Agpaytech's Research
21st April, 2025

Who Leads the Retail Payment in Africa?

FinTech App, Mobile Money & Banking Apps

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Fintech

Telecom

Bank

Introduction

Telecom-led mobile money is the backbone of Africa's digital payments, especially in unbanked regions.

Africa's payment ecosystem is rapidly evolving, with digital transactions growing at 20% annually (GSMA, 2023). Specifically, the retail payment ecosystem has improved, driven by the convergence of Third-Party Application Providers (TPAPs), Telecom Mobile Money, and Banking Apps. This nexus has transformed digital payments, financial inclusion, and e-commerce across the continent. The financial sector has witnessed a significant transformation with the emergence of third-party applications (TPAPs) that provide financial services alongside traditional banking apps. The increasing reliance on digital platforms for financial transactions has sparked discussions on the advantages, challenges, and future implications of these two financial service models. However, banking apps maintain a significant presence due to their integration with formal banking structures and security features. This report explores the nexus between TPAPs, Telecoms and banking apps, highlighting their similarities, differences, benefits, and challenges in the evolving financial ecosystem.

However, rural areas remain underserved due to limited bank branches, low internet penetration and fragmented financial systems. And most importantly, these retail ecosystem players (TPAP, Telecoms and Banks) are yet to fully interoperate and maximize cross-border e-commerce transactions in local currencies. For instance, TPAPs are fintechs, e-commerce platforms, or service providers (like Jumia, Uber, or Paystack) that integrate payment solutions into their apps. They act as intermediaries, enabling users to pay for goods/services digitally. Telecom Mobile Money (M-Pesa, MTN MoMo, Airtel Money, etc.) Telecom-led mobile money is the backbone of Africa's digital payments, especially in unbanked regions. Also, the traditional banking apps and neobanks (like KCB, Ecobank, or TymeBank) provide structured financial services, including card-based payments (Visa/Mastercard), direct bank transfers (NIBSS in Nigeria, PesaLink in Kenya) and lending and savings products.

Table 1: Retail payment key players

Player	Role	Example
Users/merchant	Initiate payment, provide a platform	Individuals, entities
Payment Aggregators (TPAP)	Facilitate multi-bank and telecom transactions	Flutterwave, Paystack, Zeepay, Opay
Mobile Money Providers (Telecom)	Enable enhanced wallet-based payments	M-Pesa (Kenya), MTN MoMo (Ghana)
Banks (traditional bank)	Process settlements & compliance	Zenith Bank, Equity Bank
Regulators	Oversee interoperability & security, supervision, etc	CBN (Nigeria), CBK (Kenya), BoG (Ghana)

Third-Party Apps (TPAP)

Third-Party Payment Aggregator Platforms (TPAPs) are revolutionizing digital payments in Africa by bridging gaps between banks, merchants, and underserved populations. TPAPs are financial applications developed by non-banking institutions that offer services such as payments, fund transfers, lending, and investment. TPAPs are fintech-driven applications developed independently from banks but integrated with banking infrastructures to facilitate payments. Examples include PayPal, Venmo, Apple Pay, Google Pay, and mobile money services in emerging markets like M-Pesa and Alipay. These apps often integrate with multiple banks and financial institutions to facilitate seamless transactions. TPAPs in reducing cash dependency, enabling SME growth, and overcoming infrastructure challenges in rural areas. In Africa, Flutterwave, M-Pesa, PalmPay, Zeepay, etc., act as intermediaries, connecting merchants, banks, and mobile money providers to streamline payments smoothly.


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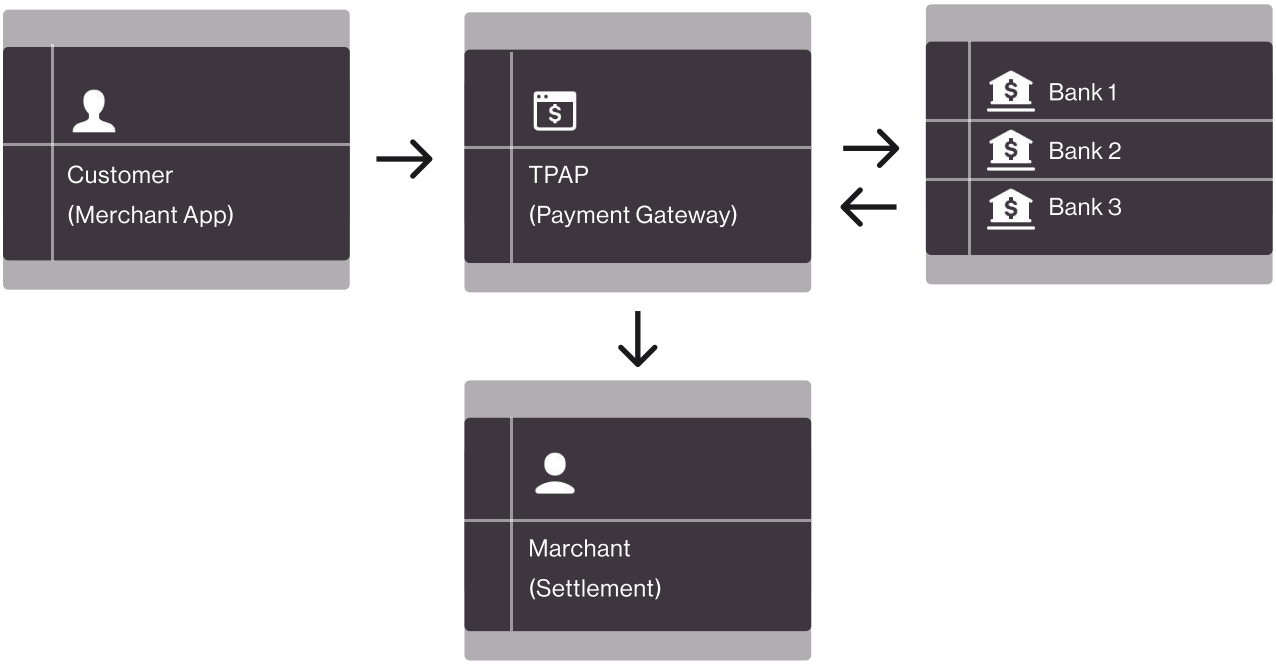
How does TPAP work?

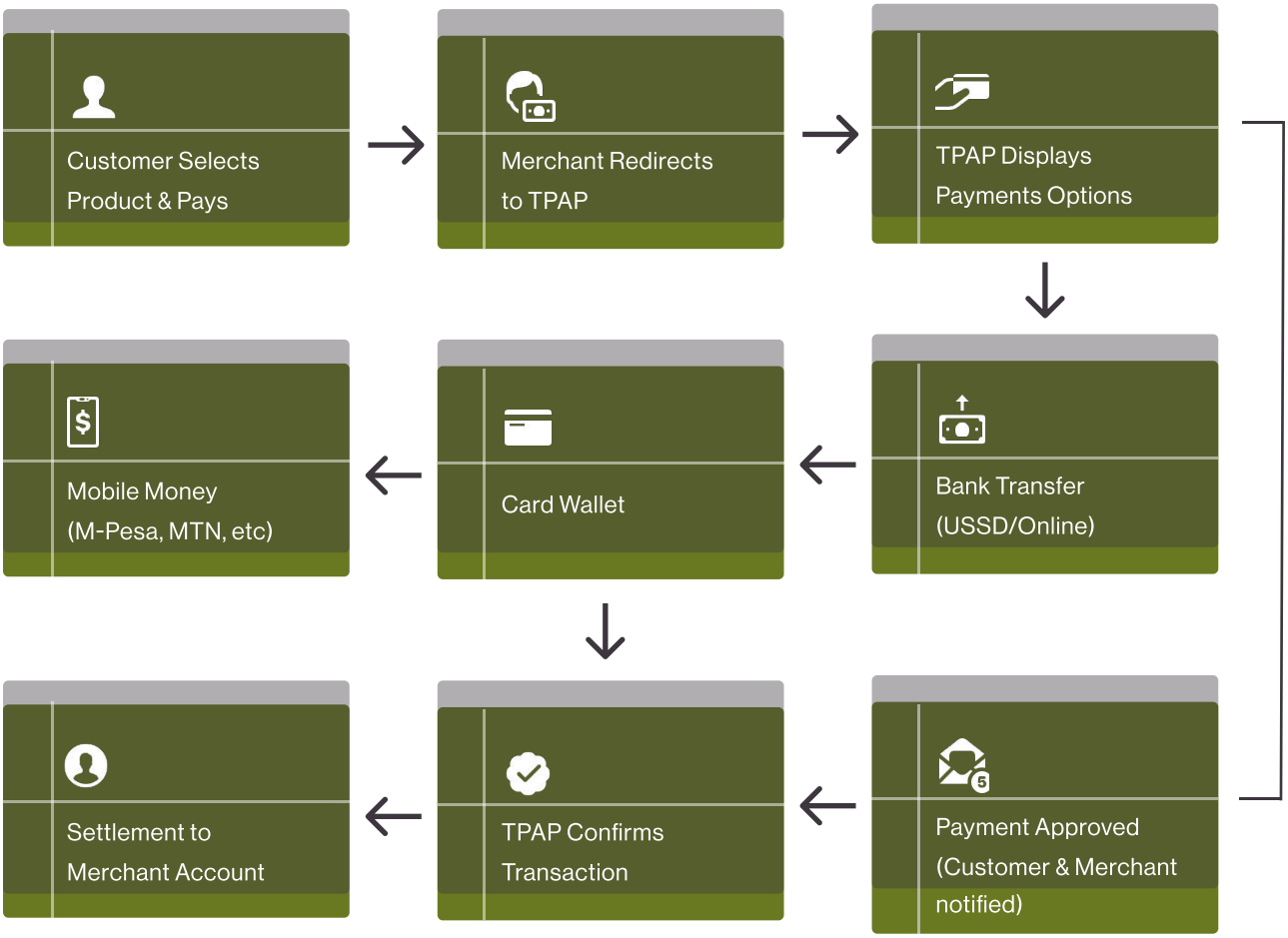
TPAP works with key players in Africa's financial ecosystem to complete every user payment initiation. Each player contributes significantly and uniquely facilitates the payment flow from the user to the receiver. TPAPs consolidate multiple payment methods (bank transfers, mobile money) into a single platform. At the checkout, a customer chooses between mobile money, QR Code, or bank transfer. The TPAP routes transactions to the customer's bank or mobile wallet via APIs whereas the Bank or Mobile Money provider require personal identification number (PIN), biometrics or one-time password (OTP) to provide real-time authentication and complete payment to the merchant. If the user has multiple linked bank accounts, they select one for payment. Funds are debited from the user's bank account and credited to the recipient (merchant or another user). For cross-border payments, if multiple banks are involved, TPAP coordinates fund transfers via payment networks (e.g., SWIFT, ACH, real-time payment systems). Most transactions are completed in near-time or real-time.

Figure 1: Payment process of TPAP with single or multiple banks

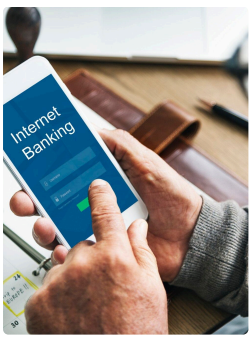


In the use case illustrated in Figure 2, the payment process involves several payment methods (bank, card, mobile money and TPAP wallet) that allow users to select one to complete the payment. The TPAP integrates with various African banks (e.g., ABSA, Equity Bank, GTBank, Zenith), mobile money (M-Pesa, MTN MoMo), cards, etc. In this case, there are some security concerns like encryption, PCI-DSS compliance, and tokenization for secure transactions. TPAP uses strong API to connect fragmented banking systems and real-time processing for mobile money and instant bank transfers. Such a robust payment system requires adherence to local regulations from participating countries and regulatory institutions.

Figure 2. Payment process flow: TPAP with multiple payments

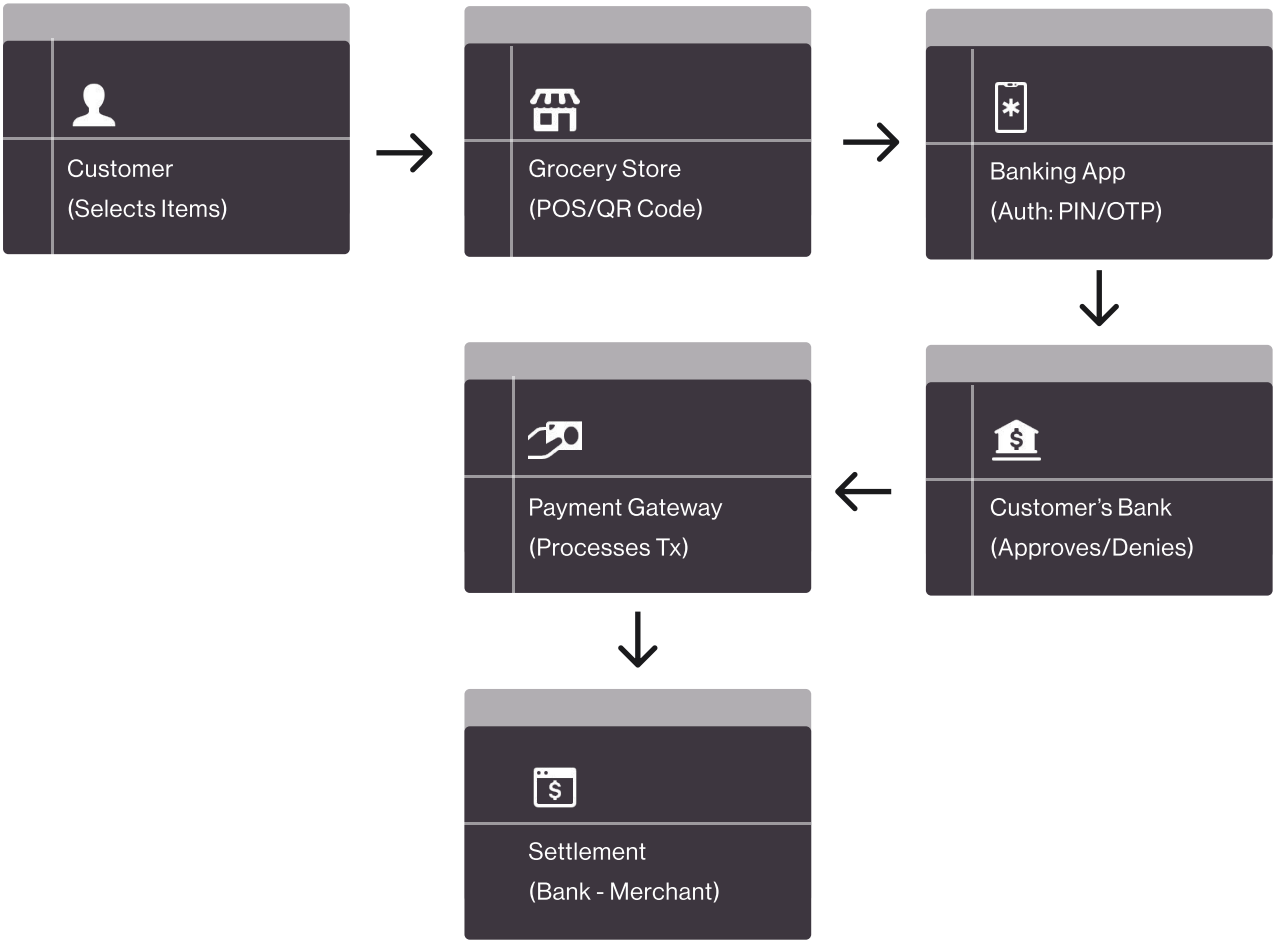


Banking Apps

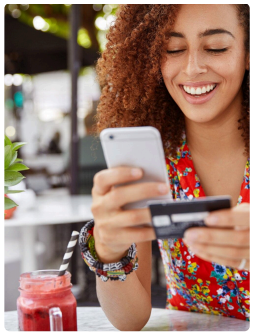


Banking apps are digital platforms developed and maintained by traditional financial institutions to provide customers with banking services such as account management, fund transfers, bill payments, and loan applications. Examples include Wells Fargo, Chase, and Barclays banking apps. The payment process begins when the customer initiates a transaction by scanning a QR code, entering the merchant's details at checkout, or selecting "Pay with Bank App" for online purchases. The banking app then opens and auto-fills the payment details, including the amount and merchant ID. Next, the customer undergoes authentication through a security check, which may involve entering a PIN, using biometric verification (fingerprint or face ID), or receiving a one-time password (OTP) via SMS or an app. Once authenticated, the bank processes the transaction in real-time by verifying the customer's balance and assessing fraud risks based on factors such as location and transaction patterns. If approved, the funds are reserved but not yet transferred. Finally, the merchant's point-of-sale system or digital platform receives an instant payment notification through a USSD push (for feature phones) or an API callback (for digital systems). The customer then sees a "Payment Successful" message on the app and receives an SMS receipt as confirmation.

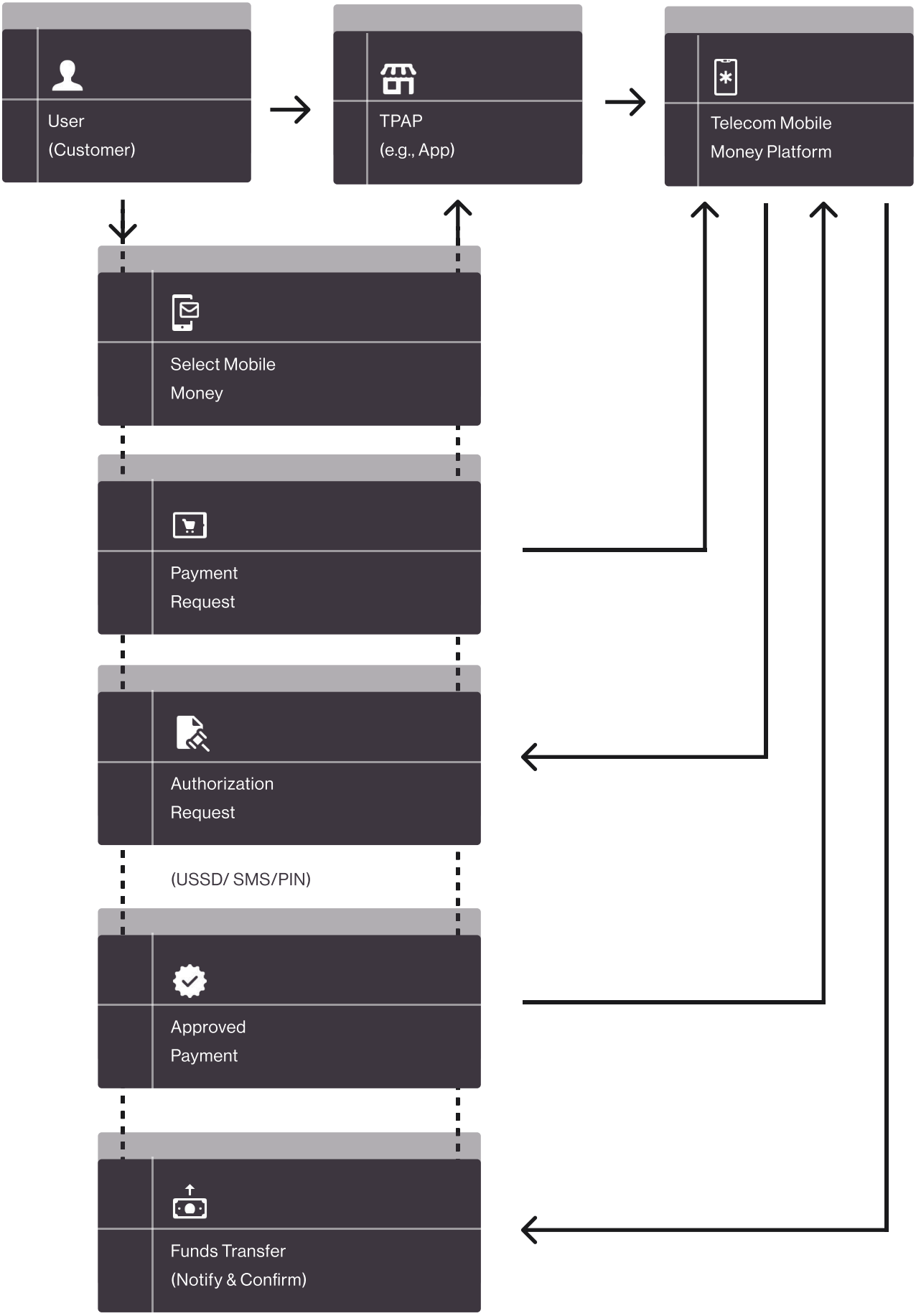
Figure 3. Payment Process via Banking App



FinTech TPAP Payment with Telecom Mobile Money



The payment process involves multiple steps that ensure secure and seamless transactions. The payment process using Telecom Mobile Money through a Third-Party Application Provider (TPAP) begins when the customer selects a TPAP service, such as a merchant platform or mobile app, and chooses Telecom Mobile Money as the payment method. The TPAP then sends a payment request to the mobile money system. Next, the customer is prompted to authenticate the transaction using a USSD menu, a Mobile Money App (via PIN or biometric verification), or an OTP sent via SMS. Once authenticated, the telecom mobile money provider verifies the transaction by checking for sufficient balance in the customer's wallet and assessing fraud risks. If approved, the provider debits the amount and reserves the funds. Finally, the reserved funds are transferred to the merchant's wallet, and both the customer and merchant receive instant payment confirmation through an SMS notification and a TPAP system update indicating a successful transaction.


User
(Customer)
TPAP
(e.g., App)
Telecom Mobile
Money Platform
Select Mobile
Money
Payment
Request
Authorization
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Approved
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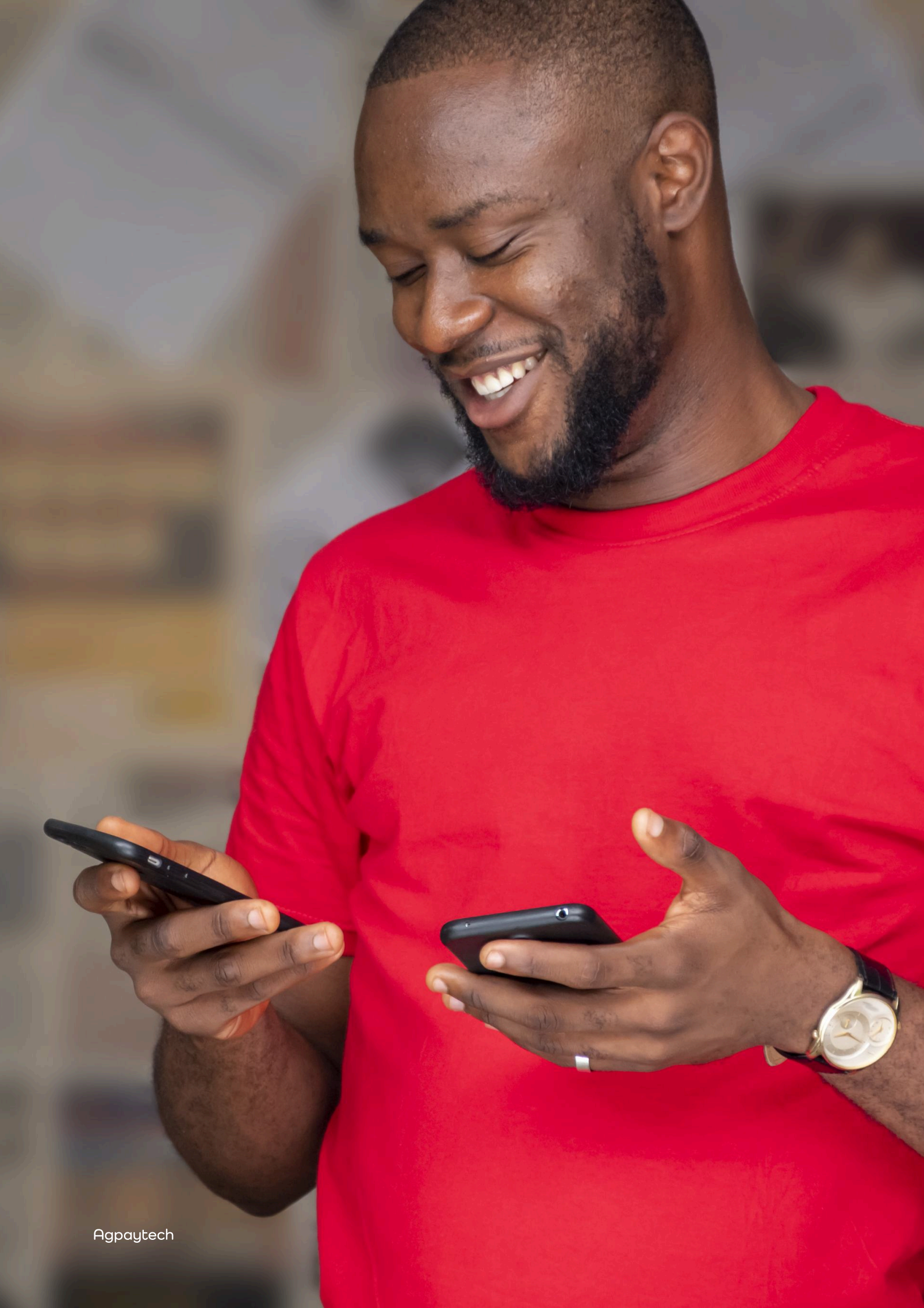
Funds Transfer
(Notify & Confirm)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Enable Cross-border payment with TPAPs, Telecom Mobile Money, and Banking Apps

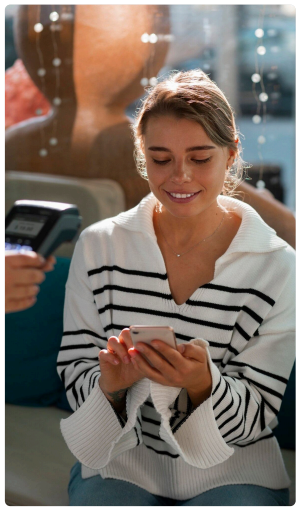
The integration of Third-Party Application Providers (TPAPs), Telecom Mobile Money, and Banking Apps has the potential to revolutionize cross-border payments in Africa by making them faster, cheaper, and more accessible.

Leveraging Mobile Money Interoperability

- **Domestic Mobile Money Networks as Cross-Border Bridges:**
  Many African telecom operators (e.g., Safaricom's M-Pesa, MTN MoMo, Airtel Money) already have vast domestic user bases. By establishing interoperable agreements between telecoms across borders, users could send money from one mobile wallet to another without needing a bank. Example: M-Pesa's partnership with Vodacom Tanzania allows Kenyans and Tanzanians to send money directly between their mobile wallets at lower fees than traditional remittance services.

- **Pan-African Mobile Money Hubs:**
  Fintechs like MFS Africa and Flutterwave act as aggregators, connecting different mobile money systems across Africa. A merchant in Nigeria can receive payments from a customer in Ghana via mobile money, converted automatically into local currency.

TPAPs as Cross-Border Payment Facilitators



- **Embedded Cross-Border Payments in Apps:**
  E-commerce platforms (Jumia, Takealot) and ride-hailing apps (Bolt, Uber) can integrate multi-currency mobile money and bank payment options. For instance, a Kenyan buyer purchasing goods from a South African vendor on Jumia could pay via M-Pesa, while the seller receives Rand via a connected banking app.

- **Digital Remittance Solutions:**
  Fintechs like Wave (Senegal, Côte d'Ivoire) and Chipper Cash use mobile money and banking APIs to enable instant, low-cost P2P transfers across Africa. These platforms bypass traditional remittance corridors (e.g., Western Union), reducing fees from ~10% to as low as 1-3%.

Banking Apps & Regional Payment Systems

- **Leveraging African Regional Payment Infrastructures:**
  The Pan-African Payment and Settlement System (PAPSS), developed by Afreximbank, allows instant cross-border transactions in local currencies. Banks and FinTech can integrate PAPSS to reduce reliance on USD/Euro conversions, cutting costs.

- **Virtual Accounts for Diaspora Payments:**
  Nigerian FinTechs like LemFi and Grey Finance allow diaspora Africans to hold and send money in local currencies via virtual accounts linked to mobile money. This avoids high forex fees charged by traditional banks.

Regulatory Collaboration for Seamless Transactions

- **Harmonizing KYC & AML Policies:**
  A major hurdle in cross-border payments is differing Know Your Customer (KYC) rules. Regional blocs (ECOWAS, SADC, EAC) could adopt shared digital identity frameworks, allowing mobile money users to transact across borders with minimal friction.

- **Licensing Fintechs for Cross-Border Operations:**
  Nigeria's Payment Service Bank (PSB) license allows non-banks (including telcos) to facilitate cross-border remittances. Similar models in other African countries could expand affordable remittance options.

Blockchain & CBDCs for Cost-Efficient Settlements

- **Tokenized Mobile Money for Instant Transfers:**
  Projects like Settlement Coin (by Flutterwave) explore blockchain-based settlements between mobile money providers, reducing delays.

- **Central Bank Digital Currencies (CBDCs):**
  Nigeria's eNaira and Ghana's e-Cedi could enable direct cross-border transactions without intermediary banks. If linked to mobile money wallets, users could send money internationally at near-zero cost. Initiatives like PAPSS, mobile money interoperability, and fintech aggregators are already paving the way. With stronger regulatory alignment and tech innovation, Africa could leapfrog traditional banking systems in cross-border payments—just as it did with mobile money adoption.

The Nexus Impact on Africa's Retail Payment System

The integration of Third-Party Application Providers (TPAPs), Telecom Mobile Money, and Banking Apps has significantly transformed Africa's retail payment landscape.

- **Financial Inclusion:**

  One of the most profound effects of this nexus is the dramatic improvement in financial inclusion, particularly in regions with limited access to traditional banking. Mobile money services, such as M-Pesa in Kenya and MTN MoMo in Ghana, have become essential tools for the unbanked, allowing users to store, send, and receive money using just a mobile phone. These services have effectively replaced the need for physical bank branches in rural and underserved areas. Additionally, TPAPs have expanded the reach of digital payments beyond simple peer-to-peer transfers. By integrating mobile money into e-commerce platforms, ride-hailing apps, and utility bill payments, TPAPs ensure that even small merchants and informal traders can participate in the digital economy. For example, a farmer in Uganda can now sell produce via an agri-tech app and receive instant mobile money payments, bypassing traditional banking hurdles.

- **Faster, Cheaper Transactions:**

  The collaboration between telecom mobile money, banking apps, and TPAPs has reduced reliance on cash, making transactions quicker and more secure. Unlike traditional banking, which often involves lengthy processing times and high fees, mobile money transfers are near-instant and cost-effective. For instance, sending money via mobile wallets (e.g., Airtel Money or Orange Money) is significantly cheaper than using bank transfers or informal cash couriers. This affordability has encouraged widespread adoption, particularly among low-income users who previously relied on risky cash-based transactions. Moreover, the rise of real-time payment systems (such as Nigeria's NIBSS Instant Payments and Kenya's PesaLink) has further accelerated digital transactions, ensuring that businesses and consumers can move money seamlessly across different platforms.

- **Business Growth:**

  The convergence of these payment systems has unlocked new opportunities for small and medium-sized enterprises (SMEs) across Africa. By leveraging TPAP integrations (such as Flutterwave with Shopify or Paystack with WooCommerce), even small businesses can accept digital payments without heavy upfront costs. Cross-border trade has also benefited, with fintech solutions like Wave in Francophone Africa and MFS Africa facilitating instant remittances and merchant payments across different countries. This has been particularly transformative for informal cross-border traders, who previously faced high forex costs and delays. Additionally, telecom companies are increasingly offering merchant payment solutions, such as Safaricom's Lipa Na M-Pesa, which allows businesses to receive payments directly into their mobile wallets. This has reduced the need for cash handling and improved financial tracking for SMEs.

- **Regulatory Evolution:**

  Governments and central banks across Africa are playing a crucial role in shaping this ecosystem by promoting interoperability and fintech-friendly policies. For example:

  - Nigeria's National Instant Payment System (NIP) ensures seamless transfers between banks and mobile money operators.
  - Ghana's GhIPSS has mandated interoperability, allowing users to send money across different telecom networks and banks.
  - Kenya's Central Bank (CBK) has introduced regulations to standardize mobile money transactions and protect consumers.

  Furthermore, new licensing frameworks such as Nigeria's Payment Service Bank (PSB) regulations have enabled non-bank entities (including telecom firms) to offer basic banking services, fostering competition and innovation.

Conclusion

The synergy between TPAPs, Telecom Mobile Money, and Banking Apps is reshaping Africa's retail payments, driving financial inclusion, and enabling a cashless economy. While challenges like interoperability persist, innovations in FinTech and supportive regulations will further strengthen this ecosystem. TPAPs and banking apps each have unique strengths and weaknesses, making them complementary rather than exclusive financial service providers. While TPAPs bring innovation and convenience, banking apps provide security and comprehensive financial services. The nexus between the two will continue to evolve, shaping the future of digital finance through collaboration and technological advancements. TPAPs are critical to Africa's financial inclusion goals, particularly in rural communities. By leveraging mobile money, offline solutions, and regulatory partnerships, they reduce cash reliance and empower SMEs. Future success depends on infrastructure development, interoperability, and inclusive policies.

About Agpaytech

Agpaytech Ltd. is a company pioneering in the Fintech space with a focused approach to building robust technologies for e-commerce Card Processing Solutions for Payment Service Providers (PSPs). Additionally, we provide Compliance and Regulatory Umbrella, Remittance-as-a-Service (RaaS), Banking-as-a-Service (BaaS), Foreign Exchange, Cross Border Payments, and digital currency technology.

We also provide practical white paper research support to central banks, government and private institutions, economic organizations, and NGOs in Africa. Our services expand from research projects, state-of-industry reports, project assessment, data collection, and consulting services in the fintech space.

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