoperability among RSPs within and between countries has increased the complexity, time, and costs of making payments. For example, off-US POS pricing is higher due to the proliferation of different closed-loop infrastructures, systems, and payment channels. Lack of interoperability between different RSPs means businesses require multiple terminals for multiple channels. Examples include mobile money and bank agents requiring multiple handsets, POS terminals and separate virtual floats for each PSP.

Due to a lack of interoperability, there is a need for multiple personal identification numbers (PINs) for payment accounts. Managing multiple PINs and passwords for different payment platforms can be cumbersome for customers. Similarly, if forgotten, managing the process of retrieving PINs and passwords can also be challenging. All this is due to a lack of integrated payment services, secure data sharing, and an open architecture for identity and authentication. The lack of interoperability in the mobile money merchant acceptance space also limits payment options available to consumers.

Recommendations

The The following recommendations could be considered to improve the interoperability environment:

1. **As stated above, the BoSS could prioritize developing national payment systems, specifically, a national retail payment switch,** and oversee national payment systems including but not limited to harmonizing message standards such as ISO 2022, adopting open APIs, using shared infrastructure to reduce capital and operational expenditure incurred by RSPs setting up independent infrastructure.

2. **The BoSS can develop guidelines for the market players on harmonized and coordinated cyber-reporting frameworks as the first step towards collective efforts and sharing of experiences necessary for putting sufficient safeguards in place.** A standard security framework (ISO/IEC 27001) can be adopted. Issues of cybersecurity and cyber-resilience around payments can be properly addressed via the following approaches: (1) specifically indicating who should monitor insecure unstructured supplementary service data (USSD) channels; (2) who should be notified of breaches in USSD, when, and how to respond to it; (3) who is ultimately responsible for any loss of consumer funds because of such breaches; and (4) who should handle any customer complaints where USSD-based breaches result in loss of customer funds. Infrastructure security should be properly addressed, particularly the roles and responsibilities of those who transmit and hold data.

3. **Provide capacity-building support to the BoSS and market players to scale retail payment services.** With the RTGS deployment underway and the national retail payments switch looming, there is a need for capacity-building within the BoSS and among market participants involved in developing retail payment systems.

Interconnectivity with local, regional, and international hubs, gateways and multilateral payment platforms

Context

Cross-border payments through the correspondent banking model often involve long transaction chains that lead to fragmented and truncated data standards, high costs of capital, and weak competition, all of which negatively affect payment speed, cost, and transparency. Interlinking retail payment systems (including fast payment systems) and wholesale payment systems (such as RTGS) enables PSPs to interact directly through linked infrastructures and reduce reliance on traditional correspondent banking. Interlinking arrangements can range from simple agreements on cross-participation to full technical integration of systems.[23]

Situation in South Sudan

South Sudan, as mentioned above, is still in the process of building its payment systems. A lot more still needs to be done. As a precursor to participating in regional and international hubs, progress should be made to resolve gaps in domestic interoperability. As both large-value (RTGS) and retail payment systems are yet to be implemented or operational, there is dependence on correspondence relationships and bilateral agreements. There is partial interoperability between private banks with their respective correspondence partners in neighboring countries. A few regional banks use their national branch networks to facilitate

[23] Building Block 13 describes the importance of interlinking of different payment systems. Committee on Payments and Market Infrastructures, 2020. *Enhancing Cross-Border Payments: Building blocks of a global roadmap*. www.bis.org/cpmi/publ/d193.pdf

cross-border transactions, especially with Kenya and Uganda. Another observation is that holders with domestic ATM-issued cards can't use them in neighbouring countries despite the banks belonging to the same group or brand. The reverse is different, holders of ATM cards issued in other neighbouring countries, can use them when travelling through the region in neighbour countries.

Recommendations

The following recommendations could be considered to improve the interconnectivity with local and regional multilateral platforms:

1. The BoSS could **prioritize integrating national payment systems, including large-value and retail payment systems,** into existing regional and international cross-border payment platforms. The BoSS is a member of regional payment systems integration projects such as the East African Payments and Settlement System (EAPS) that connects large-value payment systems of the participating Member States of the East African Community (EAC).

2. Once the NPS are in place, the BoSS could foster connectivity with local, regional, and international hubs and payment gateways. Establishing connectivity with international hubs and gateways will support greater access to digital payment channels. Such service aggregation platforms and remittance hubs enable RSPs to scale quickly and not incur disproportional operational and regulatory costs. These platforms and remittance hubs also have the potential to reduce the distance to access points and the cost of transactions by facilitating a high number of low-value/low-fee transactions through many access points (or accessible remotely through the Internet or mobile networks). Additionally, the BoSS can issue the **regulatory framework of non-bank PSPs and RSPs** to foster great efficiency in the market. A regulated industry is likely to be more vibrant as the customers are assured of the safety of their funds.

3. Although early in the transformation process, the BoSS can plan for a fintech **regulatory sandbox** approach to foster long-term inclusive innovation in digital payments and financial and banking services. While the regulatory environment for digital payments is still in its nascent phase in South Sudan, the BoSS should consider implementing a fintech regulatory sandbox that will enable banks and emerging fintech players to experiment with innovative financial products or services in a live environment but within a well-defined space and duration. The BoSS could provide the appropriate regulatory support by relaxing specific legal and regulatory requirements detailed by the BoSS, to which the sandbox entity would otherwise be subjected, for the duration of the sandbox. The sandbox would include appropriate safeguards to contain the consequences of failure and maintain the overall safety and soundness of the financial system. Upon successful experimentation and exiting the sandbox, the sandbox entity must fully comply with the relevant legal and regulatory requirements.

Impact Capital for Development

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ABOUT IGAD

The Intergovernmental Authority on Development (IGAD) is one of the eight regional economic communities (RECs) and building blocks for the African Union. IGAD was established in 1996 to supersede the Intergovernmental Authority on Drought and Development (IGADD) which was founded in 1986. The new and revitalized IGAD was launched during the 5th Summit of IGAD Assembly of Heads of State and Government—Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda—held on 25-26 November 1996 in Djibouti. The Summit endorsed the decision to enhance regional cooperation in three priority areas of food security and environmental protection, economic cooperation, regional integration and social development peace and security. The founding leaders of IGAD were motivated by a vision where the people of the region would develop a regional identity, live in peace, and enjoy a safe environment alleviating poverty through appropriate and effective sustainable development programmes.

ABOUT UNCDF

The United Nations Capital Development Fund (UNCDF) is the United Nations' flagship catalytic financing entity for the world's 46 Least Developed Countries (LDCs). With its unique capital mandate and focus on the LDCs, UNCDF works to invest and catalyse capital to support these countries in achieving the sustainable growth and inclusiveness envisioned by the 2030 Agenda for Sustainable Development and the Doha Programme of Action for the least developed countries, 2022–2031.

UNCDF builds partnerships with other UN organizations, as well as private and public sector actors, to achieve greater impact in development; specifically, by unlocking additional resources and strengthening financing mechanisms and systems contributing to transformation pathways, focusing on such development themes as green economy, digitalization, urbanization, inclusive economies, gender equality and women's economic empowerment.

A hybrid development finance institution and development agency, UNCDF uses a combination of capital instruments (deployment, financial & business advisory and catalysation) and development instruments (technical assistance, capacity development, policy advice, advocacy, thought leadership, and market analysis and scoping) which are applied across five priority areas (inclusive digital economies, local transformative finance, women's economic empowerment, climate, energy & biodiversity finance, and sustainable food systems finance).

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