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INTEROPERABILITY INDEX

Cross-Border Payments in Africa



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Cross-Border Payments in Africa

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1.1 Introduction

Interoperability is a critical factor in determining how effectively individuals, businesses, and financial institutions can participate in an increasingly globalised digital economy. This is represented through the Thunes Cross-border Interoperability Index, which operationalises the ability individuals have to transact with businesses and transfer money outside of their national systems.

Interoperability is often viewed solely through a technical lens, where the focus is on whether systems can exchange information and process transactions. In practice, it encompasses a broader set of more holistic considerations. Effective interoperability determines whether consumers can access services regardless of their preferred payment method and whether business can reach customers across borders without added complexity. Finally, the ability to integrate new payments innovations into existing financial infrastructure without creating unnecessary costs and friction is a key factor when building interoperability.

As a region, Africa remains expensive for other countries to connect to via legacy banking methods of making international payments, which makes sending and receiving remittances and conducting international business transactions difficult. Long chains of correspondent banks are often involved, as banks are less likely to have direct banking relationships, which pushes up the price and cost of payments.

Regional initiatives are having positive changes on intra-African payments, both at a central bank level and as a result of the efforts of mobile money provider alliances. For example, The Pan-African Payment and Settlement System (PAPSS) is a real-time gross settlement infrastructure to settle payments in multiple different local

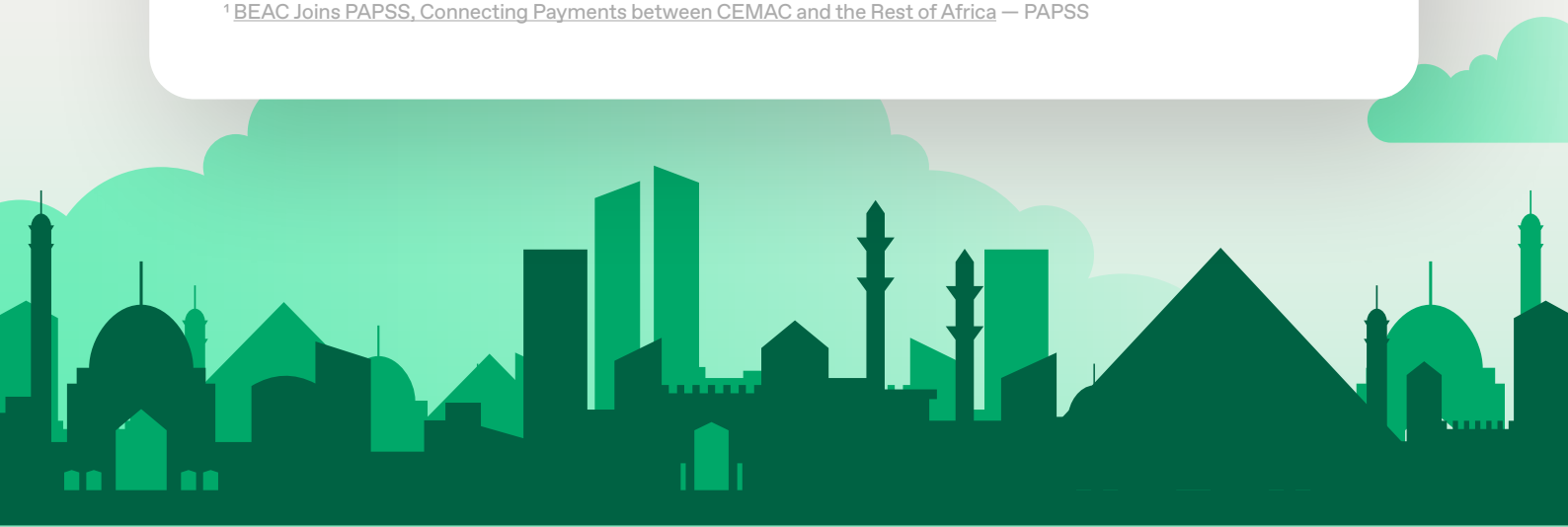
currencies. This was launched in 2022 by Afreximbank and the African Union, and currently has 21 central banks participating, including the recent addition of the Bank of Central African States in July 2026.[1] This is improving the speed and cost of cross-border payments made through banks across borders within Africa.

In comparison, inter-regional payments are less of a regulatory and policy priority. As a result, sending payments out of Africa remains difficult. Providers must meet the challenge of connecting disparate systems, such as mobile money providers in Africa to banks or digital wallets in other regions.

Mobile money has greatly increased financial inclusion in the region, allowing those without online banking or digital wallets to pay businesses digitally and pay bills electronically. However, these systems are closed-loop, meaning they are not inherently interoperable with other providers. This leaves users siloed within these systems, which are often localised to domestic borders, and therefore users struggle to transfer money internationally. Without interoperability, users are often forced to develop costly and inefficient workarounds to make their transactions.

The cross-border potential of mobile money can be realised through two dimensions of interoperability: platform interoperability and merchant interoperability. Platform interoperability describes users of one mobile money service being able to transfer money to another, while merchant interoperability allows users to pay merchants regardless of the type of mobile money account they hold. However, forming multiple bilateral connections between platforms and payment gateways is inefficient for mobile operators, so progress remains slow. Multilateral hubs that allow merchants to make one integration or for payouts providers to connect to a variety of localised end points, are key to addressing both types of interoperability.

[1] BEAC Joins PAPSS, Connecting Payments between CEMAC and the Rest of Africa — PAPSS



1.2 Ranking

Country	Regional rank	Global rank	Overall score
Kenya	1	36	4.2
Nigeria	2	43	3.6
South Africa	3	44	3.6
Egypt	4	47	3

African countries remain low in the rankings for interoperability scores, largely scoring in the bottom 10 out of the 50 countries in the Index across most categories. One of the primary underpinning factors is the persistent reliance on cash, particularly within rural areas where digital financial infrastructure remains underdeveloped and financial inclusion levels are comparatively low. While cash use is not inherently problematic, when paired with a lack of agent locations for remittances and high costs when converting cash to mobile money, it restricts the ability of individuals and businesses to send and receive payments efficiently across national borders.

The absence of extensive correspondent banking relationships across many African financial institutions presents an additional obstacle. Smaller banks often depend on intermediary institutions located outside the continent, particularly in Europe or North America, to process international transactions. This reliance increases costs and can lead to delays in payment settlement due to the increased operational processing. De-risking practices- the withdrawal of correspondent banking services due to concerns over regulatory compliance- has further constrained connectivity between African payment systems and the global financial network.

Amongst all the metrics, poor digital infrastructure scores stand out as a major barrier towards achieving an accessible, interoperable payments system. While much of the population may nominally be able to access a broadband connection, the cost and quality of connections preclude many from doing so. This can create a low-trust environment, as merchants require instant, offline payments to be made rather than risk the transaction failing later. As a result, payment providers must work with this tendency by ensuring that their payment rails facilitate instantaneous payments.

Addressing these challenges requires coordinated investment in interoperable payment infrastructure and a harmonisation of regulatory standards. Initiatives such as PAPSS represent important steps towards improving interoperability by reducing dependency on correspondent banks and international settlement currencies. However, achieving continent-wide interoperability will require widespread adoption of common technical standards and greater collaboration between global and local payment service providers.

1.3 Ranking Deep Dive

#	Country	Economic Health	Digital Infra-structure	Financial Inclusion	Cross-Border Connectivity	Market Dynamics & Progress	Overall Score
1	Kenya	1.3	3.3	5.6	1.7	7.5	***4.2***
2	Nigeria	3.3	2.5	5.0	1.3	5.5	***3.6***
3	South Africa	3.3	2.5	4.1	3.0	5.5	***3.6***
4	Egypt	2.5	1.8	3.8	1.7	5.5	***3.0***

The Thunes Cross-border Interoperability Index evaluates 50 countries across five key dimensions of interoperability: the macroeconomic environment, population-level access to digital infrastructure, financial inclusion, cross-border connectivity and market dynamics. Overall, this produces a score that takes each element into account.

Digital infrastructure creates the foundation for achieving interoperability. A reliable, accessible layer of digital infrastructure such as affordable internet connectivity is a key prerequisite for rolling out digital payment methods. This metric acts as a proxy for the readiness of the market for undertaking interoperability initiatives; if a country has a strong digital infrastructure score but lacks on other metrics, it is likely ready for interoperability investment.

The financial inclusion metric is designed to assess the extent to which all segments of society can access formal financial infrastructure and fast payments, as well as the quality of access. This includes metrics such as the percentage of the population that has either a bank account or mobile money account, thus taking into account alternative methods of financial inclusion.

The cross-border friction score indicates the cost, speed, and frequency of cross-border payments outbound from a country. A high value of cross-border payments per capita indicates strong direct banking relationships, as countries tend to establish direct banking relationships with their major trading partners. In turn, this reduces the cost and speed of making a payment via a bank.

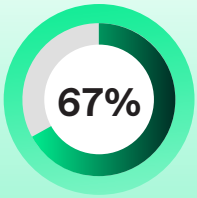
Market dynamics and progress operationalise the openness to payments innovation by looking at the status of cryptocurrency regulation, open banking mandates, and government-led initiatives in regards to cross-border payments. This is important for visualising the future of interoperability in a country.

1.4 Key Takeaways

Payments Interoperability Is Leapfrogging Traditional Rails

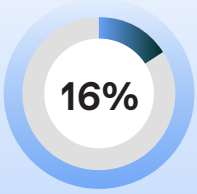
In mature markets, fintechs wanting to disrupt the payments ecosystem must compete with established banking systems and established consumer card habits. As a region largely unburdened by legacy banking infrastructure, countries across Africa are able to jump straight into implementing mobile-first payments once the digital infrastructure to support them is in place. Instead of the traditional transition from cash to cards, then from cards to digital wallets, many African markets are bypassing widespread card adoption and delivering mobile payments, such as mobile money; and to a certain extent, cryptocurrency.

In Nigeria:



Make Bank Transfers Daily

Globally:



Make Bank Transfers Daily

This is most evident in Nigeria, which is currently in a state of flux regarding payments. Those in Nigeria report the most diverse payments mix of all surveyed countries, with the average person using 2.2 payment methods per day, double the global average of 1.1. This displays that people regularly switch between multiple different types of payment depending on their needs. This could suggest that each single payment method is not sufficiently developed enough to become available for all use cases, preventing it from becoming the dominant payment method. Rather than converging on one method, Nigerians are adopting a flexible, multi-rail approach.

Nigeria payments infrastructure is increasingly being shaped by Account-to-Account payments innovation, of which Nigeria is a regional trailblazer. The Central Bank of Nigeria released its operational guidelines for Open Banking in 2023, making Nigeria the first African country to clearly lay out Open Banking regulation. At the same time, Mastercard has strategised an Alternate Payment Methods model in Nigeria, collaborating with Mono Technologies Nigeria to provide businesses in the region with A2A payment method acceptance solutions. As a result, while cash remains the primary method of payment in Nigeria, with 70% reporting daily use, bank transfers are not far behind; 67% of Nigerians use these payment methods daily.

For cross-border payments providers, this evolution highlights the need to connect to dominant A2A systems, ensuring that users can make the same low-cost, fast transfers across borders that they have come to expect from their domestic systems.

Strong Openness to Alternative Payment Methods

In comparison to other countries, those surveyed in Nigeria had a distinctly high awareness and usage of stablecoins. 29% of those surveyed stated that they already use stablecoins, but this rose significantly in a distinct group: those sending international payments. Out of these participants, 40% said they typically use cryptocurrency platforms to send money internationally, compared to just 11% of those globally.

In Nigeria,

40%

use cryptocurrency platforms to send international payments

Globally,

11%

use cryptocurrency platforms to send international payments

Storing value and protecting against currency fluctuations are the primary reasons people in South Africa and Nigeria use stablecoins, with 69% of respondents citing one or both motivations.

This pattern displays the key value proposition of cryptocurrency; in markets with currency volatility, stablecoins offer a compelling alternative to current systems. This familiarity with stablecoins eases the transition towards using them for international payments. Where traditional cross-border payments corridors are costly, like South Africa and Nigeria, the low cost of sending stablecoins incentivises use.

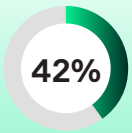
Fiat on and off ramps present a problem, as converting stablecoins into local currency can be just as expensive as making an international payment through a money transfer operator. In many cases, converting into fiat currency is necessary to make the payment useable, as acceptance rates are low amongst merchants. However, this is not always the case; the relatively high usage in the population may suggest that users can remain within the digital asset ecosystem, using stablecoins for P2P transfers and savings. As interoperability between stablecoins and fiat payment systems improves, the cost of off-ramps will diminish, further strengthening the value proposition of stablecoins.

Figure 1.1 Reasons for Using Stablecoins
Multiple Choice, %, South Africa & Nigeria)

Reason for Using Stablecoins	African Respondents
To store value	53%
To make international payments	29%
To make domestic payments	20%
To save costs	16%
To protect my money from local currency fluctuations	14%
Other	8%

The Human Cost of Poor Interoperability

In South Africa & Nigeria,



typically pay >3% in cross-border transaction fees...

...which is above the UN Sustainable Development Goal of 3%

Poor interoperability forces people to rely on costly cross-border remittance corridors, like using banking systems with high fees or informal money senders.

High remittance costs reduce the end value of the payment reaching the recipient, which can severely impact households reliant on remittances to meet regular expenses. In recognition of this, the UN has set a sustainable development goal of reducing cross-border transaction costs to under 3% by 2030. However, there is still significant progress to go, particularly in this region, where 42% of South African and Nigerian users report that their payments regularly cost more than 3%.

Gig workers in South Africa and Nigeria are also more affected by delays and fees in international payments: 60% had experienced issues in the past year compared to 37% of those who did not gig work. As gig workers may receive the majority of their household income as payment from overseas employers, any delay or unexpected conversion costs may result in needing to borrow money short-term. Furthermore, online freelancers may lose out on job opportunities as international clients choose workers who can accept fast and low-cost payment methods, making those with cumbersome payments needs less competitive in comparison.



CASE STUDY 1

Nigerian Online Freelancer

Nigerian · Lives in an urban area · 25–34 years old

HER INCOME

- Her only income is from earned wages, the majority of which is from gig work.
- She earns between $200–$500 a month, and gig work makes up $50–$300 of her earnings.
- She "sometimes does not have enough income to cover living expenses."

Her Challenges

She "experiences errors & failed transactions very often"
Often, she will experience high fees, inconvenient payment processes, and poor customer support.

Delays, fees, and uncertainty in international payments have caused her to "lose or turn down job opportunities."

They have also caused:

- Difficulty paying for essentials
- Strained relationship with family/ dependents

Despite valuing instant transfer the most in her international payment providers, her payments usually take 2–3 days to arrive.

INTERNATIONAL PAYMENTS

- She receives international payments monthly, as payment from overseas employers.
- Money is received from a variety of regions: North America, Europe, and West, East, and South Africa.
- The average payment received is <$100 at a time.
- She uses a variety of platforms to receive international payments, including traditional banks, digital MTOs, mobile wallet, mobile money providers, and cryptocurrency platforms.

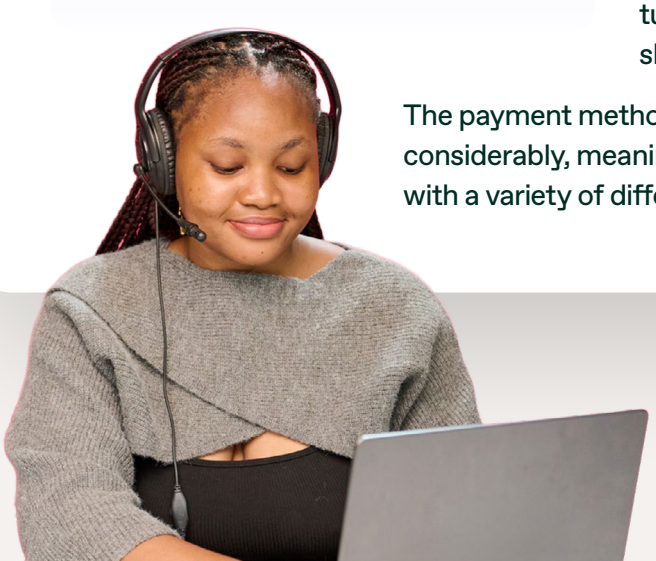
Her Innovation

She uses stablecoins for both domestic and international payments, to "protect her money from local currency fluctuations."

CONCLUSION

Despite valuing instant international payments, her payments usually take 2–3 days to reach her, and they fail very often. Difficulty with payments has caused her to turn down job opportunities, which is why she values instant payments.

The payment method her employers use to pay her vary considerably, meaning she has had to become comfortable with a variety of different payment providers.



CASE STUDY 2

South African Remittance Receiver

South African · Lives in an urban area · 34–44 years old

HER INCOME

- Her income is a mix of earned wages, financial assistance from remittances, and government benefits
- She earns between $500–$1,000 a month, <$50 of which is from gig work.
- She "lives paycheck to paycheck, with little left over at the end of each month."

Her Challenges

She often experiences poor customer support.
She reports sometimes experiencing inconvenient payment processes, errors & failed transactions, and poor exchange rates.

Over the past year, delays, fees, and uncertainty in international payments have caused her to "miss payments or pay bills late."

They have also caused her:

- To have to borrow money short-term
- Difficulty paying for essentials
- Strained relationship with family/ dependents

INTERNATIONAL PAYMENTS

- She receives $100–$200 every two months, from family/friends in Europe.
- This money is vital to her needs; she "depends on remittances to make ends meet."
- She uses a traditional bank and physical money transfer operators (like Western Union agents) to receive international payments.
- The fee per transaction is between 1–3% and the payment usually reachers her the next day.
- She chooses her international payments provider based on:

1. Habit/familiarity
2. Convenience
3. Security

Her Openness

While she would like to use stable-coins, she is restricted from doing so and cannot convert them in and out of local currency. The number one factor that would make her use stablecoins for international payments is if they were offered by a trusted payments provider, like her bank or money transfer operator.



CONCLUSION

She relies heavily on remittances to make ends meet, so any delays or high fees have serious knock on effects for her financial state. She is open to alternative payment methods, but would prefer them to be offered by her trusted and familiar payments provider.

1.4.1 Digital Infrastructure

Country	Digital Infra-structure Score
Kenya	3.3
Nigeria	2.5
South Africa	2.5
Egypt	1.8

Digital infrastructure describes the level of access to and participation in digital payments across a population. At a national level, countries must have several infrastructural factors firmly in place before the digital economy can thrive, widespread internet connectivity, high smartphone ownership, and affordable mobile subscriptions and internet access. Once this is in place, usage of digital payment systems can begin to proliferate across the population.

In the Interoperability Index, the Digital Infrastructure score measures this through the following metrics:

- Internet Usage (%)
- Smartphone Ownership (%)
- Digital Payments Activity in the past 3 months (%)
- Mobile Wallet Ownership (%)

Across the different governments and regulatory bodies in Africa, improving digital infrastructure is a key priority for the vast majority of them. Carnegie tracked 55 governance regimes and the technology policy documents tracked by each of them, finding that digital infrastructure appeared in 90% of documents, and was the sole focus of 57% of documents.[2] This underscores the recognition of digital infrastructure as playing a foundational role in Africa's digital economy. Without accessible methods of reaching the internet throughout all the population, it is difficult to for digital payment methods to proliferate across the population. While certain offline methods of payment are being explored to solve this- like Central Bank Digital Currencies- they have either not been launched, or in the case of Nigeria, uptake has been very low.

The Digital Divide

Current estimates suggest that despite over 80% of the population living within reach of a mobile broadband signal, only 36% of Africans are online.[3] The socioeconomic barriers to accessing the internet- such as the quality of connections and the price of data- remain firmly in place for a significant proportion of the population. This can be addressed by building competition amongst broadband providers in the region, lowering prices. Alternatively,



[2] Africa's Digital Infrastructure Imperative — Carnegie Endowment

[3] Internet Use — ITU, Facts and Figures 2025

investment in offline payment mechanisms and those that do not require mobile data or smartphones- such as mobile money- is also proliferating, enabling those who are underconnected to participate in the digital economy regardless.

Limited and unreliable internet access also constrains the growth of businesses across Africa, particularly for small and medium-sized enterprises. SMEs are increasingly using regional eCommerce platforms to expand beyond local market and reach new customers. The African Development Bank estimates that throughout 2026, over 13.4 million SMEs will be engaging online, which has the potential to add over $75 billion to the GDP of African countries.[4] For this opportunity to be fully realised, reliable and accessible digital infrastructure must be rolled out, allowing firms to full participate in the digital economy.

To address this, cross-border trade in South Africa, Namibia, Botswana, and Zambia is being boosted by telecom initiatives such as 'roam-at-home', which reduces or eliminates roaming charges between neighbouring countries. These digital infrastructure initiatives increase affordability, boosting mobile data usage.

1.4.2 Financial Inclusion

Country	Financial Inclusion
Kenya	5.9
Nigeria	5.0
South Africa	4.1
Egypt	3.8

Financial inclusion is the process of ensuring that everybody can access financial services equally and can easily make payments using a trusted payments system regardless of age, gender, or geography.

This was comprised of the following metrics in the interoperability index:

Access to bank branches: his metric reflects the availability of physical banking infrastructure per 1,000 in the population. While digital-first banks are becoming more prevalent, access to in-person services remains essential, particularly for individuals who are digitally excluded or rely on cash and face-to-face support

Wealth inequality: This metric captures disparities in income and wealth distribution within a population. Higher levels of inequality can limit access to financial services for lower-income groups, thereby constraining overall financial inclusion.

Real-time payments access: This metric assesses the availability of fast, secure payment systems. Financial inclusion extends beyond basic access to payments; users must also be able to transact efficiently and reliably through real-time payment networks.

[4] From Fiber to Fortune: Cross-Border Connectivity Driving Regional Growth in Africa — Telecom Review Africa

Digital payments literacy gap: This metric measures the difference in digital payments adoption between individuals aged 16–24 and those aged 25 and above. A larger gap, regardless of direction, indicates uneven levels of awareness, skills, or trust in digital payment systems across age groups

The financial inclusion scores of African countries are one of the lowest across all regions, as access to real-time payments and ownership of financial accounts is lower relative to other regions. Due to the strong presence of mobile money providers in Kenya and Nigeria, ownership of financial accounts is higher than in the other two countries, driving their higher scores in comparison to South Africa and Egypt.



Mobile Money Drives Financial Inclusion

Mobile money has transformed access to financial services, becoming one of the fastest-growing components of Africa's digital economy. It has had an exponential adoption rate: it took the industry 20 years to pass $1 trillion in annual transaction values, then only four more years to double that.[5] By the end of 2025, there were 593 million active 30-day accounts, and most active 90-day accounts originated from Sub-Saharan Africa (76%), highlighting the region's central role in driving adoption.

Despite this rapid growth, much of mobile money's potential remains untapped. According to the GSMA, the majority of transfers are still cash in and cash outs, indicating that many users still rely on mobile money primarily as a digital conduit for cash rather than taking advantage of the use cases it can facilitate. Only 26% of circulating transactions are spent with merchants, while 4% comes from inward international remittances. Expanding interoperability between mobile money providers, banks, and remittance providers will be essential for moving beyond basic cash transfers, enabling users to strengthen their financial inclusion across the continent.

The popularity of mobile money varies greatly according to the commerce landscape of the market. For example, half the people regularly use mobile money in in South Africa compared to Nigeria. This is because in South Africa, regulations stipulate that e-money can only be issued by a bank, so those offering mobile payments must partner with a bank in order to launch, which can be costly and makes it difficult to compete. A cornerstone of mobile money is domestic remittances, but the formal sector in South Africa already provides these, leaving mobile money with less of a value proposition. Those in South Africa also have the propensity of withdrawing the majority of their deposits into cash, as the infrastructure that would support alternative payment mechanisms (card readers, mobile money acceptance) is not universally in place, which suggests financial inclusion is not being fully realised. To fix this, regulatory changes and partnerships are necessary to allow non-bank players to offer interoperable services in payments, which would challenge the prevalence of cash.

[5] State of the Industry Report on Mobile Money — GSMA

Mobile Money Initiatives Act As Savings Vehicles

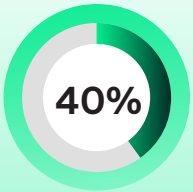
While ownership of a traditional bank account is a valuable metric for assessing financial inclusion, there are growing alternative avenues to participate financially.

Mobile money allows users without a bank account or debit card to perform online financial transactions. They can also extend credit access to end users, as well as other products like life insurance and loans, which can transition into becoming an entrypoint into formal credit for previously unbanked individuals. The digital data collected on these platforms can provide an alternative means for traditional lenders such as banks and credit institutions to assess the creditworthiness of potential borrowers.

Figure 1.2 Method of Saving Money (% of respondents, Multiple Choice)

Method of Saving Money	South Africa	Nigeria
Bank savings account in the resident country	81%	79%
Bank savings account in non-resident country	3%	4%
Money saved in a mobile money account or digital wallet in the resident country	19%	43%
Money saved in a mobile money account or digital wallet in non-resident country	5%	10%
Cash savings kept at home	24%	26%
I do not save money	6%	1%

In Nigeria:



Use Mobile Money Daily or Weekly

Many people across Africa use multiple financial products rather than relying on a single savings method, reflecting an interconnected financial ecosystem. As shown in the figure above, owning a mix of savings instruments is common, particularly in Nigeria, where many individuals hold both a bank account and a mobile money account. This overlap suggests that mobile money complements, rather than replaces, traditional banking and can serve as an important gateway into the formal financial system.

Indeed, 26% of 18-34 year olds surveyed in South Africa and Nigeria report opening a mobile money account as their first financial account, which drops to 13% in the 35-64 age range, displaying the popularity of mobile money among the youth. Strengthening

digital financial infrastructure and interoperability between mobile money providers and banks will be critical to ensuring these initial points of access can translate into wider participation for the younger generations.

1.4.3 Cross-Border Connectivity

Country	Cross-Border Connectivity
South Africa	3.0
Egypt	1.7
Kenya	1.7
Nigeria	1.3

The cross-border connectivity metric measures the ease, speed, and price of making cross-border payments, as well as the value of cross-border payments made.

The criteria considered when measuring the connectivity of cross-border payments are:

Remittance costs: This measures the cost of making P2P payments across borders, as measured by the World Bank. This covers banks, money transfer operators, and post office cash transfers.

Cross-border value: This measures the value of cross-border payments per capita in 2025.

Cross-border instant payments penetration: This measures the proportion of cross-border payments made via instant payment or fast payment schemes.

Cross-border connectivity scores remain comparatively low across Africa due to the high cost and limited scale of cross-border payments. According to the World Bank, Africa has some of the highest remittance and cross-border payment costs in the world, making it expensive for businesses and individuals to send and receive money across borders. These costs are compounded by the continued reliance on cash for both pay-in and pay-out transactions, which increases operational complexity and reduces the efficiency of digital payments.

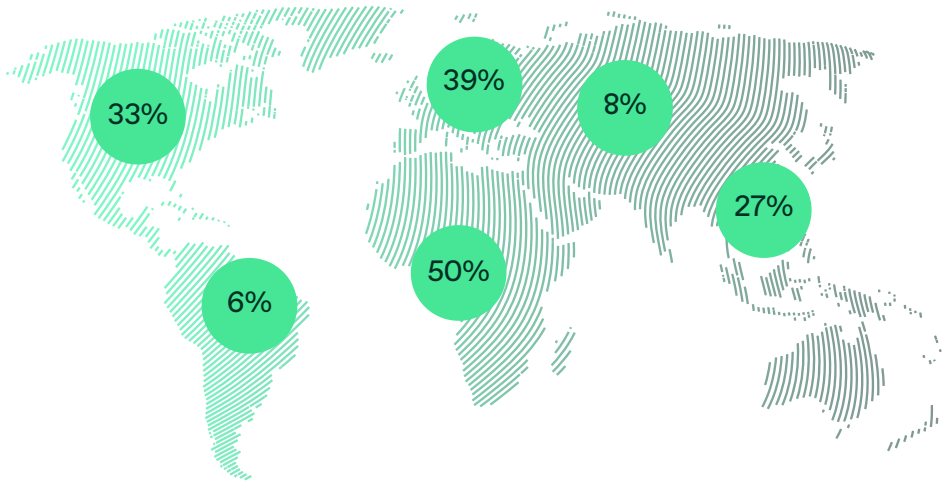
Limited transaction volumes further constrain the development of cross-border payment infrastructure. Many African markets generate relatively low levels of cross-border consumer and business payment flows, reducing the commercial incentive for payment providers to establish direct connections between markets. Instead, transactions are often routed through correspondent banks or intermediary networks, increasing costs, processing times, and complexity. This creates a self-reinforcing cycle: high costs suppress cross-border payment activity, while low transaction volumes discourage investment in the infrastructure needed to improve connectivity and reduce costs.

Corridor View: African Payments

a) Sending International Payments

As visualised in Figure 1.4, payments sent from South Africa and Nigeria are most frequently sent to other countries within Africa, demonstrating the strength of intra-African remittances. This was followed by Europe and North America.

Figure 1.3 Destinations For Cross-border Payments Sent From Respondents in South Africa & Nigeria in the Past Year (Multiple Choice, % of International Payments Senders)



The most common reason to be sending money is to purchase goods or services internationally (78%), with remittances and financial gifts emerging as the second most common reason (50%).

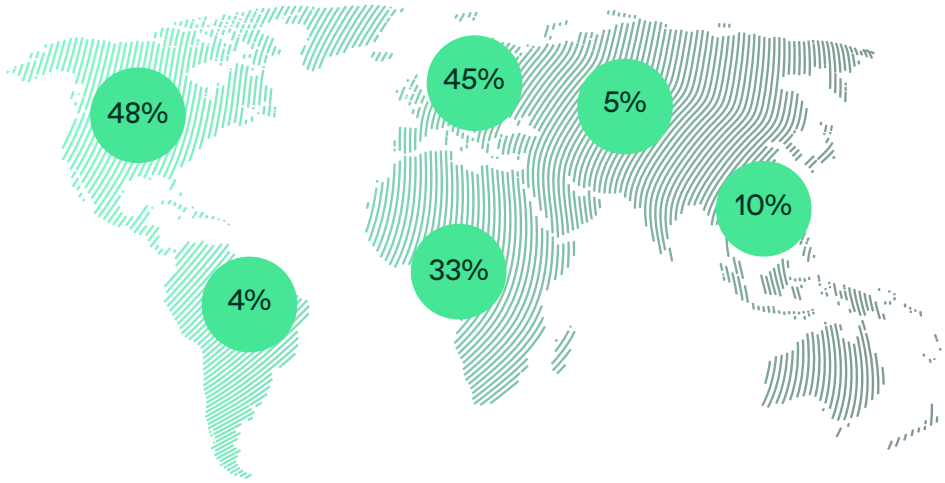
Figure 1.4 Reasons For Sending Money Internationally
(% of South African & Nigerian Cross-border Money Senders, Multiple Choice)

Reason for Sending Money Internationally	
Paying for goods purchased overseas	54%
Remittances	37%
Investment or saving purposes	26%
Paying for services provided by someone overseas	24%
Sending a financial gift	13%
Sending money to myself	12%
Other	1%

b) Receiving International Payments

The most frequent locations that those in South Africa and Nigeria receive money from are North America (48%) and Europe (45%). 29% of international payment recipients received money from more than one region in the past year.

Figure 1.5 Originating Regions For Cross-border Payments Sent From Those in Africa in the Past Year (Multiple Choice, % of International Payments Receiving)



Remittances and financial support or gifts were the most common reasons why people receive money internationally. 76% of those receiving international payments received remittances or financial support/gifts, which represents 42% of all respondents in South Africa and Nigeria. This highlights the significant role that cross-border financial support plays in these markets, where international transfers often help fund household expenses.

The second most common reason for receiving payment internationally is for salary purposes (22% of international payments receivers) and those receiving income from overseas investments (16%).

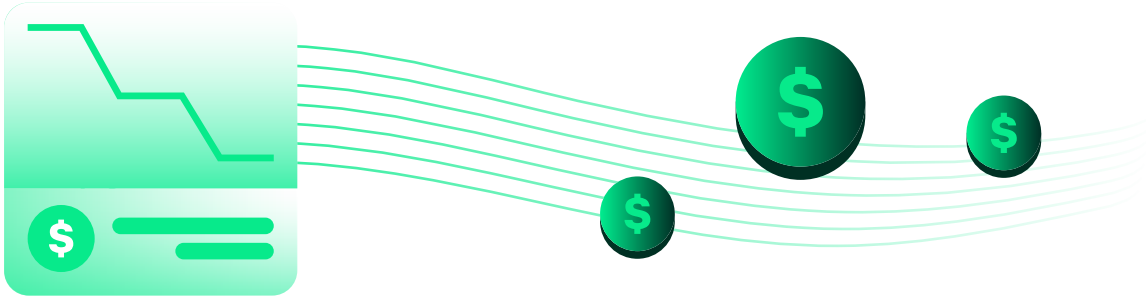
Figure 1.6 Reasons for Receiving Money Internationally
(% of African Cross-border Money Recipients, Multiple Choice)

Reason for Receiving Money Internationally	
Remittances	47%
Financial support or gifts	29%
Salary or payment from an overseas employer	22%
Investment income	16%
Payment for goods sold	14%
Money sent by me	9%
Other	9%
Refund or reimbursement	3%

High Costs Are In the Process Of Being Brought Down

According to the World Bank, Sub-Saharan Africa is the most expensive region in the world to send money to, as transaction fees are 8.5% of the total value of the amount transferred.[6] Furthermore, of the 13 corridors with costs over 20%, 9 of them originate from Sub-Saharan Africa, displaying the difficulties with sending money from this region.

While South Africa is also the most expensive country in the G20 to remit from, costs have gone down over the past decade, indicating positive forward progress. In 2013, it cost over 20% to send money from South Africa. In Q3 2025, this reduced to 15.7%[7]. This derives from greater participation in regional payment networks and the expansion of fintech providers into the country, which increase competition and reduce reliance on costly correspondent banking processes.



[6-7] Remittance Prices Worldwide — World Bank

1.4.4 Market Dynamics and Progress

Country	Market Dynamics & Progress
Kenya	7.5
Egypt	5.5
Nigeria	5.5
South Africa	5.5

The market dynamics and progress score indicates the industry momentum behind cross-border initiatives in the market. In order to assess the regulatory environment and engagement in cross-border projects, this metric was assessed by:

Cross-border payment growth: This is based on a forecast of the percentage growth a market will experience in the next four years.

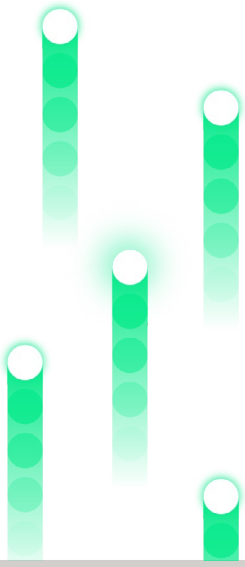
Cryptocurrency regulation status: This assesses the openness of the market towards cryptocurrencies as payment instruments, based on the existence of regulatory clarity towards this technology.

Open banking mandates: This assesses the existence and prevalence of open banking connections in a market, based on the level of adoption by banks and consumers and regulations mandating open banking API availability.

Government-led initiatives: This appraises the participation of a country's central bank in cross-border interoperability initiatives, including: regulatory roadmaps, pilot participation, fast payment system linkage, and usage of common messaging standards.

In contrast to the other metrics, these African markets perform particularly strongly on market dynamics and progress, reflecting the rapid pace of innovation and adoption across their payments ecosystems. Kenya is currently the strongest performer among these markets, with a regulatory and technical environment that is well positioned to encourage interoperability through alternative technologies.

The high market dynamics score reflects the comparatively fast-moving nature of many African payments markets. Lower levels of legacy financial infrastructure have enabled countries to adopt digital-first payment systems without the constraints of deeply entrenched banking architecture. Rather than modernising decades-old payment rails, many markets have been able to build interoperable mobile and digital payment ecosystems around emerging technologies. This flexibility has fostered widespread adoption of alternative payment methods, suggesting that the region has high potential in next-generation payments development despite lower scores in some more established dimensions.

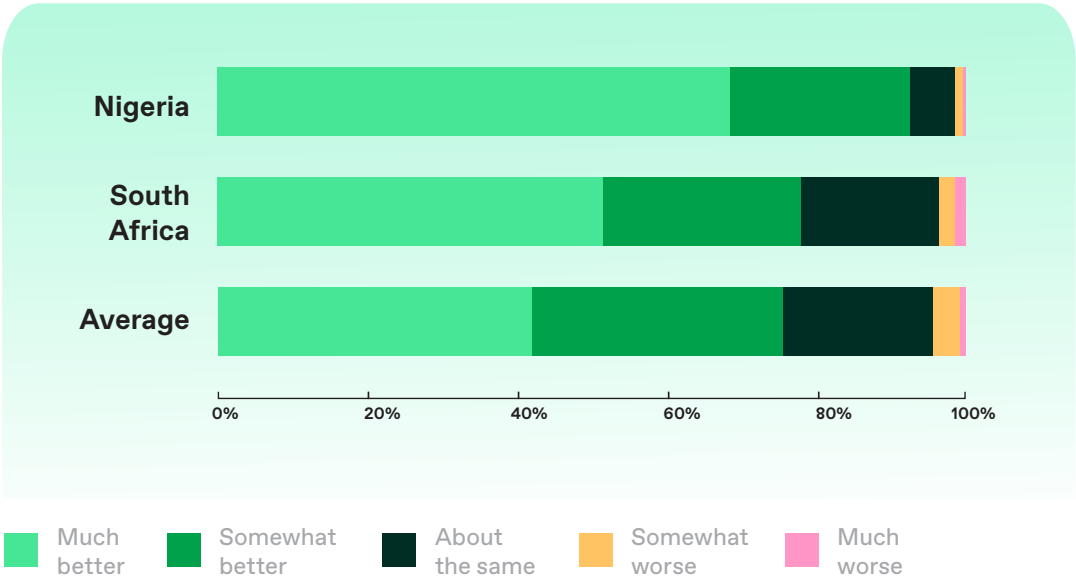


Kenya's high market dynamics score is underpinned by its mature and well-integrated digital payments ecosystem. Africa's largest mobile money service, M-PESA, is headquartered in Kenya, where the majority of its users are located. M-PESA has been at the forefront of promoting financial inclusion and digital payments across the continent. Its extensive interoperability with international payment providers, including partnerships with PayPal for cross-platform fund transfers and integrations with HomeSend and Western Union, has made it easier for individuals and businesses to send and receive money across borders. This broad network of connections has strengthened Kenya's position as a regional hub for cross-border digital payments.

Improvements Over Past Five Years

Out of all surveyed regions, those in South Africa and Nigeria were most likely to report that their experience receiving international payments had improved over the last five years compared to the global average. Out of those who were engaged in international payments five years ago, 93% of those in Nigeria and 78% of those in South Africa reported that their payment experience was much better or somewhat better. This displays the positive progress that innovations have made in these markets.

Figure 1.7 Perceived Difference Between Receiving International Payments Five Years Ago vs Today (% of Respondents)



1.4.5 Payment Provider Preferences

a) Sending International Payments



PAYMENTS SERVICE PROVIDER

Payment provider preferences across Africa vary according to local preference and the needs of consumer segments. In both South Africa and Nigeria, the most commonly used payments provider for sending international payments was through a mobile wallet or payment app, which is in line with broader global trends. This preference is likely tied to their purposes when making international transactions; the majority are purchasing goods from overseas merchants, where digital wallets like PayPal or Google Wallet are universally accepted at checkout.

However, this may reflect an overall lack of interoperability displayed by global merchants, who have not localised their checkout to the user's country of origin. Digital wallets were relatively unpopular in the overall payments mix of those in South Africa and Nigeria, with only 10% and 9% reporting daily use respectively. In comparison, debit/credit cards, cash and bank transfers were used more frequently than digital wallets in South Africa. In Nigeria, bank transfers, cash, debit/credit cards, and mobile money are all used more frequently than digital wallets. This suggests that the preferred payments options are not always available at checkout, which may force users to create digital wallet accounts instead.

Figure 1.8 Payments Providers Typically Used to Send Cross-Border Payments (%, Multiple-Choice)

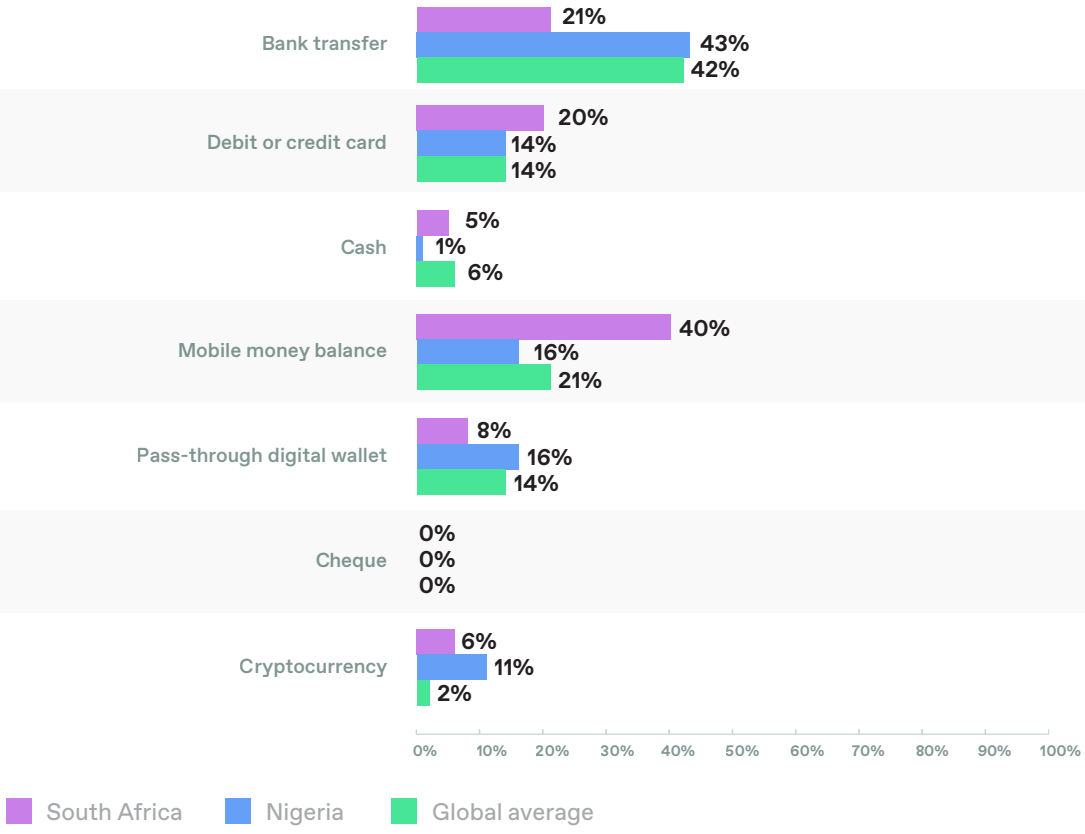
Cross-Border Payments Provider (sending)	South Africa	Nigeria
Traditional bank	31%	26%
Digital bank	9%	17%
Brick-and-mortar money transfer operator	15%	28%
Digital money transfer service	14%	26%
Mobile wallet or payment app	62%	45%
Mobile money provider	10%	2%
Cryptocurrency platform	18%	40%
Informal channel	2%	2%

FUNDING MECHANISM

While payment providers determine which platform or service consumers use to initiate an international payment, the funding method reflects where the money originates from to complete the transaction. As shown in the table below, the most common way to fund international transactions is with a mobile money balance in South Africa (40% of respondents), and a bank transfer in Nigeria (43%).

This contrast between provider preference and funding source illustrates that consumers may use the same type of payment platform while relying on different underlying sources of funds. In Nigeria, the prominence of bank transfers as a funding method highlights the importance of interoperability between banks and mobile wallets, so consumers can transfer funds quickly and easily between payment rails.

Figure 1.9 Payment Mechanism Used to Fund Outward International Payments
(% of Those Sending International Payments)

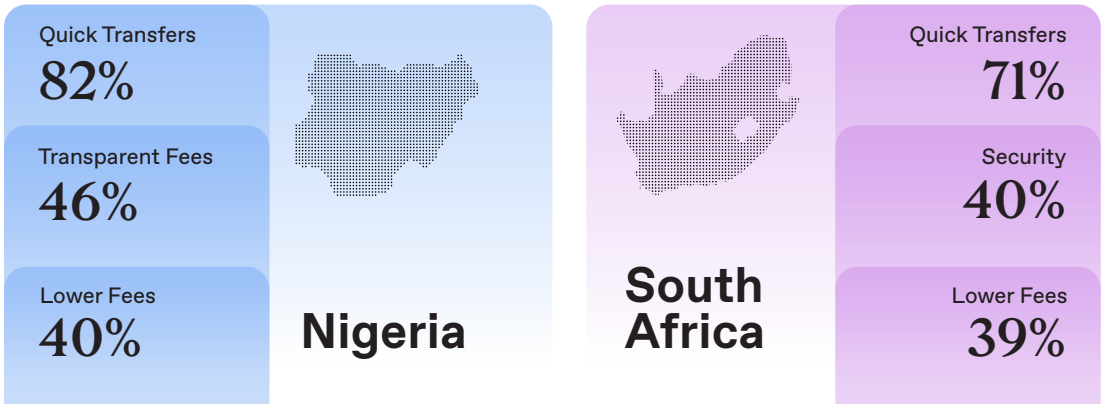


COMPETITIVE DIFFERENTIATORS

In both countries, quick transfers were overwhelmingly chosen as the most important feature about their preferred payments provider. In Nigeria, transparency and lower fees were the next most commonly valued features, while in South Africa this was security and lower fees. This displays that while having lower fees than other providers is a factor in differentiating providers, it isn't the main motivator when it comes to choosing which provider to use.

Notably, only 2% of those in South Africa and 3% in Nigeria reported that they chose their payments provider because there was no other one available, suggesting that there is a healthy level of competition in the region.

Figure 1.10 "What do you value the most about your preferred payments channel when sending money internationally?" (% ranked in top 3)



b) Receiving International Payments

PAYMENTS SERVICE PROVIDER

As with sending international payments, preferences for cross-border payment providers amongst those receiving international payments have converged strongly around mobile wallets. These remained the most popular method across all age groups, demonstrating the universal appeal mobile wallets hold.

Figure 1.11 Payments Providers Typically Used to Receive Cross-Border Payments (%, Multi-choice)

Cross-Border Payments Provider (receiving)	South Africa	Nigeria
Traditional bank	20%	34%
Digital bank	5%	14%
Brick-and-mortar money transfer operator	7%	16%
Digital money transfer service	14%	26%
Mobile wallet or payment app	77%	40%
Mobile money provider	6%	11%
Cryptocurrency exchange or platform	16%	28%
Informal channel	1%	5%

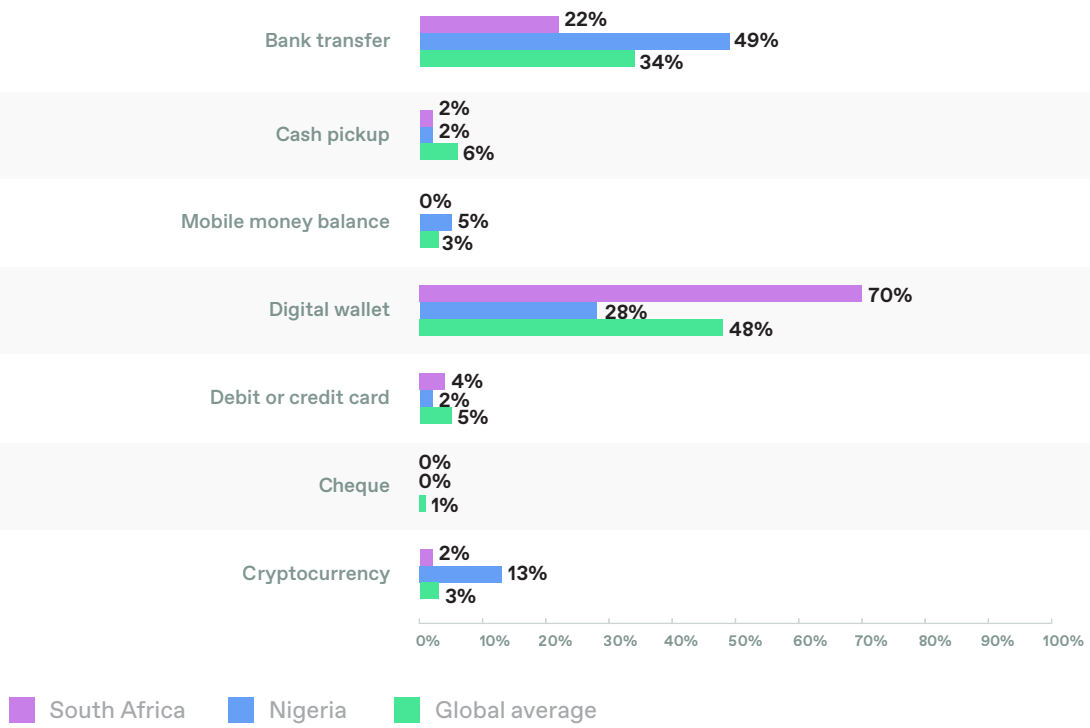
Amongst all countries surveyed, South Africa exhibited the strongest preference for mobile wallets and payment apps. 77% of respondents typically used a mobile wallet to receive international payments, compared to a global average of 57%. This finding points to a well-developed digital payments ecosystem in South Africa, where consumers appear comfortable receiving funds directly into digital accounts that can be used immediately for spending, transfers, or bill payments.

PAYMENT MECHANISM: RECEIVING INTERNATIONAL PAYMENTS

The findings reveal significant differences in how cross-border payments ultimately reach recipients in Nigeria and South Africa. In Nigeria, almost half the respondents (49%) reported that the payment was received in their bank account, while only 22% of South Africans said the same. Instead, 70% of South Africans received the payment in their digital wallet account. This suggests that South Africa's cross-border payments ecosystem is more closely aligned with consumers' preferred payment destination, enabling funds to reach users through the digital channels they use most frequently. By contrast, the greater reliance on bank accounts in Nigeria indicates that recipients sometimes need to make an additional transfer from their mobile wallet to a bank account before using the funds. This additional last mile introduces extra friction, increasing the cost and effort required for recipients to access and use their money.

By contrast, picking up cash was extremely unpopular in both countries, with only 2% in each country picking up their payment in cash. This may reflect a lack of payout agent locations in these areas, as well as a preference for digital payment methods.

Figure 1.12 Payment Method Typically Used To Receive International Payments (% of Those Receiving International Payments)



Paying in and paying out in cash is typically more expensive than digital payment methods, so despite a heavy use of cash in the everyday payments mix of each country, it has not emerged as a preference for those engaging in international payments.

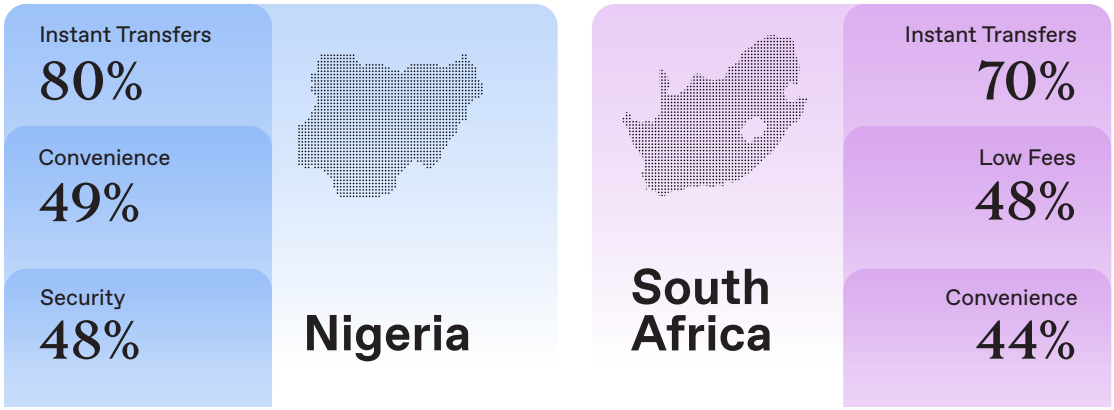
COMPETITIVE DIFFERENTIATORS

Similarly to those sending cross-border payments, instant transfers were more valued in a service provider than characteristics such as convenience, security, habit, and recommendations from friends or family.

Those in Nigeria show the strongest convergence of preferences for instant cross-border payments out of all surveyed countries. The majority of respondents receiving international payments ranked instant transfers as one of the top 3 most valued characteristics of their current cross-border payments provider, and 60% ranked it as their number 1 most valued feature. This reflects the importance of speed in Nigeria's payment ecosystem, particularly in an environment where volatility in exchange rates can quickly affect the value of received funds. Consequently, instant settlement should not be viewed as a competitive edge in Nigeria but as a baseline for satisfying users.

However, the influence of these preferences on actual provider choice may be more limited than for payment senders. In many cross-border transactions, the sender selects the payment provider or transfer service, leaving the recipient with little or no control over the provider used. As a result, recipient preferences should be interpreted as indicators of the features they value most, rather than as the primary drivers of provider selection.

Figure 1.13 "What do you value most about your preferred payments provider when receiving payments internationally?" (% Ranked Within Top 3 Values)



1.4.6 Conclusion

Improvements in interoperability are transforming commerce and remittance markets across Africa. As reported by survey respondents, the cross-border payments experiences of those in South Africa and Nigeria has significantly improved over the last five years, reflecting the progress made in connecting users both to global merchants and to friends or family abroad. Opportunities for financial inclusion and cross-border trade have expanded greatly as a result of this continued investment in technical interoperability.

However, progress in enabling cross-border payments has exposed persistent gaps in international payments corridors. Respondents receiving payments and remittances from outside of Africa continue to encounter face high fees, errors, and volatile exchange rates. This issue is exacerbated in gig workers and those reliant on remittances to make ends meet, creating rippling effects such as borrowing money to cover shortfalls and straining relationships with family members. Addressing these challenges should be a priority for those facilitating international payments.

One of the central findings of this report revolves around the innovation and adaptive behaviours displayed by users. Faced with high fees across borders, users are turning towards stablecoins to make transfers. While primarily used to hedge against currency fluctuations, a small but meaningful minority are using stablecoins for their international transfers- rising to 40% of those in Nigeria. This reflects a demand for faster settlements and low costs, representing a practical solution towards addressing shortcomings in payments infrastructure.

However, progress is complex and adoption of alternative payment systems such as stablecoins only increases fragmentation within the payments ecosystem. Preferences remain highly localised within countries; for example, Nigeria is diverging towards A2A systems while South Africa is still card-heavy. For payments providers, the challenge will be delivering these improvements while accommodating increasingly diverse customer preferences.

Finally, users are no longer evaluating providers solely on cost and convenience. As coverage and choice expands, users have demonstrated a clear preference for instant settlements, as well as transparent fees and trust in the security of their payment. Providers that can integrate real-time, local payments rails into their payment acceptance and payout mechanisms will be best placed to meet this demand.



The Interoperability Index Full Version

2

2.1 The Thunes Payments Interoperability Index, Full Version

Below is the full Interoperability Index, with scoring for each category outlined.

#	Country	Region	Economic Health	Digital Infra-structure Access	Financial Inclusion	Cross-Border Connect-ivity	Market Dynamics & Progress	Overall
1	Denmark	West Europe	8.8	9.5	9.5	8.9	6.0	**8.8**
2	Singapore	Rest of Asia Pacific	7.8	9.0	7.6	6.9	10.0	**8.3**
3	Norway	West Europe	8.5	8.8	7.9	9.2	6.5	**8.2**
4	Spain	West Europe	5.8	8.3	9.2	7.3	7.5	**8.0**
5	Nether-lands	West Europe	8.0	7.8	9.1	7.6	6.5	**8.0**
6	Sweden	West Europe	7.8	8.5	8.4	6.6	7.5	**8.0**
7	UK	West Europe	6.8	7.5	8.7	7.6	8.0	**7.9**
8	Switzer-land	West Europe	7.8	7.5	8.2	8.3	6.5	**7.7**
9	Austria	West Europe	6.8	7.8	7.4	8.6	7.0	**7.6**
10	Australia	Rest of Asia Pacific	7.0	7.5	7.1	7.6	8.5	**7.5**
11	Finland	West Europe	7.0	7.0	7.6	8.6	7.0	**7.4**
12	Germany	West Europe	7.0	8.0	6.5	7.3	7.5	**7.3**
13	South Korea	Far East & China	7.0	9.0	6.8	5.0	7.0	**7.2**
14	Belgium	West Europe	7.8	7.3	7.3	7.9	6.0	**7.2**
15	France	West Europe	7.0	5.8	8.0	7.9	7.5	**7.1**
16	Ireland	West Europe	8.8	5.8	7.5	7.9	6.0	**6.9**

#	Country	Region	Economic Health	Digital Infra-structure Access	Financial Inclusion	Cross-Border Connect-ivity	Market Dynamics & Progress	Overall
17	Japan	Far East & China	5.0	8.0	6.7	6.9	6.5	6.9
18	Portugal	West Europe	5.3	7.0	6.3	7.6	6.5	6.6
19	Poland	Central & East Europe	4.8	6.8	6.9	5.9	7.5	6.6
20	Italy	West Europe	6.3	7.5	4.9	7.9	7.0	6.6
21	US	North America	6.8	7.5	6.6	5.9	5.0	6.5
22	Canada	North America	7.5	7.0	6.7	6.3	4.0	6.4
23	China	Far East & China	3.3	6.5	6.8	7.3	5.0	6.2
24	Brazil	Latin America	2.5	6.0	6.4	3.6	10.0	6.0
25	Hungary	Central & East Europe	5.5	5.3	6.7	6.6	5.5	6.0
26	Croatia	Central & East Europe	5.3	5.8	5.7	7.6	5.5	5.9
27	New Zealand	Rest of Asia Pacific	6.8	6.3	5.3	6.3	5.5	5.9
28	Malaysia	Rest of Asia Pacific	4.0	6.0	6.1	5.0	7.0	5.8
29	Thailand	Rest of Asia Pacific	3.5	4.8	6.5	5.3	7.5	5.6
30	India	Indian Sub-continent	1.3	2.5	7.3	6.9	9.0	5.5
31	United Arab Emirates	Middle East	6.8	5.3	5.2	5.3	5.5	5.4
32	Saudi Arabia	Middle East	4.5	5.0	4.9	4.3	5.5	4.9
33	Mexico	Latin America	4.0	3.3	5.7	2.6	7.5	4.6

#	Country	Region	Economic Health	Digital Infra-structure Access	Financial Inclusion	Cross-Border Connect-ivity	Market Dynamics & Progress	Overall
34	Chile	Latin America	4.8	4.3	4.4	3.0	6.0	**4.4**
35	Kuwait	Middle East	8.0	4.3	3.3	4.6	3.5	**4.3**
36	Kenya	Africa	1.3	3.3	5.9	1.7	7.5	**4.2**
37	Indonesia	Rest of Asia Pacific	2.0	3.0	4.1	5.9	6.0	**4.1**
38	Turkey	Central & East Europe	4.0	4.3	5.0	2.3	3.0	**4.0**
39	Argentina	Latin America	3.3	3.8	4.5	3.0	4.5	**3.9**
40	Vietnam	Rest of Asia Pacific	2.8	3.5	4.1	3.6	5.0	**3.8**
41	Qatar	Middle East	5.5	4.8	2.9	3.0	3.5	**3.8**
42	Philippines	Rest of Asia Pacific	2.0	2.8	3.3	4.3	7.5	**3.8**
43	Nigeria	Africa	3.3	2.5	5.0	1.3	5.5	**3.6**
44	South Africa	Africa	3.3	2.5	4.1	3.0	5.5	**3.6**
45	Colombia	Latin America	3.3	3.0	3.5	2.6	5.0	**3.4**
46	Peru	Latin America	4.5	1.8	3.8	3.0	4.0	**3.2**
47	Egypt	Africa	2.5	1.8	3.8	1.7	5.5	**3.0**
48	Bangla-desh	Indian Sub-continent	2.5	1.3	4.3	1.0	4.5	**2.7**
49	Nepal	Indian Sub-continent	1.3	1.8	4.6	0.7	4.0	**2.7**
50	Pakistan	Indian Sub-continent	0.8	1.3	4.6	0.7	5.0	**2.7**

Appendix

3

3.1 Survey Methodology

i. Geographic and Household Income Coverage

The survey recruited respondents online, including individuals who had experience sending money internationally as well as those who had not. Respondents represented a broad cross-section of people across income thresholds. The sample was designed to capture a range of perspectives on cross-border payments, including both active users and non-users of international money transfer services.

Fig. 3.1 Number of Respondents Recruited per Country

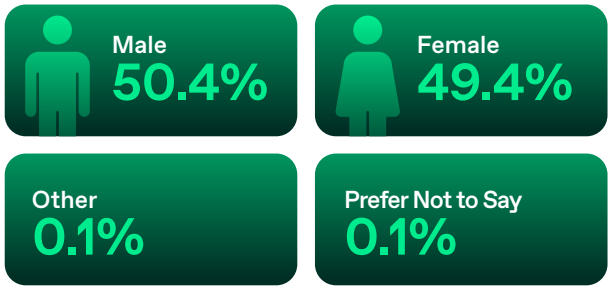
Country	Number of respondents
US	1,013
Brazil	541
Saudi Arabia	507
China	1,026
India	554
Philippines	527
UK	1,011
Germany	519
South Africa	516
Nigeria	549

ii. Sampling and Recruitment

Participants were recruited via online panels using pre-defined screening criteria to ensure respondents were located within the chosen countries. Screening questions were used to identify respondents based on their experience with sending and/or receiving international payments.

A balanced sample across key demographic groups was achieved:

Fig. 3.2 Survey Sample Demographics by Country



iii. Data Collection

The survey was conducted online using a structured questionnaire. A total of 6,763 completed responses met all screening criteria and quality checks and were included in the final analysis. Data collection took place over the period of April 2026.

iv. Survey Instrument

The questionnaire consisted of 44 questions and was designed to capture behaviours, preferences, and experiences related to cross-border payments. Participants were routed to one of four versions of the survey based on their responses to initial screening questions:

- Respondents who both sent and received international payments were shown the full survey.
- Respondents who neither sent nor received international payments were shown a shorter version consisting of 17 questions.
- Respondents who only sent or only received international payments were shown relevant sections tailored to their experience.

This routing approach ensured that questions remained relevant to each participant while minimising respondent burden.

Limitations
As with all survey-based research, the findings are subject to certain limitations:

- The survey was conducted online, which may exclude individuals without internet access or those less likely to participate in digital panels.
- Responses are self-reported and may be subject to recall bias or social desirability bias.
- Finally, as the survey was carried out in April 2026, the results capture responses at this point in time. Changes in economic conditions or regulations may affect consumer attitudes or experiences after this point.

3.2 Interoperability Index Methodology

The Payments Interoperability Index was developed to assess the accessibility and ease of making payments across borders. This was assessed via five core dimensions, designed to capture different aspects of interoperability. The dimensions are as follows:

Economic Health: This is designed to capture the macroeconomic environment of the countries, as well as the human and social experiences of living within this. This assessed measures including GDP, trade openness, volume of operating businesses and quality of life.

Digital Infrastructure: This measures how connected citizens are to the internet, as well as the proportion of the adult population who have made or received a digital payment in the past 3 months.

Financial Inclusion: This uses measures such as wealth inequality, access to bank branches, and the proportion of the adult population who have a formal financial account or mobile money account.

Cross-Border Connectivity: This measures factors such as the cost of sending and receiving remittances, the proportion of consumer transactions made via instant payment schemes, and the overall value of the cross-border payments market

Market Dynamics and Progress: This measures the progress of various regulatory and government mandates designed to improve the money transfer market, such as government-led initiatives, open banking mandates and cryptocurrency regulations. In order to assess the potential of the market, it also assesses the forecast growth in the market.

The score given in each dimension reflects a set of measurable indicators. These were sourced from a variety of reliable sources: for example, the Global Findex Database 2025, which is a demand-side survey of 145,000 adults in 141 economies. This provides data on how adults around the world use both formal and informal financial services to save, borrow, make payments, and manage financial risk.

Also used was World Bank data regarding remittance costs around the world. The World Bank releases quarterly releases with the SmaRT indicator the simple average of the three cheapest qualifying services for sending the equivalent of $200 in each country.

This aims to reflect what a savvy consumer with access to sufficiently complete information could pay to transfer remittances in each corridor. Services qualify if they make the payment in five days or less, as well as being accessible by geographic proximity (e.g. to branches) for services that require physical presence.

To ensure that the Interoperability Index represented a holistic view of market dynamics, a qualitative assessment of various metrics was conducted. This used central bank publications and government releases on national digital payment strategies to assess the openness of the market to technological shifts, such as the presence or absence of cryptocurrency regulations and participation in cross-border fast payment system linkage pilots.

Finally, in-house data regarding the value of cross-border payments and the proportion of payments made via instant payment schemes were utilised for the index. Further information on these can be found in the report Cross-border Payments Market 2026-2030.

About Thunes

4

4.1 About Thunes.

Thunes is the Smart Superhighway to move money around the world. Thunes' proprietary Direct Global Network allows Members to make payments in real-time in over 140 countries and more than 90 currencies. Thunes' Network connects directly to over 12 billion mobile wallets, stablecoin wallets and bank accounts worldwide, as well as 15 billion cards via more than 220 different payment methods, such as GCash, M-Pesa, Airtel, MTN, Orange, JazzCash, Easypaisa, AliPay, WeChat Pay and many more. Thunes' Direct Global Network differentiates itself through its worldwide reach, in-house SmartX Treasury System and Fortress Compliance Platform, ensuring Members of the Network receive unrivaled speed, control, visibility, protection, and cost efficiencies when making real-time payments, globally. Members of Thunes' Direct Global Network include gig economy giants like Uber and Deliveroo, super-apps like Grab and WeChat, MTOs, fintechs, PSPs and banks. Headquartered in Singapore, Thunes has offices in 14 locations, including New York, Barcelona, Beijing, Dubai, Hong Kong, Johannesburg, London, Manila, Nairobi, Paris, Riyadh, San Francisco and Shanghai. For more information, visit thunes.com.

4.2 About JUNIPER RESEARCH

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