



# The State of Cash Dependency and Digital Financial Inclusion in Africa

June 2026



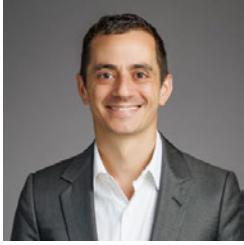
# The State of Cash Dependency and Digital Financial Inclusion in Africa

June 2026



Mo Ibrahim Foundation

Yale *International Leadership Center*



Tarek Mouganie is a Ghanaian entrepreneur and Founder and Group CEO of Affinity Africa, a digital bank that provides affordable and accessible services to micro and small and medium sized businesses. Since inception, Affinity's contribution has been profound, with nearly 90% of their customers previously unbanked, over 60% of whom are women operating in the informal sector. Tarek was previously a Director at Man Group where he managed a portfolio of investments within the \$200 billion global investment fund. He started his career as an academic at the University of Cambridge where he obtained his PhD in Physics.

# A letter from Affinity Africa

Africa is not short of ambition, talent, or ideas. What it has historically been short of is coordinated infrastructure — financial, institutional, and political — to convert those assets into economic mobility, productive enterprise, and shared prosperity. The gap between what the continent is and what it could be is not a mystery. It is a set of specific, structural problems that have resisted serious attention for too long. They can be fixed with the right alignment and political commitment.

That conviction is what brought Affinity Africa, the International Leadership Center at Yale, and the Mo Ibrahim Foundation together, not just for this report, but for a long-term collaboration to examine the most pressing issues holding the continent back. Three institutions approaching these challenges from different vantage points: one building financial infrastructure on the ground; one focused on cultivating the leadership and institutional capacity that makes lasting reform possible; one holding a long mirror to Africa's development trajectory with the rigour and independence that honest accountability requires. Together, we intend to produce a body of work that is genuinely useful to the policymakers, entrepreneurs, and citizens who are doing the work of building a better Africa.

This report is the first output of that partnership. We chose to begin with cash dependency not because it is the only issue worth examining, but because it is one of the most consequential. The gap between the financial infrastructure Africa has built and the economic behaviour it was supposed to change is vast, and the cost of that gap compounds every year. It seemed the right place to start.

Let me be direct about what cash dependency means, because it is easy to discuss it in the abstract while missing how severe the real consequences are.

Africa has invested decades and billions of dollars building financial infrastructure that reaches further than almost anywhere else in the world. And yet for the street vendor, the migrant worker sending money home, the informal trader running a business on thin margins, cash remains the rational choice. Not necessarily because they lack access to something better, but because something better has not yet been built for the way they actually live and work. The gap between the current infrastructure and people's real needs is what this report is about.

The consequences are not abstract. When transactions leave no digital record, businesses cannot access credit. When remittance corridors still extract a significant share of every transfer, households pay a tax they cannot afford. When the majority of economic activity sits outside the formal system, governments cannot see it, cannot tax it, and cannot fund the public services the people producing it most need. These are not inefficiencies at the margins. They are structural constraints on what the continent can become.

The argument I keep making, and that this report makes in considerably more depth, is that the problem is not the technology. The problem is incentives. Digital payments do not yet outperform cash where it actually matters: at the level of individual decisions made by informal merchants and small business owners working within the real constraints they face every day. Until digital is cheaper, more reliable, more accessible and more useful than cash at that level, the reality will not change.

At Affinity, we are trying to solve this problem, from within the system. We built a digital banking platform that offers customers savings, credit, and payments products, affordably and through a proprietary customer journey that is able to surpass the documentation barriers in a reliable and resilient way. Over 65% of our customers have access to formal financial products for the first time in their lives, thanks to Affinity.

We are not building a simplified product that solves a specific pain point, we are building — from the ground up — a full banking experience designed for those who need it the most. We believe that bringing this segment inside the formal system is one of the highest-multiplier investments the continent can make. We believe that from inside, we can foster real change.

That ground-level experience is what we bring to this collaboration. The analysis in this report is sharper because it is tested against the reality of what it actually takes to move people from cash to digital. Not in theory, but in the market.

But we are one institution, solving one piece of a huge puzzle. And that is precisely the point.

If we are honest with ourselves, the structural reality for most Africans navigating the financial system today is not meaningfully different from what it was twenty years ago. That is no longer acceptable. The continent's demographic trajectory means the window to get this right is narrowing, not widening, and the cost of incrementalism is rising every year.

None of the actors in this space — policymakers, private sector, investors, donors, regulators — have been standing still. Everyone has been contributing what they can, where they can, and none of that effort has been wasted. But individual effort is not the same as collective momentum. We need to come together with a shared sense interest, a willingness to move faster than our respective institutions are accustomed to, and the honesty to prioritise what actually works over what is merely comfortable. That moment is long overdue.

To the people reading this report: the gap between where the continent is and where it could be is closable. The question is whether those of us with the resources and the platform to drive that change will choose to do so with the urgency it deserves.

I believe we will.

Dr Tarek Mouganie  
Founder & Group CEO, Affinity Africa  
Accra, Ghana | 2026



Dr Mo Ibrahim is the founder and Chair of the Mo Ibrahim Foundation, which he established in 2006 to support good governance and exceptional leadership on the African continent. Born in Sudan, Dr Ibrahim has had a distinguished business career. In 1989, he founded Mobile Systems International (MSI), a world leading cellular consulting and software provider and in 1998, Celtel International, one of Africa's leading mobile telephone companies which was acquired by Zain in 2005. Dr Ibrahim is also the Co-founder and Co-chair of the Africa Europe Foundation, which was launched in 2020 to reset and bolster Africa-Europe relations.

# A letter from the Mo Ibrahim Foundation

This report comes at an important moment for our continent.

Africa is entering a period where many long-standing assumptions about development financing are being fundamentally challenged. Development budgets are shrinking. Global priorities are shifting. The current multilateral system itself is under strain, and progressively more challenged.

And yet, none of this is entirely new or unexpected.

For years, it has become clear that Africa's future cannot continue to depend primarily on external generosity, nor can our development trajectory be determined by decisions taken elsewhere. The recent contraction of international aid simply accelerates a reality that was already emerging: Africa must, and can indeed, increasingly finance its own development, build greater economic autonomy, and strengthen the systems capable of converting the continent's immense potential into broad-based prosperity.

This is ultimately a question of political commitment, and African ownership.

That conversation was central to the discussions held during the 2025 Ibrahim Governance Weekend in Marrakech, where leaders from across government, business, academia, and civil society examined what it would truly take to finance "The Africa We Want." The conclusion was clear: Africa possesses substantial domestic resources, entrepreneurial energy, natural wealth, and financial potential. The challenge is less the availability of capital, than whether our systems are capable of mobilising, retaining, allocating, and scaling that capital productively.

This is where the issue of cash dependency becomes critically important.

At first glance, cash dependency may appear to be merely a technical or payments-related issue. In reality, it sits at the centre of Africa's broader development and financing challenge.

A continent seeking greater economic autonomy cannot rely on financial systems that remain fragmented, inefficient, and largely informal. The development of our continent requires building domestic, regional, continental systems capable of mobilising African savings, supporting African enterprise, facilitating intra-African commerce, and retaining greater value within African economies themselves. And this Cash dependency remains one of the structural barriers preventing that transition from happening at the scale required.

The result is a structural constraint on Africa's ability to build its own future on its own terms. This is why governance must now move to the centre of the conversation.

The transition away from cash dependency will not happen through innovation alone. Africa has no shortage of innovation, talent, or entrepreneurial capacity. What remains uneven and constraining is the institutional environment required to allow these systems to scale effectively across economies and borders.

Public sector leadership is therefore decisive.

Governments and regulators have a central role to play in building the conditions for a more integrated and productive financial system: strengthening digital public infrastructure, modernising regulatory frameworks, enabling interoperability across payment systems, digitising public services and transfers, improving domestic resource mobilisation, and fostering the trust necessary for citizens and businesses to participate fully in formal financial systems.

This is about state capacity, economic resilience, and long-term sovereignty.

The countries that will be best positioned in the decades ahead will not necessarily be those with the greatest natural resources, but those capable of building institutions that can mobilise capital effectively, support enterprise at scale, and integrate their economies into larger regional and global systems.

The urgency is real. By 2050, one in four people in the world will be African. Financing the infrastructure, jobs, healthcare, education, energy systems, and economic opportunities required at that scale will demand far stronger domestic financial systems than many countries currently possess today.

Incremental reform will not be enough. The public sector must move faster in building the regulatory clarity, institutional coordination, and governance frameworks capable of supporting Africa's next phase of economic transformation. Because ultimately, ownership cannot exist without accountability, and economic autonomy cannot exist without strong institutions.

Sir Mo Ibrahim  
Founder & Chair, Mo Ibrahim Foundation  
London, United Kingdom | 2026



Emma Sky OBE is the founding director of Yale's International Leadership Center. She is a lecturer at the Yale Jackson School of Global Affairs where she teaches courses on great power competition and cooperation, grand strategy and Middle East politics. Sky is a trustee of the HALO Trust, a humanitarian NGO that clears landmines. She is the author of the highly acclaimed *The Unravelling: High Hopes and Missed Opportunities in Iraq* (2015) and *In a Time of Monsters: Travelling in a Middle East in Revolt* (2019).

# A letter from the Yale International Leadership Center

By mid-century, Africa will represent nearly a quarter of the global working-age population. That single fact ought to reorient how the world thinks about finance, infrastructure, and opportunity. Africa is not a problem to be managed. It is the demographic, economic, and entrepreneurial frontier of the twenty-first century — and how the continent prospers will shape how the rest of the world prospers, too.

Africa's got talent. Africa's got innovators. Africa's got the world's most advanced mobile money infrastructure, carrying three-quarters of global transaction volume across more than a billion accounts. It has built agent networks that reach places banks never went, and shown that financial services can scale without traditional branches. The pathway to possible runs through the daily decisions of merchants, households, and small businesses across 54 markets.

And yet, as this report sets out with admirable clarity, cash still wins. Not because digital alternatives are absent, but because they do not yet outperform cash where it matters most: in the hands of a market trader, a migrant worker sending \$200 home, an informal business operating on thin margins. The \$330 billion SME financing gap, the \$8 billion annual remittance tax, the 85% of workers outside the formal economy — these are not inevitable features of the continent. They are the cost of an unfinished transition. Closing that gap is among the highest leverage moves available to anyone serious about Africa's flourishing.

Underneath every challenge of this scale is a crisis of leadership — a shortage not of leaders, but of leaders equipped to navigate complexity, bridge divides, and translate ideas into change. That is why the Yale International Leadership Center exists, and it is the spirit in which this report has been produced. The ILC connects global leaders to Yale, Yale to global challenges, and leaders to each other. This report is the first product of a new research collaboration in that tradition. It pairs the analytical depth of Yale with the lived expertise of practitioners working across African financial systems — the regulators writing the rules, the operators building the rails, the innovators dreaming what is possible, and the entrepreneurs choosing every day whether to accept a note or a digital payment. The recommendations that follow are an action agenda, with specific responsibilities assigned to specific actors, grounded in what has actually worked in India, Brazil, and elsewhere, and in what is possible in Africa.

Nothing about Africa's future is preordained. The components of a less cash-dependent continent already exist across different markets; the task is to align incentives, regulations, and investments so they work together. That is a leadership challenge as much as a technical one.

Emma Sky OBE  
Director, Yale International Leadership Center  
New Haven, Connecticut, United States of America | 2026

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# About the Author

Michael Thompson is a joint MPP/MBA candidate at Yale, focused on climate innovation, emerging technologies, and impact investing. He brings nearly a decade of experience evaluating and deploying capital into early-stage ventures and funds across multiple geographies, spanning sectors including agriculture, renewable energy, financial services, and frontier technologies. His work has covered both direct investments and fund strategies, with a focus on identifying scalable, commercially viable solutions in undercapitalized markets.

Prior to Yale, Michael worked closely with founders and investors to assess opportunities, structure investments, and support portfolio growth. Trained as a chemical engineer, he brings a systems-level approach to problem solving and is particularly interested in translating technical innovation into investable, high-impact businesses.

# Preface

Africa's digital payment infrastructure is among the most innovative in the world. The continent accounts for 74% of global mobile money transaction volume, has built agent networks that reach places banks never went, and has demonstrated that financial services can be delivered at scale without traditional branch infrastructure. And yet, for the overwhelming majority of people transacting in African economies, cash remains the default. It is how they buy food, pay rent, settle debts, and run their businesses. The gap between the infrastructure that exists and the behavior it was supposed to change is the central problem this report addresses.

The argument this report makes is quite straightforward. Cash persists not because digital alternatives are absent, but because they do not yet outperform cash where it matters most, at the level of daily decisions by merchants, households, and small businesses. Technology has solved the access problem. It has not solved the incentive problem. Until digital payments are cheaper, more reliable, and more useful than cash for the people actually making those decisions, the system will stay where it is regardless of how much infrastructure gets built on top of it.

This report is organized around three questions. Why has the transition stalled despite two decades of mobile money growth? What would it take to break the pattern? And what does each actor in the system, regulator, government, operator, bank, innovator, investor, and merchant, need to do differently to make it happen? Chapter 1 answers the first question, tracing the structural, economic, and political forces that sustain cash dependency. Chapter 2 answers the second and third, setting out a three-part action agenda and assigning specific responsibilities to each actor. Chapter 3 examines how India, Brazil, and Ethiopia have navigated versions of this transition, and what their experience means for African markets at different stages of development.

# Executive Summary

Africa has built one of the world's most advanced mobile money ecosystems, with dense agent networks and digital rails that reach far beyond bank branches. Yet cash remains the dominant way people buy food, pay rent, settle debts, and run their businesses. The central puzzle this report addresses is why a continent with such advanced digital rails is still so dependent on physical money.

The answer is not that digital alternatives are absent, it is that they do not yet outperform cash where it matters most: at the level of daily decisions by merchants, households, and small businesses. For an informal trader processing low-value transactions, accepting cash costs nothing, settles instantly, and requires no technology or training. For a migrant worker sending money home, cash-based channels avoid high digital remittance fees when digital value must be cashed out on arrival. For an informal business operating on thin margins, staying off the formal system avoids administrative burdens and tax exposure. These are rational responses to the actual incentives people face.

At the same time, the dominance of cash imposes heavy costs at the system level. When transactions do not generate digital records, lenders cannot assess creditworthiness, so capital does not reach productive small and medium enterprises. Governments cannot see much of the economy, so tax bases stay narrow and public services remain underfunded. High remittance costs act as a de facto tax on some of the poorest households. The informal majority lacks access to formal savings products that preserve value in high-inflation environments. The result is an economy that consistently underperforms its potential.

Cash persists for three mutually reinforcing reasons. First, at the individual level, cash remains cheaper, more reliable, and more useful than digital alternatives for most everyday transactions. Second, at the structural level, regulatory fragmentation, merchant economics, and agent reliability problems lock every actor into cash-dependent behavior. Third, at the political economy level, informal actors, mobile money operators, and financial incumbents all have short-term interests that are better served by the current system than by a fully digital one. No single factor explains cash dependency; all three must be addressed together if digital is to become the default.

The analysis distinguishes clearly between what traditional banking solved and what it did not, and what mobile money solved and what it did not. Formal banks provided a safe store of value, large-ticket credit for corporations and governments, and the infrastructure for high-value trade and public finance. They did not solve inclusion for the majority operating in the informal sector, without steady employment, formal ID, or proximity to branches. Mobile money solved reach. By leveraging airtime distribution networks instead of branches, mobile network operators brought basic payment services to hundreds of millions of people banks never served. Africa now carries roughly 74% of global mobile money transaction volume, processing over \$1 trillion across more than a billion accounts.

But that reach has not translated into financial depth. Over 90% of mobile money value is withdrawn as cash at the point of receipt rather than circulating digitally, a pattern described as the cash-in/cash-out trap. Merchant acceptance of digital payments remains limited, agent network liquidity is uneven, and regulatory caps on wallet balances constrain how useful digital accounts can be for businesses. In many markets, mobile money providers are licensed only as payment service providers, unable to intermediate savings or extend credit at scale. The platforms with the widest reach therefore have the least scope to build financial depth, while smaller fintechs building credit, savings, and insurance products struggle to reach scale without access to those same distribution networks.

Breaking the cash equilibrium requires three coordinated actions. The first is to make digital payments cheaper than cash for merchants. As long as accepting digital costs more than accepting cash, merchants will prefer notes and coins. The report calls for capping merchant discount rates for low-value transactions, mandating zero-fee acceptance below defined thresholds, and using public procurement and licensing to require digital acceptance for government-facing payments. The second action is to mandate interoperability with real-time, low-cost settlement. Voluntary interoperability has failed

wherever it has been attempted because incumbents have rational incentives to protect platform lock-in. Regulators must require all licensed providers to connect to national real-time payment infrastructure, with clear deadlines and penalties for non-compliance. The third action is to create compelling reasons for value to stay digital, by building credit, savings, insurance, and investment products on top of payment rails, so that keeping money in the system is economically rational.

These three actions require coordinated movement from multiple stakeholders. Regulators must mandate interoperability, cap fees, reform licensing, and unlock data for credit. Governments must digitize their own payments, build and integrate digital identity systems, and address high mobile data costs through competition policy. Mobile money operators must invest in agent liquidity, open their distribution to innovators, and shift from transaction fee revenue to financial services revenue. Banks must partner with digital platforms rather than resist them. Innovators must focus on credit based on transaction histories, inflation-resistant savings, insurance for informal workers, merchant tools that undercut cash, and agent float financing. Development finance institutions must fund the enabling infrastructure and transition costs that markets alone will not absorb.

The conclusion is that a less cash-dependent Africa is not a distant ambition but a practical outcome of deliberate choices. The components of such a system already exist across different markets. The task now is to align incentives, regulations, and investments so that they work together.

# Chapter 1: The System-Level Case for Digital Finance

For most people transacting in African economies, cash is still the most practical option available. A street vendor processing \$5 transactions pays zero fees, settles instantly, and needs no technology. A household sending \$200 home avoids the 8.7% average remittance fee that digital corridors still charge in many markets. An informal business operating on thin margins avoids the administrative burden that comes with formal financial systems. These are logical responses to the actual costs and constraints people face every day.

The problem is that what works at the individual level imposes significant costs on the broader economy. When most transactions settle in cash, there are no transaction histories. Lenders cannot assess creditworthiness, so capital does not reach productive businesses. Governments cannot verify income, so tax bases stay narrow and public services remain underfunded. Households cannot access formal savings products that preserve value in high-inflation environments. Remittance fees stay high because digital transfers must convert back to cash at the endpoint. The result is a system that consistently underperforms its potential.

## CORE THESIS

The core challenge is not technology. It is aligning individual incentives with system-level benefits. At the individual level, cash wins on cost, reliability, and utility. At the system-wide level, it undermines credit markets, fiscal capacity, and economic productivity. Digital systems will only displace cash when they outperform it on all three individual dimensions simultaneously, because that is where the decision actually gets made.

## WHY CASH STILL WINS TODAY

Six structural factors keep cash dominant across African markets:

- Merchant cost structure: accepting digital payments costs 1 to 3% per transaction; accepting cash costs nothing.
- Limited merchant acceptance: most informal merchants do not accept digital payments, so consumers must carry cash to participate in daily commerce.
- Identity and KYC barriers: large segments of the population cannot open digital accounts because they lack formal ID documentation.
- Agent reliability: when agents run out of float, users cannot cash out, making digital balances inaccessible at the moment they are most needed.
- Trust and fraud: widespread mobile money fraud, combined with historical experience of bank failures and account restrictions, makes cash feel safer.
- Political economy: informal actors, mobile money operators, and financial incumbents all have short-term interests that are better served by the current system than by a fully digital one.

Africa has built world-leading mobile money infrastructure, processing over \$1.1 trillion across 1.1 billion accounts in 2024.<sup>1</sup> People use mobile money to send money home or pay a utility bill, then immediately withdraw the cash and carry on as before. Daily commerce still runs on physical cash.

#### KEY FINDING



90%  
Over

of mobile money value is withdrawn as cash rather than circulating digitally. Africa has solved an accessibility problem. It has not yet solved the utility problem that would make digital the default for everyday commerce.

<sup>1</sup> GSMA (2025), State of the Industry Report on Mobile Money 2025. GSMA Intelligence, London.

# 1.1 Why Cashless Matters: The Economic Prize

Moving from cash to digital finance requires significant coordination across governments, regulators, and private actors. The case for doing it rests on three structural benefits that compound over time.

## 1.1.1 Unlocking the \$330 Billion SME Financing Gap

Small and medium enterprises (SMEs) account for roughly 80% of jobs across Africa and over 90% of private sector businesses in Sub-Saharan Africa,<sup>2</sup> yet they remain systematically excluded from formal credit. The IFC estimates the continent's SME financing gap at \$330 billion annually, with around 5% of bank credit reaching SMEs.<sup>34</sup> The rest flows to large corporates, government securities, and real estate.

Lenders stay away because cash-based businesses leave no verifiable record of revenue, cash flow, or repayment history. Every digital transaction creates a data point. Aggregated over time, those data points become a credit history, and businesses that transact digitally become bankable not because they are fundamentally different but because they are finally visible to the people who allocate capital.

After launching its Unified Payments Interface in 2016, digital transaction data enabled fintech lenders and traditional banks in India to extend credit to tens of millions of previously excluded borrowers using transaction histories rather than collateral.<sup>5</sup> Africa's \$330 billion financing gap is not a fixed constraint. It is an opportunity that digitization unlocks.

The cost of transacting digitally has fallen significantly, and in many corridors digital transfers are already cheaper than handling physical cash. What digital has not yet delivered is productive utility. The financing gap will persist as long as digital payments remain a cheaper way to move cash rather than a genuinely more productive way to run a business.

Figure 1: Where Bank Credit Goes in Africa



Source: Proparco / World Bank Enterprise Survey Data; IFC MSME Finance Gap Report 2017

Figure 1: SMEs receive only 5.4% of bank credit in Africa. The rest flows to large corporates, government, and real estate.

2 AUDA-NEPAD (2021), SME Development in Africa. Johannesburg: African Union Development Agency. Employment share figure corroborated by AfDB (2022), African Economic Outlook.

3 IFC (2017), MSME Finance Gap: Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets. Washington, D.C.: International Finance Corporation.

4 African Development Bank (2022), African Economic Outlook 2022. Abidjan: AfDB. Credit allocation data from Chapter 2.

5 NPCI (2023), UPI Product Statistics and Annual Report 2022-23. Mumbai: National Payments Corporation of India.

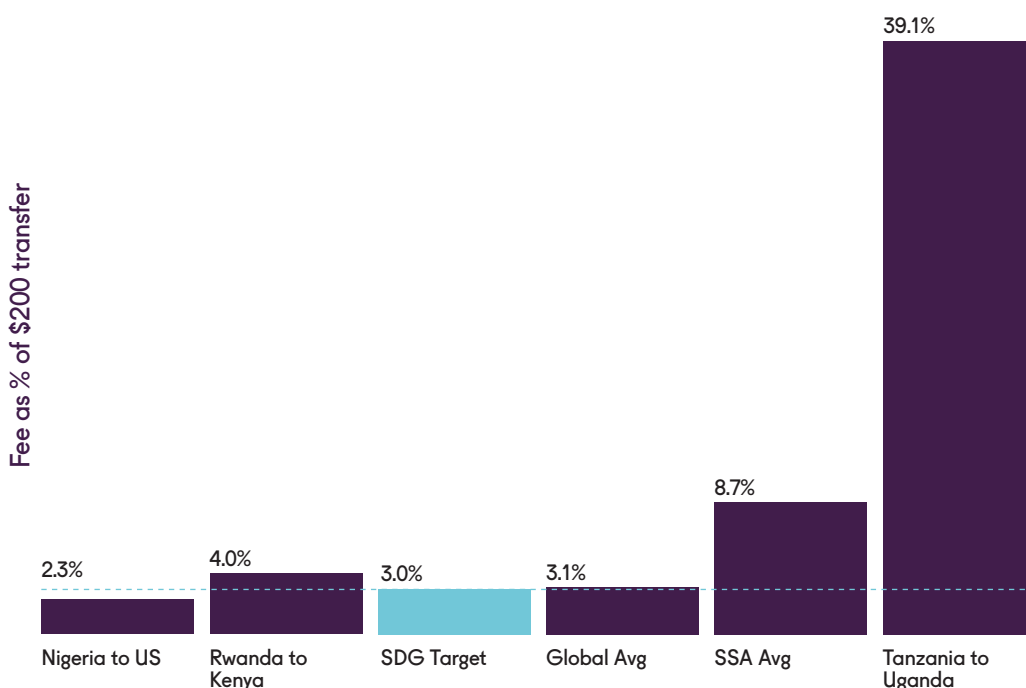
### 1.1.2 Reducing the \$8 Billion Annual Remittance Tax

Remittances are one of the most important financial flows into African households, with over \$104 billion flowing into the continent in 2024, roughly twice the level of overseas development assistance.<sup>6</sup> World Bank data puts the average fee for sending money to Sub-Saharan Africa at 8.7% per transfer, nearly three times the global average of 3.1% and well above the SDG target of 3%.<sup>7</sup> On \$95 billion in remittances received in 2023, those fees represent roughly \$8 billion that leaves households in transit.

For an individual household the numbers are stark. A migrant worker sending \$200 per month loses \$17.40 on every transfer, adding up to more than a full month's worth of remittances gone to transaction costs over the course of a year.

The Tanzania to Uganda corridor, two neighboring countries, cost a migrant 39.1% to send \$200 in 2023.<sup>8</sup> By contrast, a Nigerian migrant in the United States pays only 2.29% on the same transfer.<sup>9</sup> It is more expensive to send money across a land border than across an ocean, which reflects the absence of integrated payment infrastructure within the continent.

Figure 2: The Cost of Sending Money Across African Borders



Source: World Bank Remittance Prices Worldwide Database, Q4 2023

Figure 2: Remittance costs range from 2.3% on the Nigeria to US corridor to 39.1% on Tanzania to Uganda, far above the SDG target of 3%. Source: World Bank, Q4 2023.

The technology to bring these costs close to zero already exists. Average remittance costs on the Rwanda-Kenya corridor have halved since 2016.<sup>10</sup> Stablecoins pegged to major currencies now account for 43% of total cryptocurrency transaction volume in Sub-Saharan Africa, used primarily for cross-border payments and value storage.<sup>11</sup> The barrier is not technology. It is that digital value still has to convert back to physical cash at the point of receipt in most markets, collapsing the cost advantage.

6 World Bank (2024), Migration and Development Brief 40: Remittances Brave Global Headwinds. Washington, D.C.: World Bank Group.  
 7 World Bank (2023), Remittance Prices Worldwide Database, Q4 2023. Washington, D.C.: World Bank Group. Available at: remittanceprices.worldbank.org  
 8 World Bank (2023), Remittance Prices Worldwide Database, Q4 2023. Tanzania-Uganda corridor. Washington, D.C.: World Bank Group.  
 9 World Bank (2023), Remittance Prices Worldwide Database, Q4 2023. Nigeria-United States corridor. Washington, D.C.: World Bank Group.  
 10 World Bank (2023), Remittance Prices Worldwide Database, Q4 2023. Rwanda-Kenya corridor. Washington, D.C.: World Bank Group.  
 11 Chainalysis (2024), The 2024 Geography of Cryptocurrency Report. New York: Chainalysis Inc. Sub-Saharan Africa chapter. Stablecoin share reflects transaction data for July 2023 to June 2024.

### 1.1.3 Expanding Fiscal Capacity and Strengthening Governance

With roughly 85% of African workers employed in the informal sector,<sup>12</sup> the majority of transactions happen in cash, leave no record, and fall entirely outside what governments can see or tax. Digitization expands fiscal capacity by making economic activity visible. India's direct benefit transfer system reduced leakage in government programs from an estimated 40 to 50% down to single digits in many schemes.<sup>13</sup> Brazil's PIX system improved tax compliance by making previously invisible transactions traceable.<sup>14</sup>

The complication is that the people who would benefit most from better public services often have the strongest short-term incentives to remain outside the system. Digitization will only draw informal actors in if formalization offers something tangible in return: credit access, legal protections, and more reliable public goods. Governments that lead with compliance requirements rather than benefits will find the transition does not happen.

SME financing gap  
< 10% of bank credit reaches SMEs



12 ILO (2023), World Employment and Social Outlook: Trends 2023. Geneva: International Labour Organization. The 85% figure reflects the share of non-agricultural employment in informal arrangements across sub-Saharan Africa.

13 Government of India, Ministry of Finance (2023), Direct Benefit Transfer Annual Report 2022-23. New Delhi: DBT Mission.

14 Banco Central do Brasil (2023), PIX: Relatório de Gestão 2023 [PIX Annual Management Report 2023]. Brasília: BCB.

## 1.2 What Banking and Mobile Money Solved and Did Not

To understand why cash dependency persists despite significant financial innovation, it helps to be precise about what each wave of financial infrastructure actually solved, and what it left untouched.

### 1.2.1 What Traditional Banking Solved and Did Not

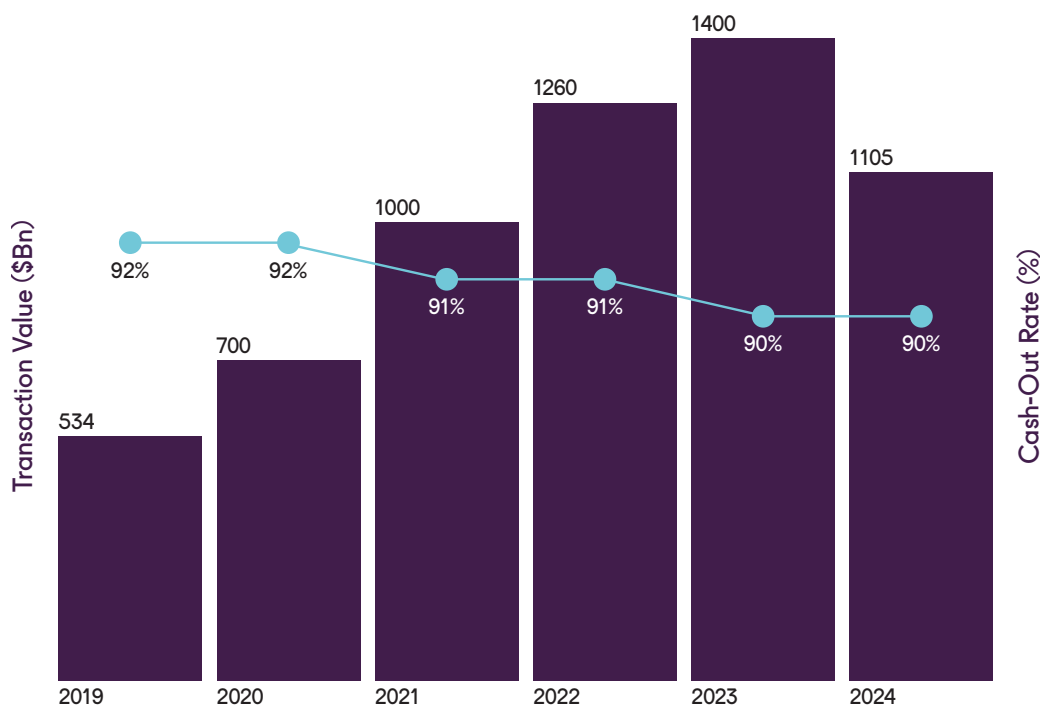
Formal banking solved several important problems. It provided a safe store of value for customers with verifiable income and documentation, enabled large-ticket credit for corporations and governments, facilitated high-value trade finance, and gave governments the transmission mechanisms needed to implement monetary policy. What banking did not solve was inclusion. Banks required payslips, verifiable addresses, employment documentation, minimum balances, and physical branch access. For the majority of Africans operating in the informal sector, without steady employment, verifiable income, or formal ID, these requirements were insurmountable. The populations banks could not serve were not marginal. They were the majority.

### 1.2.2 What Mobile Money Solved and Did Not

Mobile money addressed banking's fundamental failure: reach. By routing financial services through airtime distribution networks rather than branch infrastructure, mobile money operators reached the places and populations that banks never served. Africa now accounts for roughly 74% of global mobile money transaction volume, processing over \$1.1 trillion across 1.1 billion accounts in 2024.

Mobile money solved an access problem. The question now is whether that access has translated into deeper financial integration that drives economic transformation. Where banks have depth without reach, mobile money has reach without depth. The system-level failure is that these strengths remain poorly integrated, and neither alone is sufficient to break the cash equilibrium.

Figure 3: Mobile Money Grows, But Cash-Out Rate Stays High



Source: GSMA State of the Industry Report of Mobile Money 2020-2025. Cash-out rate approximate

Figure 3: Africa mobile money transaction value has grown to over \$1.1 trillion, while the cash-out rate has remained above 90% throughout. Source: GSMA 2020-2025.

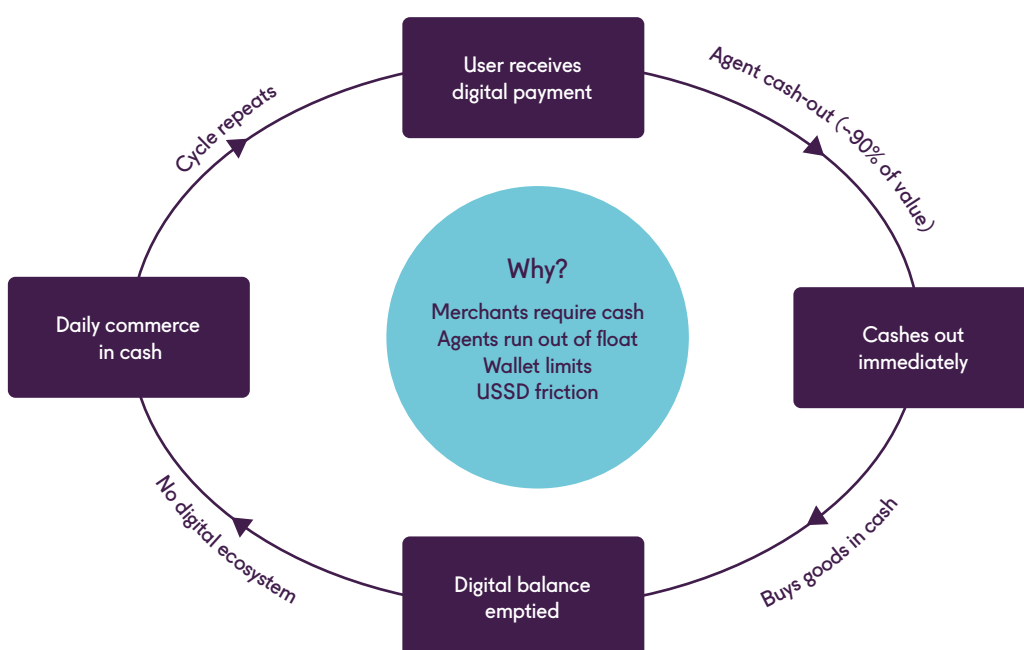
### 1.2.3 The Cash-In/Cash-Out Trap

The dominant pattern across mobile money markets is that users receive digital payments and then immediately convert them into cash. Over 90% of mobile money value is withdrawn at the point of receipt rather than kept in the system.<sup>15</sup> Even in Kenya, the continent's most advanced mobile money market, cash still dominates the majority of everyday transactions despite near-universal mobile money access.<sup>16</sup>

Merchant acceptance of digital payments remains low. Agent network reliability is inconsistent, creating justified anxiety about whether money will be accessible when needed. Regulatory caps on wallet balances and daily transaction limits constrain how useful a digital account can be for anyone running a business. The dominant interface for mobile money across much of the continent remains USSD, slow and friction-heavy compared to handing over a note.

**The cash-in/cash-out trap:** a system where digital infrastructure exists but value cannot remain digital because the surrounding ecosystem has not been built to support it.

Figure 4: The Cash-In / Cash-Out Trap



Source: GSMA State of the Industry Report of Mobile Money 2023; authors' analysis

Figure 4: The cash-in/cash-out trap. Over 90% of mobile money value is cashed out immediately due to limited merchant acceptance, agent liquidity gaps, and USSD friction. Source: GSMA 2023.

### 1.2.4 The Financial Depth Problem

Even beyond the cash-out dynamic, mobile money platforms have struggled to evolve from payment tools into full financial service providers. What remains largely unmet is the next layer of financial services: credit, savings, insurance, and investment products that allow users to do something productive with the money they hold digitally.

In many markets, mobile money providers are licensed as payment service providers rather than financial intermediaries, which means they can move money but cannot lend it, intermediate savings, or build the full suite of financial products that would make digital balances economically meaningful. The demand is nonetheless there. Smaller fintechs have stepped into the gap, some using mobile transaction data to extend credit and savings, others building standalone platforms. But without the distribution scale of the large mobile money platforms, these efforts reach only a small fraction of the people who need them.

<sup>15</sup> GSMA (2023), State of the Industry Report on Mobile Money 2023. GSMA Intelligence, London. The report notes that cash-out transactions account for the majority of mobile money value flows across Sub-Saharan African markets.

<sup>16</sup> Central Bank of Kenya, Kenya National Bureau of Statistics, and FSD Kenya (2021), 2021 FinAccess Household Survey. Nairobi: CBK.

## 1.3 The Structural Barriers That Sustain Cash Dependency

Despite two decades of mobile money growth, several structural conditions continue to make cash the default for most daily transactions. Each barrier reinforces the others, and addressing one without the others produces limited results.

### 1.3.1 Regulatory Fragmentation Limits Scale

Africa's regulatory landscape for digital finance is not a single system. It is 54 distinct systems, each with its own licensing requirements, KYC rules, consumer protection frameworks, and supervisory approaches. Building regional scale requires navigating each jurisdiction separately, raising costs and preventing the network density that digital payment systems need.

KYC requirements present a particularly acute barrier. In many markets national ID registration remains incomplete, birth registration is inconsistent, and address verification is unreliable. Large segments of the population cannot meet basic account opening requirements regardless of their willingness to use digital financial services. Women and rural populations bear this burden disproportionately.<sup>17</sup>

Within countries, domestic interoperability has improved significantly. The more persistent problem is cross-border. Across much of West and Central Africa, a mobile money user cannot easily send money across a border without reverting to cash. PAPSS, launched by Afreximbank, represents a meaningful step toward continental integration, but adoption remains early.<sup>18</sup>

### 1.3.2 Merchant Economics Continue to Favor Cash

For informal micro-businesses, the cost-benefit analysis rarely works in digital's favor. A market vendor processing 50 transactions per day averaging \$5 each can accept cash with zero marginal cost, or accept digital payments with transaction fees of 1 to 3%. Beyond fees, the cost of mobile data remains a meaningful barrier in many African markets, where data prices as a proportion of income are among the highest in the world.

Consumers hold cash because merchants require it. Merchants require cash because consumers carry it. Each side rationally waits for the other to move first. Absent deliberate intervention, the economics will continue to favor cash.

### 1.3.3 Agent Network Reliability and Trust Deficits

The most immediate reliability problem in mobile money is agent liquidity. When a user needs to cash out and the nearest agent has already exhausted their float, the transaction cannot happen. This plays out daily across agent networks, particularly in rural areas and during high demand periods like month-end paydays. In some markets, digital infrastructure has made cash more accessible rather than less, by enabling its distribution through agent networks at a scale that traditional banking never achieved.

Beyond agent liquidity, many people carry a general wariness toward digital financial services grounded in direct experience. Mobile money fraud is widespread, ranging from PIN compromise and SIM swapping to social engineering schemes. Alongside fraud, broader experiences of bank failures, opaque fee structures, and account restrictions with no avenue for appeal have reinforced a preference for cash. Taken together, these barriers create conditions where no single actor can shift the equilibrium alone.

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<sup>17</sup> World Bank (2022), Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, D.C.: World Bank Group.

<sup>18</sup> Afreximbank (2023), Pan-African Payment and Settlement System (PAPSS): Annual Report 2023. Cairo: African Export-Import Bank.

## 1.4 The Political Economy: Who Benefits from Cash Dependency

Structural barriers alone do not fully explain why cash dependency persists. The current system also reflects the interests of actors who benefit from it, and reform agendas that ignore those interests will struggle to gain traction.

### 1.4.1 Informal Sector Actors and the Formalization Trade-off

The populations that would benefit most from digital financial services often have the strongest short-term reasons to remain outside the formal system. Cash settles instantly, requires no infrastructure, and leaves no record that creates downstream compliance obligations. Most informal actors are not opposed to formalization in principle. When it offers tangible benefits that outweigh the costs of visibility, including access to credit, legal protections, and better public services, many will accept the trade-off. When it offers primarily increased tax exposure without commensurate returns, they will not.

### 1.4.2 Mobile Money Operators and the Limits of Partial Digitization

Mobile money operators have expanded digital payment access at scale, reaching populations that traditional banks did not serve. But current business models create incentives that do not fully align with a cashless ecosystem. Many operators earn meaningful revenue from cash-out fees and agent network commissions. A fully digital ecosystem would require a fundamental shift in how they generate income, and that transition requires both regulatory headroom and substantial product investment.

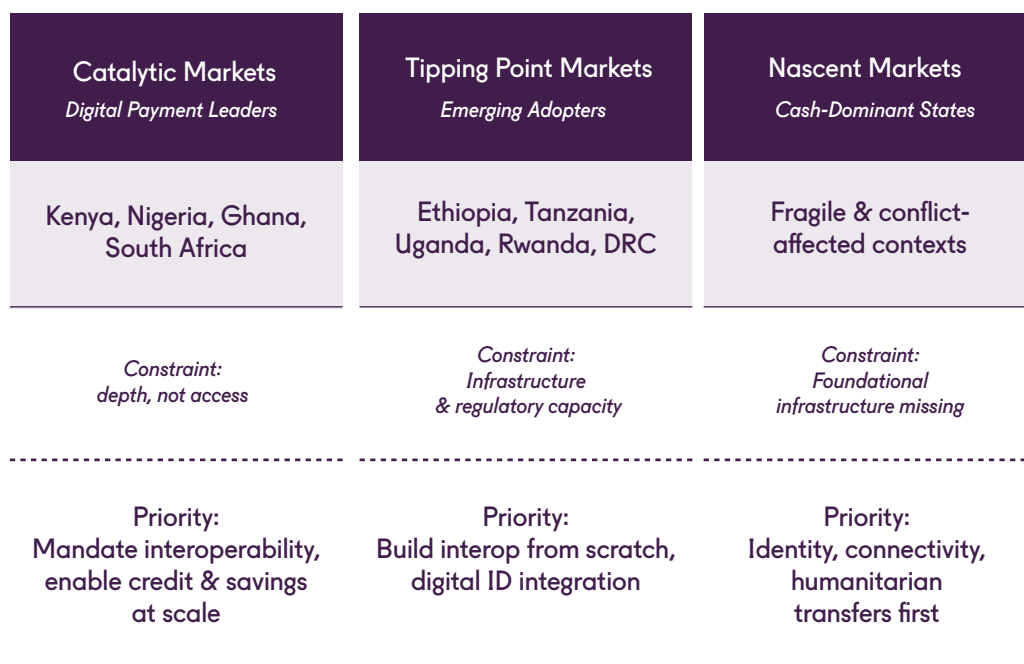
### 1.4.3 Financial Incumbents: A Consideration for Reform Design

Commercial banks and traditional remittance providers have built substantial businesses around the existing system. Understanding their position is more useful than treating them as obstacles. Banks bring balance sheets, regulatory relationships, risk management infrastructure, and customer trust that new digital entrants lack. The transition will happen faster if incumbents see digital expansion as a growth opportunity. Achieving this requires deliberate policy design that aligns incentives, reducing the costs of participation while creating new revenue opportunities within a more integrated digital system.

## 1.5 Regional Differentiation: Matching Policy to Context

Across Africa's 54 countries, digital payment systems operate at vastly different stages of development. The framework below segments markets into three categories based on digital payment maturity and institutional capacity. These are not fixed classifications; countries move between them as conditions evolve.

Figure 5: Africa Digital Payment Market Tiers



Source: authors' framework based on GSMA and World Bank Global Findex 2021

Figure 5: Africa digital payment market tiers, each requiring different policy interventions based on infrastructure maturity and regulatory capacity. Source: authors framework, GSMA and World Bank Findex 2021.

### 1.5.1 Catalytic Markets

Kenya, Nigeria, Ghana, and South Africa represent the continent's most advanced digital payment ecosystems. The binding constraint in these markets is no longer access but depth. Three priorities define progress: merchant acceptance at scale, improved interoperability with real-time settlement, and regulatory conditions that allow fintechs to deliver credit and savings products at scale. Progress will require regulatory mandates rather than industry-led coordination.

### 1.5.2 Tipping Point Markets

Ethiopia, Tanzania, Uganda, Rwanda, and DRC have growing mobile money adoption but face more binding infrastructure and institutional constraints. These markets also have a strategic advantage: they are building systems late enough to require interoperability and real-time settlement from the outset, rather than retrofitting it later. Digital identity programs paired with tiered KYC frameworks are equally important, since documentation barriers remain one of the most significant sources of exclusion.

### 1.5.3 Nascent Markets

In fragile and conflict-affected contexts, the binding constraints are foundational: basic connectivity, electricity, identity systems, and institutional trust. Prioritizing digital payments as a primary intervention in these environments is premature. The more appropriate focus is building the infrastructure that makes eventual digitization possible, including basic identity systems and digitizing humanitarian transfers where operational conditions allow.



## 1.6 How Other Markets Broke Cash Dependency

Across economies that have successfully reduced cash dependency, the transition happened only when digital payments became cheaper, safer, and more widely accepted than physical money. Technology alone did not shift behavior. Policy design, regulatory mandates, and credible public infrastructure are what unlocked change.

### 1.6.1 The Card Revolution and Its Limits

The United States began its transition away from cash in the late 1950s with the introduction of general-purpose credit cards. Adoption was initially slow, with only around 16% of American households holding a credit card in 1970.<sup>19</sup> Three forces drove the transition: cards solved a safety problem for high-value purchases; the credit function created demand by allowing households to smooth consumption; and growing consumer adoption gave merchants increasing incentives to accept cards. By 2020, cash accounted for less than 20% of point-of-sale transactions across most OECD economies.

The card model did not translate to Africa because banks already served the majority of OECD populations when cards emerged. In Africa, banking penetration remains below 50% in most countries. Interchange fees of 2 to 3% are prohibitive for small merchants processing low-value transactions. The network effects that drove card adoption in OECD markets work in reverse in most African contexts.<sup>20</sup>

### 1.6.2 Policy and Regulation as Accelerants

In the European Union, the Payment Services Directive introduced open banking, reduced interchange fees, and required interoperability. Cash usage in the EU fell from roughly 79% of transactions in 2016 to under 60% by 2022.<sup>21,22</sup> The United Kingdom followed a similar path. In both cases the regulatory interventions were deliberate and designed to change the economics of digital payments rather than simply encourage adoption.

Nigeria provides an African example with important lessons. The Central Bank of Nigeria introduced a cashless policy in 2012, imposing fees on large cash transactions. By 2020, Nigeria had over 30 million active debit cards and nearly one million POS terminals.<sup>23</sup> But increased card issuance did not translate into broader financial inclusion. In Lagos and other major cities, over two million POS agents now provide a dense, decentralized cash distribution network: users transfer funds digitally and are handed cash instantly. These networks are not displacing cash. They are making it more accessible than ever by using digital rails to distribute it more efficiently. Systems designed to expand access can, under certain conditions, reinforce the very behaviors they are intended to replace.

### 1.6.3 What Africa Can Learn

Markets that have reduced cash dependency did not get there through technology alone. Consumer value, merchant acceptance, and deliberate regulatory intervention all had to move together. In every case where the transition succeeded, governments and regulators made active choices to accelerate it. The card-based pathway that worked in high banking penetration economies is not available to most African markets. Mobile money has already done what cards could not. The challenge now is applying the same deliberate policy thinking to completing the transition that mobile money infrastructure has made possible but not yet delivered.

The next chapter sets out what it would take to change these incentives: making digital cheaper than cash, mandating interoperability, and creating reasons for value to stay digital.

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19 Federal Reserve Bank of San Francisco (2020), *Diary of Consumer Payment Choice: 2019 Data*. San Francisco: FRBSF. For historical US card adoption rates see also Nilson Report and Federal Reserve Payments Study (various years).

20 European Central Bank (2022), *Study on the Payment Attitudes of Consumers in the Euro Area (SPACE) 2022*. Frankfurt: ECB. For broader OECD context see also BIS (2022), *Statistics on Payment, Clearing and Settlement Systems in the CPMI Countries*, Basel: Bank for International Settlements.

21 European Commission (2022), *Impact Assessment Report: Revised Payment Services Directive (PSD2) Review*. Brussels: European Commission, DG FISMA.

22 European Central Bank (2022), *Study on the Payment Attitudes of Consumers in the Euro Area (SPACE) 2022*. Frankfurt: ECB. Cash usage fell from approximately 79% of transactions in 2016 to under 60% by 2022.

23 Central Bank of Nigeria (2022), *Annual Report 2022*. Abuja: CBN. Card issuance and payment system statistics from Chapter 5: Payment System.

# Chapter 2: Breaking the Cash Equilibrium

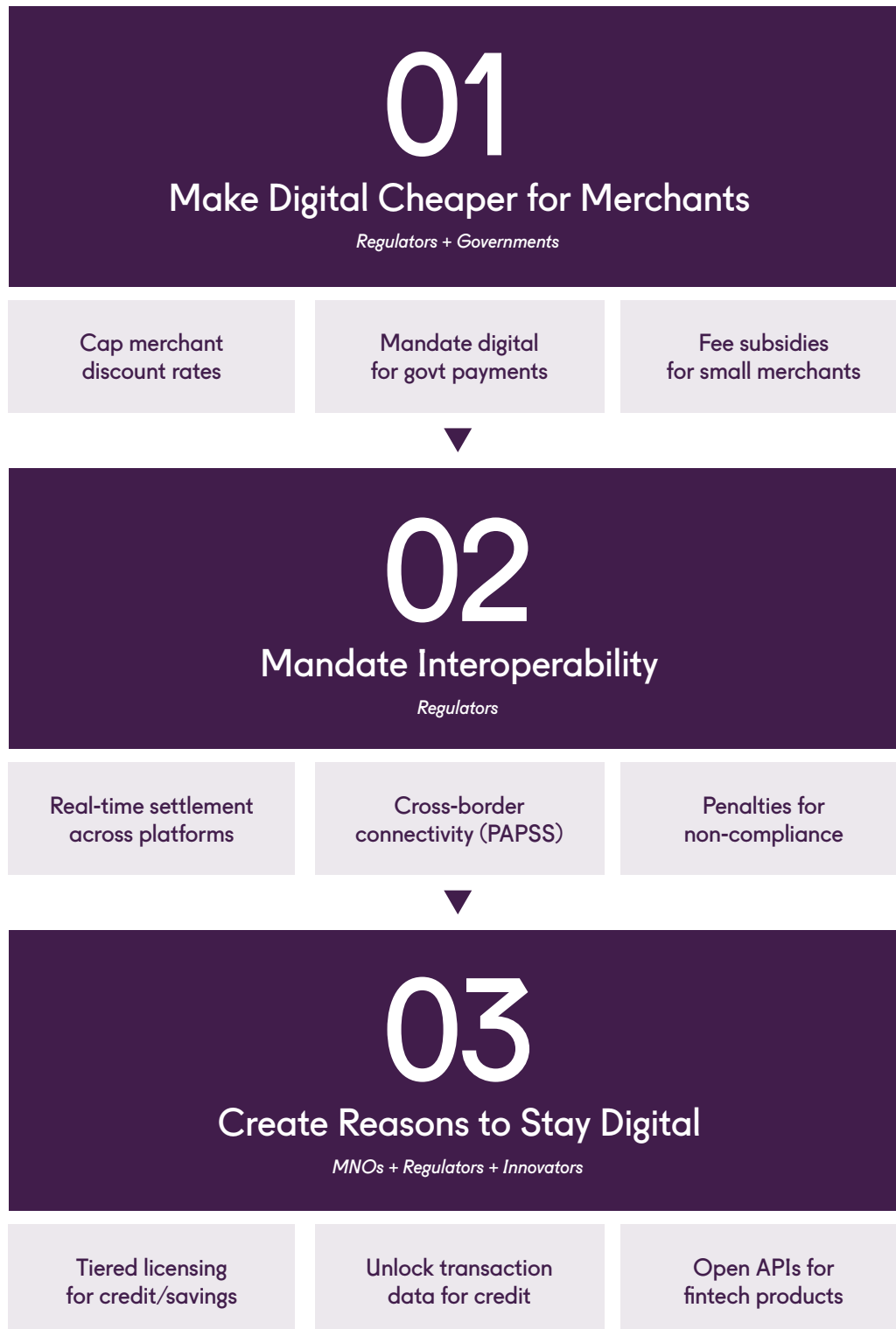
Cash dependency in Africa is not a technology problem or a poverty problem. It persists because every actor in the system, individuals, merchants, operators, and governments, is making a rational decision given what everyone else is doing. Consumers carry cash because merchants require it. Merchants require cash because consumers carry it. Operators build for cash-out because that is where the revenue is. No single actor can break the pattern alone, and why incremental improvements will not solve it.

As Nigeria demonstrates, building digital infrastructure without aligning incentives can make cash more efficient rather than less. A system with merchant acceptance but no interoperability fragments. A system with interoperability but no financial depth becomes a more efficient cash distribution network. A system with financial products but no merchant acceptance limits digital value to specific use cases rather than everyday commerce. All three must move together.

## 2.1 Recommended Actions to Break the Cash Equilibrium

These actions must happen in sequence. Each changes the conditions required for the next to succeed.

Figure 6: Three Actions to Break Cash Dependency



*Each action changes the conditions required for the next to succeed*

*Figure 6: Three actions to break cash dependency, with the actors responsible and specific levers available to each. Source: authors analysis.*

## Action 1: Make digital cheaper than cash for merchants

*Regulators + Governments*

Consumers carry cash because merchants require it. Merchants require it because accepting digital costs more than accepting cash. Until that equation flips, consumer-facing innovation will not shift behavior at scale.

Regulators must cap merchant discount rates for low-value transactions and mandate zero-fee acceptance below a defined threshold. Governments must use their procurement power to accelerate the shift, requiring digital payment acceptance for all government services, licenses, and transfers.

This action will reduce short-term fee revenue for mobile money operators and banks. Someone must absorb that cost. Without merchant acceptance, digital balances cannot circulate, credit markets cannot develop, and the system cannot generate the financial services revenue that will ultimately replace transaction fee income. The transition away from cash is not costless. The question is who absorbs the cost.

## Action 2: Mandate interoperability

*Regulators*

Voluntary interoperability has failed wherever it has been attempted. Incumbents have rational incentives to protect platform lock-in and will delay, negotiate, and resist rather than open their networks.

Regulators must mandate real-time interoperability across all licensed payment providers, require instant settlement at near-zero cost, and enforce cross-border connectivity within regional economic blocs. Brazil's PIX showed that coordinated regulatory intervention can achieve in months what market-driven approaches fail to deliver over years.<sup>24</sup> For central banks with the institutional capacity to act, particularly in Catalytic markets, this is an immediate priority.

## Action 3: Create reasons for value to stay digital

*MNOs + Regulators + Innovators*

Merchant acceptance and interoperability are necessary but not sufficient. Even in a frictionless system, users will cash out if there is no advantage to holding digital balances.

Mobile money operators must be given regulatory headroom to offer credit, savings, and insurance products at scale, or be required to partner with institutions that can. Transaction data that already exists across platforms must be unlocked as the basis for credit underwriting, with appropriate consumer protections. Innovators must have clear licensing pathways and open access to distribution to build financial products on top of existing payment rails.

<sup>24</sup> Banco Central do Brasil (2023), PIX: Relatório de Gestão 2023 [PIX Annual Management Report 2023]. Brasília: BCB. PIX was launched in November 2020 with mandatory participation for all institutions holding more than 500,000 active customer accounts.

## 2.2 What Regulators Must Do

*Regulators are central to Actions 1 and 2, and provide the enabling framework for Action 3.*

Regulators are the only actors in the system with both the authority and the mandate to change the rules that everyone else operates within. The barriers sustaining cash dependency will not be resolved by market forces alone. Each reflects a coordination failure that only regulatory intervention can resolve.

### **Mandate real-time interoperability**

Regulators must require all licensed payment providers to connect to national payment infrastructure and settle transactions in real time. Mandates with clear deadlines and financial penalties for non-compliance are the only mechanism that has consistently worked. Cross-border interoperability within regional economic blocs must be treated with the same urgency. PAPSS provides the infrastructure for regional settlement but adoption must be driven by regulatory requirement, not institutional goodwill.

### **Cap fees and eliminate the merchant cost disadvantage**

Regulators must set maximum merchant discount rates for transactions below a defined threshold and prohibit fee structures that discourage adoption among small businesses. This will compress revenue for incumbent operators and banks in the short term. That is a necessary consequence of breaking a pricing structure that has kept cash dominant.

### **Reform licensing to enable financial depth**

Regulators must create tiered licensing frameworks that allow payment providers to offer credit, savings, and insurance products subject to appropriate capital requirements and consumer protections, without requiring them to meet full banking prudential standards. The goal is to match regulatory requirements to actual risk.

### **Establish data governance frameworks that unlock credit**

Regulators must establish clear rules for how transaction data can be used, by whom, and with what consumer protections, so that the credit histories implicit in millions of mobile money accounts can be converted into actual access to credit. This requires coordination between central banks, data protection authorities, and competition regulators.

### **Build supervisory capacity in parallel with market development**

Regulatory reform without supervisory capacity creates rules that exist on paper but are not enforced. Investment in technical expertise and regional regulatory cooperation through bodies like the East African Community and ECOWAS are preconditions for reform that sticks.

If regulators do not move on interoperability, platform lock-in will entrench cash rather than displace it.



## 2.3 What Governments Must Do

Governments are central to Action 1 and provide the foundational infrastructure that makes Actions 2 and 3 possible.

Governments have tools that regulators do not. They control procurement, public spending, identity infrastructure, and competition policy. Each can be deployed to shift the economics of digital payments.

### **Build and integrate digital identity infrastructure**

Governments must invest in national biometric ID programs that achieve universal coverage, design them for remote verification, and integrate them with financial account opening from the outset. KYC frameworks must be tiered to match risk, allowing simplified onboarding for low value accounts.

### **Digitize government payments**

Every government payment made in cash is a missed opportunity to build the digital ecosystem. Salaries, pensions, social transfers, tax refunds, and procurement payments should all flow through digital channels. When governments digitize their own payments, they create immediate, large-scale demand for digital financial services.

### **Use procurement power to drive merchant acceptance**

Requiring digital payment acceptance as a condition of government contracts and licenses creates immediate incentive for businesses to build the infrastructure to receive digital payments. Combined with fee subsidies for small merchants, this can shift the merchant calculus faster than any consumer-facing campaign.

### **Address data costs through competition policy**

In many African markets mobile data remains unaffordably expensive relative to incomes. Governments must use competition policy to create conditions where data costs fall through market competition rather than regulatory price controls.

If governments do not lead by digitizing their own payments, they cannot credibly ask the private sector to follow.

## 2.4 What Mobile Money Operators Must Do

Mobile money operators are central to Action 3, and their investment in agent liquidity directly enables Actions 1 and 2 to take effect.

Mobile money operators are at an inflection point. The next phase requires a different business model, and operators that move first will define the market. Those that do not will be regulated around.

### **Shift from transaction revenue to financial services revenue**

The cash-out fee model is a dead end. As regulators cap fees and mandate interoperability, that revenue will compress. For mobile money operators, financial services revenue is a larger and more durable profit pool than cash-out fees. Operators that have already moved toward credit, savings, and insurance are building businesses that generate revenue from the value held in digital wallets rather than the friction of converting it back to cash.

### **Invest in agent float and network reliability**

As long as users cannot be confident that they can access their money when they need it, they will treat digital wallets as a temporary transit point rather than a store of value. Operators must solve the agent liquidity problem at scale through working capital solutions for agents and real-time visibility into network liquidity.

### **Open distribution to innovators**

Rather than building every product in-house, operators should create open APIs and partnership frameworks that allow third-party credit, savings, and insurance providers to reach their customer base. This accelerates financial depth and generates new revenue streams through platform fees and data partnerships.

If operators do not shift their revenue model, regulators and competitors will redesign the market around them.

## 2.5 What Banks Must Do

Banks are central to Action 3 and, through their regulatory relationships and balance sheets, can accelerate or obstruct Actions 1 and 2.

Banks can lead the next phase of Africa's digital financial transition or be progressively disintermediated from it. For banks, digital rails are a customer acquisition strategy in markets where branches are too costly to build. The growth strategy is to deploy balance sheet where fintechs cannot: funding loan books that digital platforms originate, providing regulated capacity that mobile money operators need to intermediate savings, and underwriting insurance products that digital channels distribute at scale.

### **Partner rather than resist**

The instinct to resist fee caps, delay interoperability implementation, and oppose non-bank lending licenses is understandable but counterproductive. Every year spent defending existing fee structures is a year in which fintechs and mobile money operators deepen customer relationships that banks will struggle to recover.

### **Deploy balance sheet where fintechs cannot**

Fintechs have data and distribution. Banks have capital, regulatory relationships, and risk management infrastructure. Banks that position themselves as the regulated balance sheet behind digital financial services are not being displaced. They are becoming the infrastructure layer of a much larger system.

If banks resist rather than partner, they will find their most valuable customers acquired by operators that move faster.

## 2.6 What Innovators Must Do

Innovators are central to Action 3, building the financial products that create reasons for value to stay digital.

Africa's fintech ecosystem has demonstrated that demand for digital financial services exists and that innovative business models can serve it profitably. The next phase requires moving from proving the concept to building at scale.

### Focus on the last mile of financial depth

The most valuable unsolved problems are credit for micro-enterprises based on transaction history, savings products that preserve value in high-inflation environments, insurance for informal workers and smallholder farmers, and merchant payment tools that cost less than cash to operate.

Problem	Innovation Opportunity	Enabling Regulation Needed
Micro-enterprise credit gap (\$330Bn)	Transaction-history-based lending for SMEs	Tiered lending licenses; data governance framework
Inflation erosion of cash savings	Mobile savings products linked to stable assets	Allow MNOs to intermediate savings above a defined threshold
Informal worker exposure to shocks	Micro-insurance delivered via mobile money wallets	Streamlined insurance licensing for digital channels
Merchant acceptance cost barrier	Zero-fee POS tools and QR-based payment acceptance	Cap merchant discount rates for low-value transactions
Agent float shortages	Working capital finance for agent networks	Fintech lenders to serve the agent float market at scale

Figure 7: Innovation opportunity areas in African digital finance mapped to the enabling regulation required. Source: authors analysis, GSMA, IFC, and World Bank.

### Solve agent liquidity

Agent float financing is one of the most important unsolved problems in African digital finance. Agents who run out of cash become points of failure rather than points of access, and the working capital required to keep agent networks liquid is both real and underserved by conventional lenders.

### Build for trust, not just functionality

Transparent fee structures, instant dispute resolution, real-time transaction notifications, biometric authentication, and clear data usage policies are the building blocks of the trust that cash has built over centuries. Innovators that treat trust as a core product feature rather than a compliance requirement will build the customer relationships that sustain long-term businesses.

If innovators do not solve the last-mile financial depth problem, it will remain unaddressed. No other actor in the system is positioned to build these products at the price points and distribution scale that are needed.



## 2.7 What Investors and Development Finance Institutions Must Do

Investors and DFIs enable all three actions by funding the transition costs that no single commercial actor can absorb alone.

The transition away from cash requires capital that commercial markets will not provide at the scale and patience required. DFIs have a specific and important role in funding the transition costs that no single actor can absorb alone.

### **Fund the infrastructure that makes markets possible**

Agent float financing, digital identity infrastructure, rural connectivity, and payment switch development create the conditions for commercial activity without being fully commercial themselves. DFIs and impact investors must fund these enabling layers, accepting below-market returns where necessary.

### **Provide patient capital for financial product development**

Building credit underwriting models in markets with thin data, developing insurance products for informal workers, and scaling savings products in high-inflation environments all require capital that can tolerate longer development timelines than conventional venture investment.

### **Use concessional capital to shift the merchant economics**

DFIs and donors can use concessional capital to subsidize merchant discount rates in specific markets, reducing fees to near zero while digital adoption builds the network density needed to sustain lower commercial fee structures. This is a time-limited intervention designed to break the pattern rather than replace market economics indefinitely.

If DFIs and investors do not fund the transition costs that commercial actors cannot absorb, the economics will not align fast enough to shift the equilibrium.

## 2.8 What Merchants Must Do

Merchants are the fulcrum of Action 1. Without merchant acceptance, no amount of regulatory or product innovation will break the cash equilibrium.

Merchants do not read policy reports. But they respond to economics, and the decisions of millions of informal merchants about whether to accept digital payments will determine whether the transition happens or stalls.

### **Accept digital when the economics work**

As regulators cap fees and operators improve network reliability, the cost-benefit calculation will shift. Merchants who move early gain access to the transaction data that unlocks credit, the growing base of digital-first customers, and the supply chain relationships that formal businesses provide.

### **Demand better tools**

The merchant tools currently available in most African markets are inadequate. QR code payments, basic POS devices, and USSD interfaces create friction that cash does not. Merchants should demand tools that make digital acceptance as simple as handing over a note.

The merchant is the indicator of whether the system has worked. If merchants still prefer cash, the interventions have not yet changed the underlying economics.

# Chapter 3:

## How Other Economies Shifted the Equilibrium

The barriers sustaining cash dependency in Africa are real but not insurmountable. India, Brazil, and Ethiopia have each made meaningful progress toward digital finance at scale, through different strategies and from different starting points. None offers a blueprint to copy wholesale, and each has features that are not directly replicable in all contexts across Africa. Together they reveal what coordination across identity, payments, and financial access can achieve when policy moves with purpose. Each case study illustrates one of the three actions in practice.

### 3.1 India: Building the Stack

**Action illustrated:** Create reasons for value to stay digital, through public infrastructure that links identity, accounts, and payments into a single ecosystem.

In 2011, India's financial landscape resembled many of Africa's Tipping Point markets today. Bank account penetration stood at 58% of adults, cash dominated retail transactions, identity systems were fragmented, and government benefit transfers suffered significant leakage. The constraint was not a shortage of financial institutions. It was the absence of a coherent ecosystem linking identity, accounts, and payment infrastructure.

India's response was to build that ecosystem deliberately and in layers. The first layer was universal digital identity. Aadhaar provided every resident with a unique biometric ID linked to fingerprints and iris scans, covering over 99% of adults by 2018.<sup>25</sup> Banks could now verify identity remotely, removing the documentation barrier that had excluded hundreds of millions. The second layer was mass bank account expansion. The Jan Dhan program opened over 500 million accounts by linking them directly to Aadhaar and routing government benefit payments through them.<sup>26</sup> The third layer was instant interoperable payments. UPI, launched in 2016 and linked directly to users' phone numbers, allowed anyone with a bank account to transfer money instantly to anyone else regardless of bank or payment app, with any company free to build products on top of the same public infrastructure.

Government provided the rails. Private companies competed to build the best products on top. This prevented platform lock-in, drove costs toward zero, and created network effects that accelerated adoption rapidly.

By 2023, India was processing over 100 billion UPI transactions annually, accounting for 46% of global real-time digital payment volume.<sup>27</sup> Direct benefit transfers worth over \$400 billion reached beneficiaries annually with leakage falling to single digits in many programs.<sup>28</sup> Credit access expanded as transaction histories replaced physical collateral as the basis for lending.

The architectural principle is directly applicable to Africa. Government builds the rails; private actors compete on products. India's experience is not directly replicable at the scale of individual African governments, but the sequencing, identity first, then accounts, then payments, then credit, is exactly the sequence that African policymakers need to engineer deliberately.

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<sup>25</sup> UIDAI (2023), Annual Report 2022-23. New Delhi: Unique Identification Authority of India. Available at: [uidai.gov.in](https://uidai.gov.in)

<sup>26</sup> Government of India, Ministry of Finance (2023), Pradhan Mantri Jan-Dhan Yojana: Progress Report as of March 2023. New Delhi. Available at: [pmjdy.gov.in](https://pmjdy.gov.in)

<sup>27</sup> NPCI (2023), UPI Product Statistics 2022-23. Mumbai: National Payments Corporation of India. UPI processed 117.6 billion transactions in calendar year 2023, accounting for approximately 46% of global real-time payment volume.

<sup>28</sup> Government of India, Ministry of Finance (2023), Direct Benefit Transfer Annual Report 2022-23. New Delhi: DBT Mission. Cumulative DBT transfers exceeded Rs. 34 trillion (approximately \$410 billion at prevailing exchange rates) with documented leakage reductions across 314 schemes.

## 3.2 Brazil: The Power of Regulatory Mandate

**Action illustrated:** Mandate interoperability, through a central bank directive that forced instant settlement and eliminated the fee structures sustaining cash dependency.

Brazil's starting point was different from India's. By 2015, roughly 70% of Brazilian adults held bank accounts, but the financial system was expensive, concentrated, and resistant to change. Cash remained the default not because digital infrastructure did not exist but because it was too costly and too fragmented to be genuinely useful.

Brazil's Central Bank mandated the creation of PIX, an instant payment system that all financial institutions above a minimum size were required to join. Launched in November 2020, PIX operated around the clock with settlement in seconds, was free for individuals, and allowed payments using simple identifiers. No point-of-sale hardware was required. Any merchant with a bank account could receive payments through a printed QR code.<sup>29</sup>

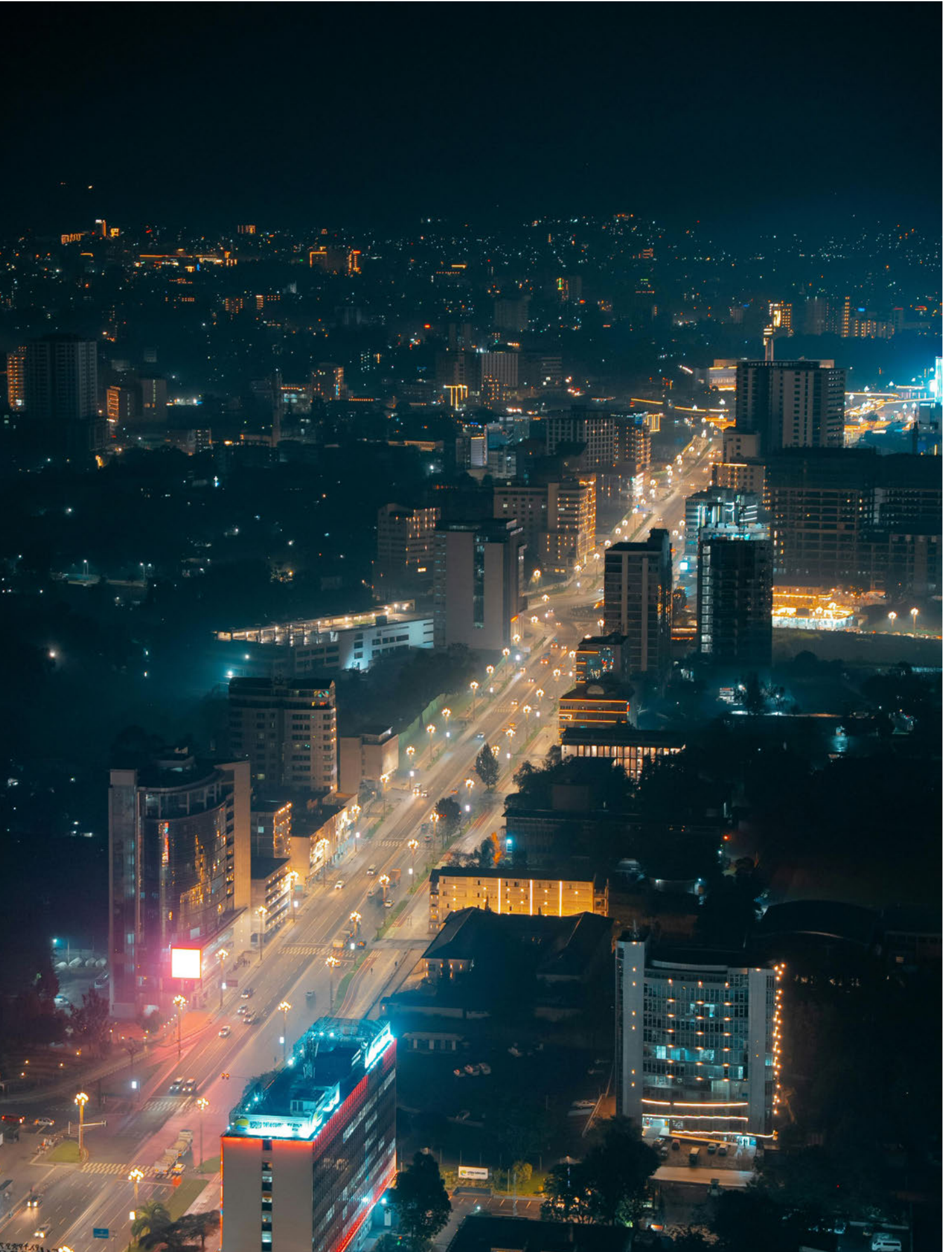
Within one year PIX had processed over 5 billion transactions. By end of 2023 cumulative volume exceeded 40 billion, accounting for more than 30% of all electronic payments in Brazil. Cash usage in urban retail fell an estimated 20 to 30%.<sup>30</sup>

The lesson for Africa's Catalytic markets is direct. Kenya, Nigeria, Ghana, and South Africa have the institutional capacity to implement similar mandates. Brazil demonstrates that when regulators move with conviction and technical competence, adoption follows at speed. The political economy challenge is real, overcoming incumbent resistance from operators and banks who lose fee income, but it is surmountable.



<sup>29</sup> Banco Central do Brasil (2023), PIX: Relatório de Gestão 2023. Brasília: BCB. On launch structure and mandatory participation framework for financial institutions.

<sup>30</sup> Banco Central do Brasil (2023), Relatório do Sistema de Pagamentos Brasileiro [Brazilian Payment System Report] 2023. Brasília: BCB. PIX reached 40 billion cumulative transactions by end of 2023, representing over 30% of all electronic payments.



## 3.3 Ethiopia: Building Everything at Once

**Action illustrated:** What happens when the conditions for all three actions are absent simultaneously, and what the trust problem looks like in practice.

Ethiopia represents the hardest version of the digital finance transition: a Tipping Point market attempting to build telecommunications competition, digital identity, payment infrastructure, and regulatory capacity simultaneously. Until 2021, Ethio Telecom held a state monopoly on mobile services, banking was dominated by state-owned institutions, and fewer than 35% of adults held any formal financial account.<sup>31</sup> Cash dominated virtually all transactions.

Beginning in 2019, the government pursued an ambitious reform agenda. A private telecom license was awarded to a consortium led by Safaricom. The Fayda national biometric ID system was launched. The National Bank of Ethiopia initiated reforms to create interoperable payment infrastructure and real-time settlement from the outset, an attempt to design in the interoperability that other markets have struggled to retrofit later.

Progress has been real. Telebirr reached tens of millions of registered users within two years. But the structural patterns documented throughout this report are playing out exactly as the framework predicts. Users keep small balances for specific purposes and cash out for business purchases because many merchants still require cash. Merchant acceptance outside major cities remains limited. Agent liquidity constraints create anxiety about access when it matters most.

The trust deficit is acute and grounded in direct experience. One Addis Ababa user described rushing to an emergency room at night only to find the Telebirr system had shut down, unable to pay, and saved only by the cash she habitually carried. That single experience encapsulates why cash retains its hold even among active digital payment users: its reliability cannot be conditional.

The formalization concern is equally concrete. Multiple users described reluctance to link their Fayda ID to existing accounts because transaction histories might be read as personal income by tax authorities, when in practice those accounts handle family remittances, pooled household funds, and business receipts that do not belong solely to the account holder.

One user described creating a new Telebirr account specifically to avoid previous transaction history being visible, a rational workaround that illustrates how surveillance concerns drive behavior in ways that aggregate statistics never capture. These are not edge cases. They are the system working exactly as users have designed it to work for their own circumstances.

Ethiopia's experience does not suggest the reform agenda is wrong. It suggests that technical infrastructure and policy reform must be accompanied by genuine trust building, transparent communication about how transaction data will and will not be used, and a visible return to users from the visibility they are being asked to accept. This is the lesson that no amount of infrastructure investment can substitute for.

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<sup>31</sup> World Bank (2022), Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, D.C.: World Bank Group. Ethiopia account ownership data.

# Conclusion: What a Less Cash-Dependent Africa Looks Like

The analysis in this report leads to a single clear conclusion. Cash dependency in Africa will not end because better technology becomes available. It will end when the economics of digital payments change at the individual level, when merchants find it cheaper to accept digital than cash, when users find it more useful to hold digital balances than withdraw them, and when regulators remove the fragmentation that makes digital unreliable. These are coordination problems, and coordination problems require deliberate action from multiple actors at once.

The three actions set out in Chapter 2 are the minimum required to shift the equilibrium. Making digital cheaper for merchants changes the foundational incentive that has sustained cash dependency. Mandating interoperability removes the fragmentation that makes digital systems unreliable and expensive to navigate. Creating reasons for value to stay digital gives individuals and businesses a reason to keep money in the system rather than cash it out the moment it arrives. None of these actions works without the others.

The stakeholder responsibilities are equally clear. Regulators must mandate rather than negotiate. Governments must digitize their own payments and build the identity infrastructure that financial services depend on. Mobile money operators must invest in agent liquidity, open their distribution to innovators, and shift their revenue models toward financial services. Banks must partner rather than resist. Innovators must focus on agent liquidity, micro-enterprise credit, inflation-resistant savings, and merchant tools. DFIs must fund the transition costs that commercial actors cannot absorb alone. Merchants must adopt digital when the economics finally work, and demand the tools that make it easy.

What this looks like in practice is a system where a smallholder farmer in a secondary city receives a government transfer directly to a digital wallet, pays a vendor by QR code without incurring a fee, accesses a small working capital loan based on six months of transaction history without visiting a bank branch, and holds the balance in a savings product that earns a return above inflation. The vendor receives the payment instantly, pays a supplier digitally, and builds a credit record that a fintech uses to extend a stock financing facility. The government can see economic activity that was previously invisible, expand the tax base without raising rates, and direct services to where they are most needed.

This is not a distant vision. The components already exist across different markets. M-PESA has shown that mobile money can reach scale. UPI has shown that interoperability by design creates network effects that self-reinforce. PIX has shown that regulatory mandates produce adoption that voluntary coordination never achieves. The Ethiopia experience has shown what trust requires: not just infrastructure, but transparency, reliability, and a visible return on the visibility that formalization asks of people.

Africa's digital payment infrastructure is already among the most innovative in the world. The work now is finishing what that infrastructure started.



# Appendix

## Stakeholder Action Brief

This section summarizes the specific responsibilities of each stakeholder group.

### Regulators

Regulators are the most important actors in this transition because they alone can change the rules that everyone else operates within. The most urgent priorities are: mandating real-time interoperability across all licensed payment providers with clear deadlines and financial penalties for non-compliance; capping merchant discount rates for low-value transactions to eliminate the cost disadvantage that keeps cash dominant; creating tiered licensing frameworks that allow payment providers to offer credit, savings, and insurance without meeting full banking prudential requirements; and establishing data governance rules that allow transaction histories to be used responsibly as the basis for credit underwriting. None of this will happen through voluntary coordination. If regulators do not act on interoperability, platform lock-in will entrench cash rather than displace it.

### Governments

Governments have tools that regulators do not. Every government payment made in cash is a missed opportunity to build the digital ecosystem. Digitizing salary payments, pensions, social transfers, and procurement payments creates immediate demand for digital financial services. Building universal digital identity infrastructure, designed for remote verification and integrated with financial account opening from the outset, removes the documentation barrier that excludes the largest share of the unbanked. Requiring digital payment acceptance as a condition of government contracts drives immediate merchant adoption. Addressing mobile data costs through competition policy removes one of the most persistent barriers to adoption. If governments do not lead by digitizing their own payments, they cannot credibly ask the private sector to follow.

### Mobile Money Operators

Mobile money operators face a genuine strategic choice. The cash-out fee model that has sustained revenues over the past decade is a dead end. As regulators cap fees and mandate interoperability, that revenue will compress. Operators that move toward financial services are building businesses that generate revenue from the value held in digital wallets rather than the friction of converting it back to cash. Solving agent liquidity is the most urgent operational priority: an agent network that runs out of float at month-end is not a distribution asset, it actively undermines trust. Opening distribution to third-party innovators through open APIs accelerates financial depth without requiring operators to build every product themselves. If mobile money operators do not shift their revenue model, regulators and competitors will redesign the market around them.

### Banks

Banks can lead the next phase of Africa's digital financial transition or be progressively disintermediated from it. The growth strategy available to banks is to deploy balance sheet where fintechs cannot: funding the loan books that digital platforms originate, providing the regulated capacity that mobile money operators need to intermediate savings, and underwriting insurance products that digital channels distribute at scale. Banks that partner with digital platforms have found new customer acquisition paths that branch networks never provided. Banks that resist will find their most valuable customers acquired by operators that move faster.

## Innovators

The most valuable unsolved problems are credit for micro-enterprises based on transaction history, savings products that preserve value in high-inflation environments, insurance for informal workers and smallholder farmers, merchant payment tools that cost less than cash to operate, and working capital financing for agent networks. These are not niche problems. They represent the financial needs of the majority of the population across most African markets. Innovators that build the right products for these segments, at the right price points, with the right distribution partnerships, are addressing markets larger than most that exist in higher-income economies.

## Investors and Development Finance Institutions

The transition away from cash requires capital that commercial markets will not provide at the scale and patience required. Agent float financing, digital identity infrastructure, rural connectivity, and payment switch development create the conditions for commercial activity without being fully commercial themselves. DFIs and impact investors must fund these enabling layers, accepting below-market returns where necessary. Concessional capital used to subsidize merchant discount rates in specific markets can break the pricing deadlock that has kept cash dominant. This subsidy is time-limited by design: as digital adoption builds network density, the commercial fee structure becomes viable without ongoing support.

## Merchants

Merchants will not be moved by policy arguments. They will be moved by economics. As regulators cap fees and operators improve network reliability, the cost-benefit calculation will shift. Merchants who move early gain access to the transaction data that unlocks credit, the growing base of digital-first customers, and the supply chain relationships that formal businesses provide. The tools currently available to merchants are inadequate, and innovators should be building merchant acceptance infrastructure that is as simple as handing over a note. Merchants should demand those tools and accept digital when the economics make it rational to do so.

# List of Abbreviations

AfCFTA	African Continental Free Trade Area
AML/CFT	Anti-Money Laundering / Countering the Financing of Terrorism
API	Application Programming Interface
CBN	Central Bank of Nigeria
DFI	Development Finance Institution
DRC	Democratic Republic of Congo
ECOWAS	Economic Community of West African States
EU	European Union
Fayda	Ethiopia's National Digital ID System
GSMA	Global System for Mobile Communications Association
IFC	International Finance Corporation
ILO	International Labour Organization
Jan Dhan	Pradhan Mantri Jan-Dhan Yojana (India's financial inclusion program)
KYC	Know Your Customer
MNO	Mobile Network Operator
NPCI	National Payments Corporation of India
PAPSS	Pan-African Payment and Settlement System
PIX	Brazil's Instant Payment System
POS	Point of Sale
PSD	Payment Services Directive (European Union)
QR	Quick Response (code)
SDG	Sustainable Development Goal
SME	Small and Medium Enterprise
UIDAI	Unique Identification Authority of India
UNHCR	United Nations High Commissioner for Refugees
UPI	Unified Payments Interface (India)
USSD	Unstructured Supplementary Service Data
WFP	World Food Programme

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Affinity Africa is a digital banking platform built in Ghana for Africa, dedicated to making financial services more affordable and accessible for every person and business. Powered by a secure, proprietary technology platform, Affinity provides 24/7 banking services designed for the needs of unbanked and underserved individuals and micro, small, and medium-sized enterprises across the continent.

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