



Agent Networks at the Last Mile

Implications for Financial Regulators

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Background for the Content in This Deck

CGAP's Cash-In/Cash-Out (CICO) for Rural Agent Networks project supports market actors in six focus countries (Colombia, Côte d'Ivoire, India, Indonesia, Morocco and Pakistan) to implement practices, policies, and regulations that extend the reach and enhance the quality of rural CICO networks. This enables lower income rural customers, especially women, to use a wider variety of digital financial services (DFS) as tools to better manage and improve their livelihoods.

As part of this work, CGAP and its partners made a comprehensive compilation of recent global knowledge about how CICO agent networks operate in different markets and the Financial Service Provider (FSP) practices, policies and regulations that have enabled their development.

CGAP has used the global knowledge compiled to support a technical dialogue with focus country stakeholders that builds consensus on key constraints preventing CICO network development and to implement country-specific action plans that address these constraints.

This deck shares this global knowledge more broadly so that it can inform a similar dialogue among FSPs, policy makers and regulators in other countries.

Purpose of This Deck

This deck shares parts of the CICO global knowledge compiled by CGAP that are considered relevant for Financial Regulators. There are another two decks that do the same for FSPs and policy makers.

The knowledge shared in this deck is general, meaning that it represents a comprehensive compilation of CICO agent network operations and recommendations without specifying whether they apply to, or could be implemented in, the reader's unique context.

Readers are expected to view this deck as a menu of potential good practices shown by the global experience and reflect on whether these practices apply in their own market and organization.

More specifically, it: (i) shows how expanding rural CICO agent networks is key to ensuring more inclusive digital financial ecosystems; (ii) illustrates industry innovations that are making rural CICO more viable; and (iii) presents a set of regulatory considerations that can enable such innovations within a stable financial system.

This Deck is Part of a Broader Set of CGAP Knowledge Products on CICO

The CICO global knowledge compiled in this deck includes previous CGAP work, as well as work from partners like the Bill and Melinda Gates Foundation, Boston Consulting Group, MSC and IDEO Colab, among many others.

This deck will be complemented by subsequent CGAP knowledge products that synthesize lessons from the work conducted in the six focus countries, once CGAP's CICO project concludes.

These subsequent CGAP publications will reflect more deeply on those contextual settings (e.g. customer segments, markets, organizations) that determine when the general practice, policy and regulatory recommendations presented in this deck apply and suggest stakeholder implementation strategies that are better suited to the various contexts.

Table of Contents

AGENT NETWORKS AT THE LAST MILE — IMPLICATIONS FOR FINANCIAL REGULATORS

 1. Executive Summary..... 4	 4. The role of regulation in enabling rural CICO 33	 7. Geospatial mapping 65
 2. Why CICO networks matter 10	 5. Regulations to promote gender equity 53	 8. Appendix 71
 3. Understanding innovations enabling rural CICO 20	 6. Customer protection 60	

Executive Summary

Rural CICO agent networks—whether bank or mobile money-led—should be prioritized by regulators

- Increasing the reach and quality of all types of CICO agent networks has been shown to enable people to take up and use DFS. In turn, the use of DFS allows people to build more resilient livelihoods and invest in opportunities that improve their well-being.
- However, there is a persistent rural gap in CICO network coverage that leaves out most of the world's financially underserved and excluded people from digital financial ecosystems.
- Regulation that enables rural CICO promotes not only financial inclusion, but also other socio-economic development outcomes that benefit the most vulnerable groups of society.

To design effective enablers, regulators need to recognize those industry innovations that have been shown to make rural CICO more viable

- Lead DFS markets reveal a journey for rural CICO networks grounded in identifying a strong anchor use case that appeals to many customers, including those in rural areas.
- This has sparked motivation among FSPs to invest in third-party agent network managers (ANM) that improve the unit economics of rural agents and enable these agents to increase revenues and cover their costs. That is, if market-based customer and agent fees are allowed to ensure sustainability.
- There's a new generation of ANMs that leverage digital technology to increase agent efficiencies and customer value propositions in an unprecedented manner.
- These new ANMs reveal a trend in which non-exclusive, non-dedicated and interoperable agents are key drivers of lower costs, higher revenues and viability in rural areas. How regulators can promote these enabling agent features is a highly market-specific exercise that requires close dialogue and agreement with industry actors.

Executive Summary

Regulation should seek to promote those FSP-ANM features most associated with viable rural CICO networks

- Agent regulation (both for bank and mobile money) should define the range of permitted activities, liabilities, and modalities of work for FSPs, ANMs and individual agents. Therefore, agent regulation is key in enabling, over time, the type of features in FSP-ANM partnerships that are most associated with rural CICO viability, like agent non-exclusivity, non-dedication and interoperability.
- At least three key regulatory objectives can create conditions for viable rural CICO agents: (i) allowing for adequate agent tiering; (ii) allowing for adequate account tiering; and (iii) providing for FSPs to outsource adequate agent management and support, if they choose to.
- To ensure adequate customer protection, FSPs should be liable for agent conduct and compliance, set principles for agent selection and monitoring, and review providers' internal controls and processes to mitigate risks.

A key aspect of regulation that enables more inclusive financial systems is ensuring gender equity

- Although the gender gap in financial services access and use is decreasing globally, it still persists with various degrees of severity in most countries.
- Given that CICO is a strong driver of DFS use, the lack of women's access to adequate CICO networks helps explain the persistent gender gap in DFS. Therefore, removing barriers for women to use CICO contributes to more gender-equitable digital financial systems.
- Gender barriers are complex and context-specific. Regulation should focus on identifying and addressing them in various ways to increase women's participation in CICO networks as customers and agents, as shown by examples provided.

Executive Summary

Customer protection should be embedded into agent regulation

- Regulators should hold providers liable for agent conduct and compliance, set principles for agent selection and monitoring, and review providers' internal controls and processes to mitigate risks.
- It is therefore important to establish regulation that defines what FSPs are accountable for, clarifies what aspects of agent operations they should monitor, and requires the establishment of FSP's own mechanisms to monitor agent behavior.

Geospatial agent coverage data can inform regulation that better enables rural CICO networks

- For regulators to monitor how and which type of agent networks are expanding to underserved and excluded areas (or not), it is imperative to complement agent density data with measurements of agent geospatial coverage.
- Unlike agent density, which measures the number of agents per capita, geospatial coverage captures how the number of agents varies with the population density in each part of the country.
- Geographical coverage can be combined with other data sets, like economic census, ITC infrastructure, and merchant location data to develop more accurate predictions of areas where new agents could be viable but have not been activated by FSPs due to information asymmetries.
- Regulators can engage in an industry dialogue to agree on the type of geospatial data FSPs can feasibly report. The analysis of such data can be very valuable for informing regulators if KYA, KYC and agent outsourcing regulations need to be improved to enable CICO network expansion.

2. Why CICO Networks Matter

Relevance for Financial Regulators

It has been shown that increasing the reach and quality of CICO agent networks has enabled people to take up and use digital financial services (DFS). In turn, the use of DFS allows people to build more resilient livelihoods and invest in opportunities that improve their well-being.

The reason that CICO networks are needed to enable more digital financial inclusion is that most lower-income people in the world still earn in cash. Therefore, even as more people have access to smartphones, the internet and e-wallets, if they are not paid digitally, they need some way to add their cash to a digital account in order to benefit from DFS. And since there is still a limited number of digital use cases for most people's daily transactions, they need a way to convert the e-money they receive back into cash to spend it.

However, CICO networks are notoriously difficult to expand in rural areas where most of the world's poor, financially excluded populations still live and work. Therefore, regulations that enable greater rural CICO reach and quality contribute to more inclusive financial systems.

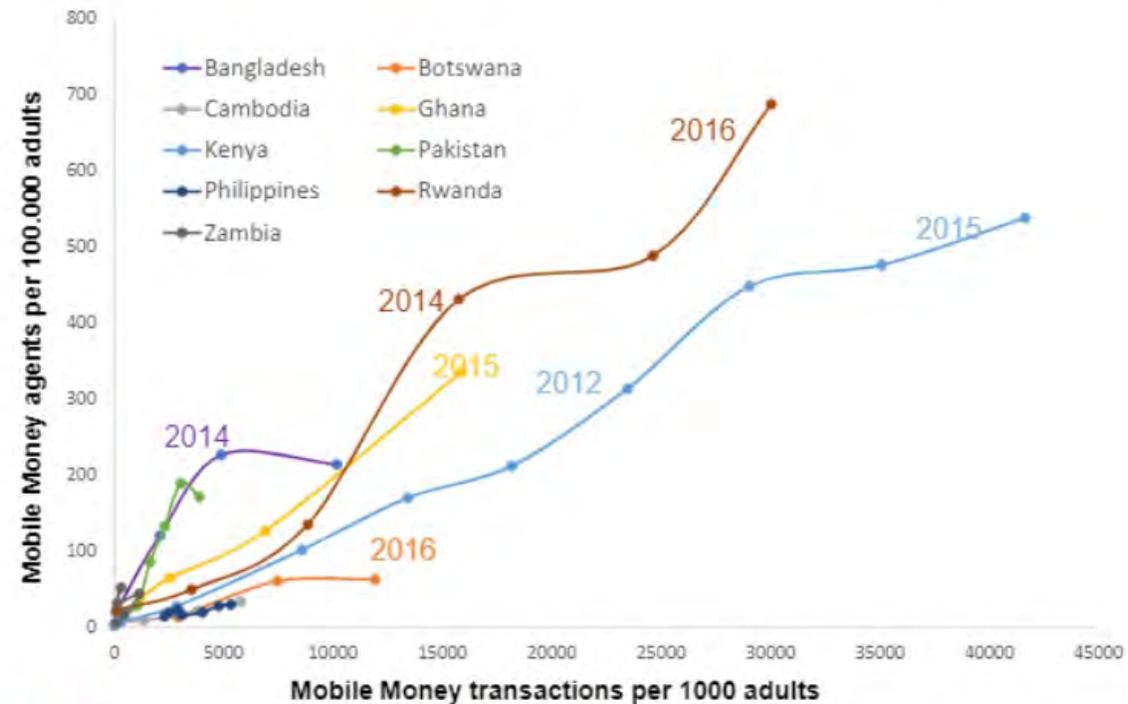
Across the World, the Use of DFS Tracks Closely with Customer Proximity to CICO Agents



Research shows that across mobile money markets, agent proximity to customers has been important for the uptake and usage of mobile money

Financial services use without proximity is rare

In 9 leading DFS markets, mobile money use tracks closely with agent proximity



Source: CGAP based on IMF FAS data, 2017. Selection based on data availability. The reporting methodology might distort some success stories for mobile money, see CGAP 2016 and Ulla 2017.

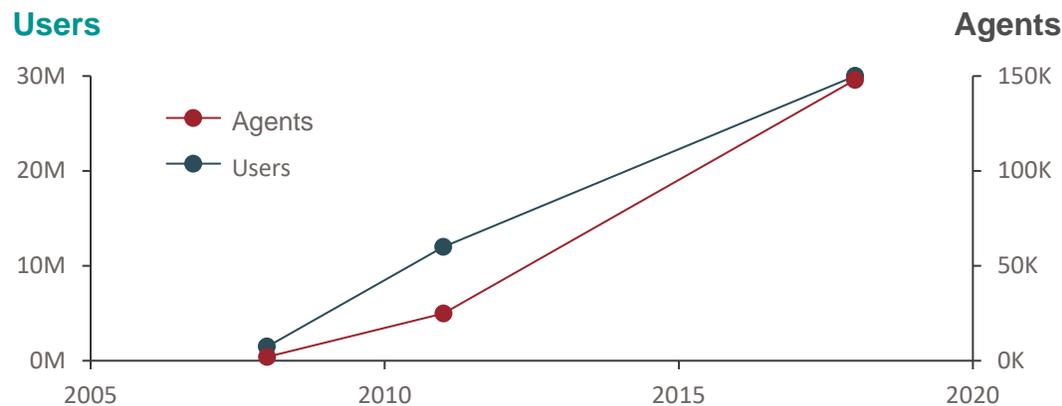
Source: Proximity Matters: Five Case Studies in Closing the CICO Gap (CGAP, 2018)

CICO Agent Networks Drive Initial Expansion of DFS Uptake and Use in both Banking and Mobile Money Markets, Enabling Sustained Growth



Example: Growth in the number of agents and users of Kenya's mobile banking service M-Pesa followed similar trajectories:

- M-Pesa grew very rapidly to become the largest agent network & mobile money platform in Kenya
- From **~2K agents and ~1.5M users in 2008** it grew to **~148K agents and ~30M users in 2018**



Example: Expansion of banking correspondents in Mexico caused an increase in uptake and use of accounts and FS:

- In 2018, **31.5M** Mexican adults were using banking correspondents' services, **an increase of 49% vs. 2012**
 - In rural areas, that number was **8.1M adults up from 4M in 2012** (a 2x increase)
- The number of active "Banamex Transfer" mobile accounts² **grew from 2.75M in 2014 to 10M+ in 2018**
- The number and amount of savings transactions managed by correspondents **grew ~6-7x between 2013 and 2018 to 23M transactions or \$30M monthly**

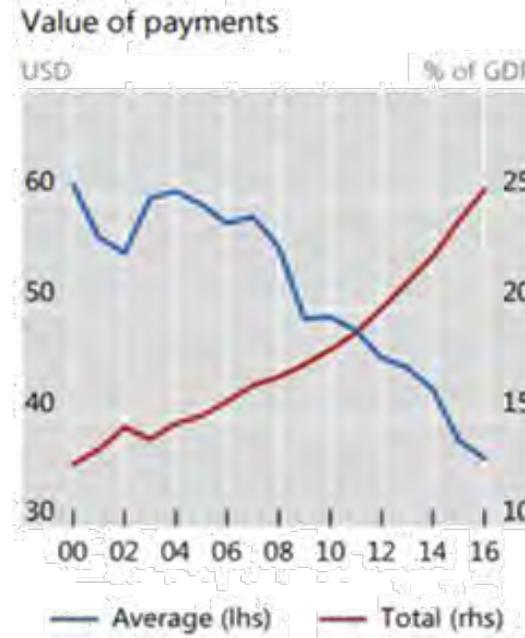
1. Banamex Transfer accounts are simplified bank accounts that allow users to use their mobile phones to perform simple and secure bank transactions by phone. Sources: Measuring the Impact of Bank Correspondents on Financial Inclusion in Mexico (National Banking Commission, 2018); Payments are a-changin' but cash still rules (BIS, March 2018), The long-run poverty and gender impacts of mobile money (Suri and Jack, 2016); How Mobile Money is Spreading (The Economist, 2018)

In Most Emerging Markets, Cash Use is Growing Along with DFS Transactions

CICO Networks Act as a Bridge for Customers with Cash to Start Trying the DFS Offer, Growing Over Time

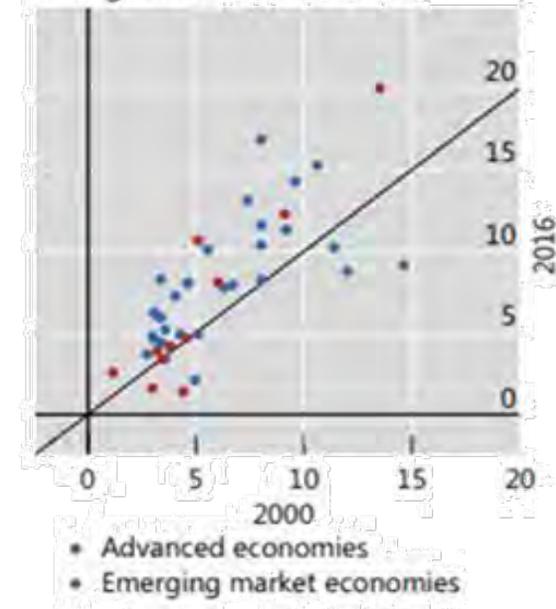
Growth of DFS does not eliminate the need for cash

Globally, the value of card payments is decreasing while their number is increasing



In most countries, cash in circulation is greater in 2016 than what it was in 2000

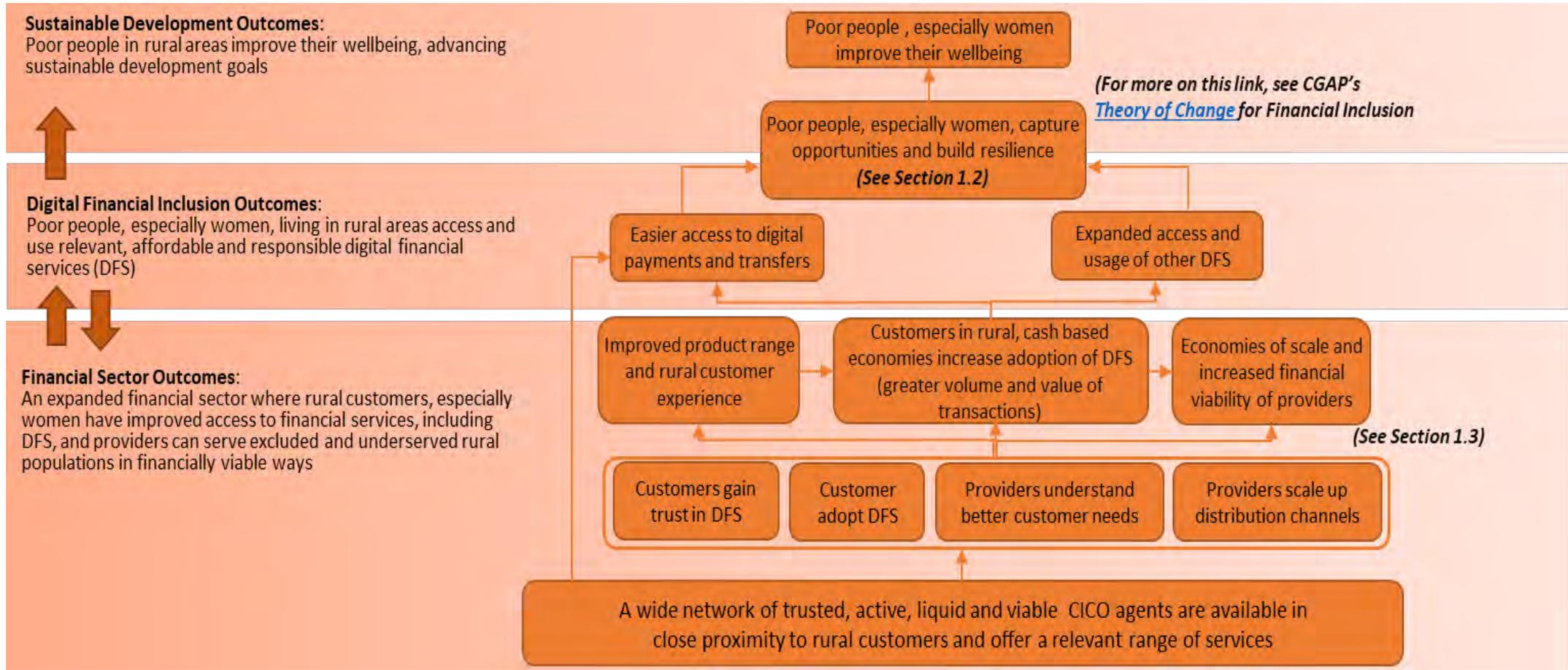
Cash in circulation, as a % of GDP
Change from 2000 to 2016



Digital (card) payment and cash transactions have been growing side-by-side in most countries around the world. In emerging markets in particular, CICO infrastructure has expanded and, actually, enabled the initial DFS uptake and use.

Sources: The Role of Cash In/Cash Out in Digital Financial Inclusion (CGAP, 2019); Payments Are a-Changin' but Cash Still Rules, BIS (2018)

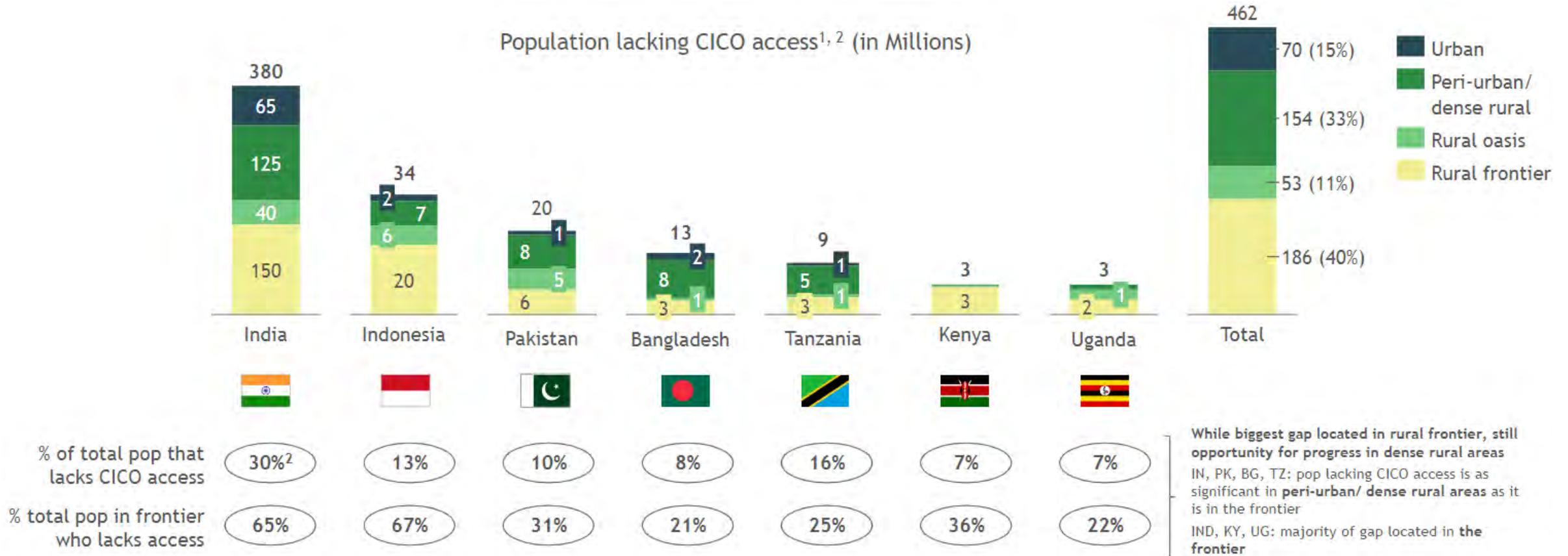
Enabling Policy to Support Rural CICO Contributes to Various Sustainable Development Goals Beyond Financial Inclusion



Source: Developing Rural Cash-In-Cash-Out (CICO) Agent Networks to Advance Digital Financial Inclusion: Emerging Guidance for Funders (CGAP, 2022)

However, the Vast Majority of People who Currently Lack CICO Access Live in Rural Areas

Population lacking CICO access^{1, 2} (in Millions)



Source: BCG (2019). Definitions: **Rural frontier** is sparsely populated, very remote, and no established commercial activity; **Rural oasis** is sparsely populated, remote, but with towns that drive commercial activity; **Peri-urban** is less densely populated, slightly less infrastructure connectivity and commercial activity; **Urban** is large, densely populated with very high infrastructure connectivity and commercial activity. 1. Defined as the percentage of people within 5 km of a CICO service point. 2. For India, defined as % of people within 1 km of a CICO service point.

Four Geographic Contexts Determine the Nature of CICO Agent Networks and Their Viability

Description	Urban	Peri-urban/ Dense rural	Rural oasis	Rural frontier
				
	<p>Large, densely populated with very high infrastructure connectivity and commercial activity</p>	<p>Less densely populated, slightly less infrastructure connectivity and commercial activity</p>	<p>Smaller, sparsely populated, remote, but with points of interest that drive commercial activity</p>	<p>Very sparsely populated, very remote, and no established commercial activity</p>
Implications for CICO viability	<p>Organic CICO network expansion is more likely in urban, peri-urban/dense rural, and rural "oases"; viability is less likely in the rural "frontier"</p>			
	<p>Likely economically and operationally viable</p> <ul style="list-style-type: none"> • More than sufficient population density, size, and economic activity for economic viability • Highly connected with roads and rebalancing locations 	<p>Likely economically and operationally viable</p> <ul style="list-style-type: none"> • Sufficient population density, size, and economic activity for economic viability • Sufficiently connected with roads and rebalancing locations 	<p>Potentially economically viable with operational challenges</p> <ul style="list-style-type: none"> • Potentially limited local demand; however commercial points of interest draw customers from surrounding areas • Remote location and infrastructure gaps may present challenges (e.g., liquidity management) 	<p>Significant challenges to economic and operational viability</p> <ul style="list-style-type: none"> • Insufficient customer demand • High operating costs and complexity (esp. liquidity management) • Lack of enabling infrastructure also a potential barrier (e.g., mobile connectivity)

Prevailing Agent Models Make it Hard for Rural Agents to Drive Sufficient Transaction Volume within Their Catchment Area

Characteristics of rural geographies...



Low population size and density
Typically <5000 population



Lower economic activity
Typical consumer income is <\$500/yr



Geographically remote
>50km from closest urban center



Limited existing infrastructure
Limited banking presence, limited postal infrastructure, fewer paved roads (however assumes presence of telco network)



... Leading to three main barriers



Supply and demand challenges
Leading to transactions ~70% less in volume and ~30% less in value than in 'oasis' rural areas, & lower profitability



Regulatory challenges
When regulations are not designed with rural constraints in mind, e.g., ID requirements, exclusivity, unrealistic KYA requirements



Operational & industry complexities
Limited commercial partnerships as a result of limited infrastructure

Policies have been shown to enable innovations in agent management models that address these constraints, as shown below

Source: BCG DFS Agent Interview Study 2018, secondary Research (Helix ANA surveys, IFC/MasterCard Foundation), BCG DFS Provider Interview Study 2018

As Countries Become more Digitized, Enabling Rural CICO to Extend Financial Access will be Crucial to Integrate Rural Areas at Risk of Being Left Out

Leading DFS providers are increasing their reach and quality in urban areas, but their **presence in remote rural areas remains limited**

Low transaction volumes, high startup costs, and other challenges have led to a **widening urban-rural financial infrastructure gap**

DFS can **utilize existing momentum in growth of digital technology infrastructure** across many rural developing contexts to expand financial services to rural areas



China: **88%** (200 out of 225 million) financially excluded individuals located in rural areas



13% higher account ownership among adults in the wealthiest 60% of households worldwide than among those in the poorest 40%



85% of individuals who lack CICO access across select research countries¹ located in rural areas



~1 billion financially excluded individuals globally of whom **~480 million** already have internet access

1. India, Indonesia, Pakistan, Bangladesh, Tanzania, Kenya, Uganda; Source: Global Findex database; World Bank; BCG analysis

3. Understanding Innovations Enabling Rural CIC0

Regulators Should Recognize Those Innovations that are Helping Overcome the Rural CICO Challenge in Order to Reflect on Regulatory Implications

Lead DFS markets reveal a journey for rural CICO networks grounded on identifying a strong anchor use case that appeals to many customers, including those in rural areas.

This has sparked motivation among FSPs to invest in third-party agent network managers (ANM) that improve the unit economics of rural agents, enabling these agents to increase revenues and cover their costs. That is if market-based customer and agent fees are allowed to ensure sustainability.

There's a new generation of ANMs that leverage digital technology to increase agent efficiencies and customer value propositions in an unprecedented manner.

Three Main Archetypes of CICO Agent Network Development Journeys are Driven by Their Anchor Use Case



Person-to-person (P2P)

- Urban to rural domestic remittances drive rural agent network growth
- E.g. Kenya – Mobile Network Operator (MNO) as lead provider to formalize P2P transfers market for lower-income customers



Government-to-person (G2P)

- Rural agent network development driven by government's desire to expand G2P transfers to rural-area beneficiaries
- E.g. Colombia and India – private and public sector banks play lead role in rural DFS distribution



E-commerce

- E-commerce companies' desire to drive transactions beyond urban zones fuels rural agent network expansion
- E.g. China – Mature stage of e-commerce-led agent business models

Factors that influence archetype

- Type of use case prevalent in local markets
- Type of DFS provider that is leading/ investing in the agent network expansion
- Regulatory/ incentive framework

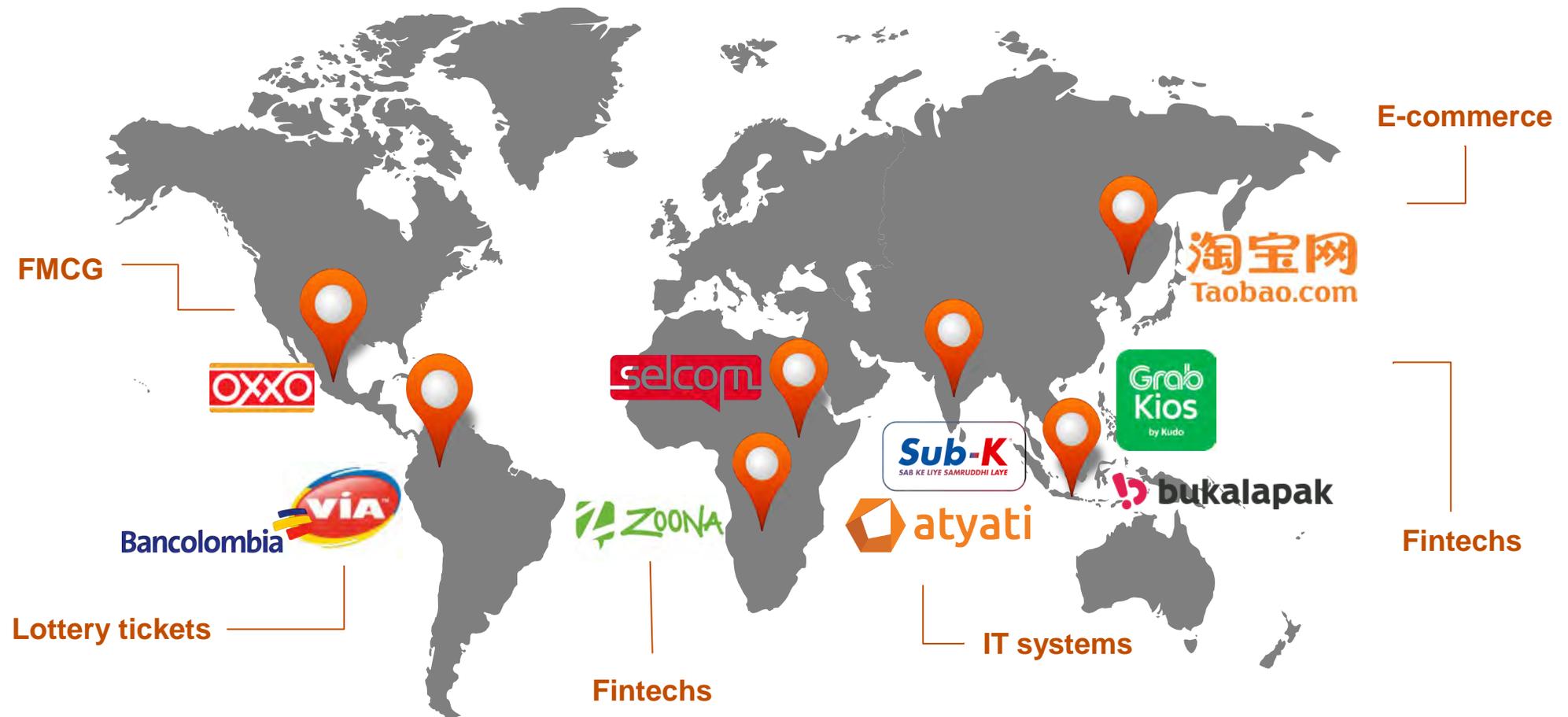
FSPS have Relied on Agent Network Managers (ANMs) to Outsource the Agent Onboarding and Management Process

Weak agent management, from recruitment to supervision and liquidity support, can be costly. It must be well handled to ensure models are viable and reach out to remote areas.



Outsourcing agent management and support can help draw on the **specialized expertise of external third-party companies** (e.g. FMCG, agribusiness, IT and logistics), increasing efficiency and enabling a viable agent outlet

A New Generation of ANMs Leverage New Business Models to Improve Customer Value through Unprecedented Levels of Service Aggregation



Four Distinct ANM Models Globally

A taxonomy based on how many provider services the agent can facilitate with a single float account

	Stand-Alone ANM	Specialised ANM	Large Chain	NEW GENERATION ANMS Diversified ANM
Transaction Processing	<ul style="list-style-type: none"> ANM does not integrate into financial service providers' (FSP) systems Agent txns are processed and managed by the FSP's core system. ANM has no or limited visibility on agent transaction data 	<ul style="list-style-type: none"> Integrates its systems only with FSPs Agent's float account is managed by the ANM and can be used to process customer txns on any partner FSP Has visibility into agent transaction data Contracts and pays commissions to the agents 	<ul style="list-style-type: none"> Integrates its systems only with FSPs. ANM manages a pooled float account for all agents (agents don't have individual float) ANM has full visibility into transaction data ANM earns all commissions 	<ul style="list-style-type: none"> Integrates its system with that of FSPs AND non-financial service providers like e-commerce, FMCG, agribusiness, others Has full visibility into agent transaction data Contracts and pays commissions to the agents
Product Offering	<ul style="list-style-type: none"> Supplies agents with FSP's equipment or access to FSP agent platform Only promotes financial products from partner FSP May offer non-financial products in separate agent till 	<ul style="list-style-type: none"> ANM provides agents with a platform where they can process financial transactions Distributes only a financial service offering from partner FSPs (unlike a diversified ANM). ANM may also be authorized to offer some non-bank financial services (e.g., credit, payments). 	<ul style="list-style-type: none"> Agents are the ANM staff. The agent outlet is wholly owned by the ANM and so there is no agency contract between the agent and the ANM. The ANM decides the location where the agent will open and staffs the service point and owns/rents the physical structure. 	<ul style="list-style-type: none"> Agent's float account managed by the ANM can process financial and non-financial txns from customers of partner FSPs and partner non-financial service providers ANM trains its agents to facilitate additional non-financial services e.g.; sale of FMCG, customers' submission of e-commerce orders, use the agent as a product pick-up point for customers
Agent Network	<ul style="list-style-type: none"> Recruits agents on behalf of a FSP (KYA) Occasional training and follow-up if requested by FSP 	<ul style="list-style-type: none"> Recruits and manages agents. Offers training and liquidity management support. 	<ul style="list-style-type: none"> Centrally run chain of stores, a head office recruits and manages all stores/agents 	<ul style="list-style-type: none"> Identifies, recruits and trains agents on behalf of FSP partners and non-financial partners
	Examples: FIA Global (India), ValeMas (Colombia)	E.g., Atyati (India), Intouch (Senegal), Tanda (Kenya), ABC (Uganda)	E.g., Oxxo (Mexico), PEP (South Africa), Exito (Colombia)	E.g., Grabkios (Indonesia), PTM (Colombia), Taobao (China), Dvara (India)

Regardless of the ‘Anchor’ Use Case that Kickstarts the CICO Agent Network Development Journey...

... These New ANMs Have Helped FSPS Expand CICO Networks by



Diversifying faster from one anchor use case into **new ones** (i.e., G2P, P2P, e-commerce)



Diversifying agent revenue streams to encompass **other DFS or non-DFS revenue streams** (e.g., integrating APIs from firms in e-commerce FMCG, agribusiness, ride hailing)



Digitizing locally **important rural value chains** to increase commercial DFS penetration (e.g., agricultural supply chain payments, community health worker payroll)

CICO agent networks tend to develop in rural areas through P2P-, G2P-, or e-commerce-led pathways



Person-to-person (P2P)

- Urban to rural domestic remittances drive rural agent network growth
- Kenya – Mobile Network Operator (MNO) as lead provider to formalize P2P transfers market for lower-income customers



Government-to-person (G2P)

- Rural agent network development driven by government's desire to expand G2P transfers to rural-area beneficiaries
- Colombia and India – private and public sector banks play lead role in rural DFS distribution

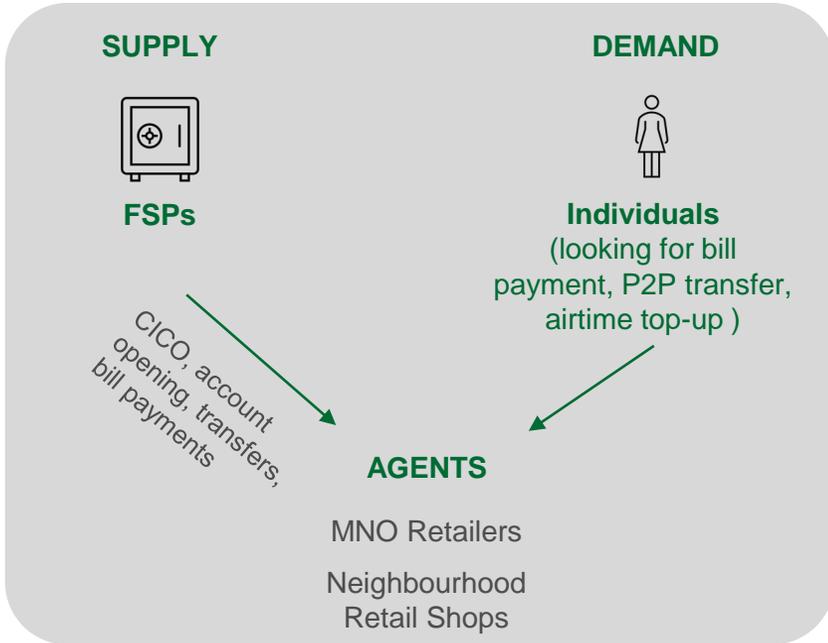


E-commerce

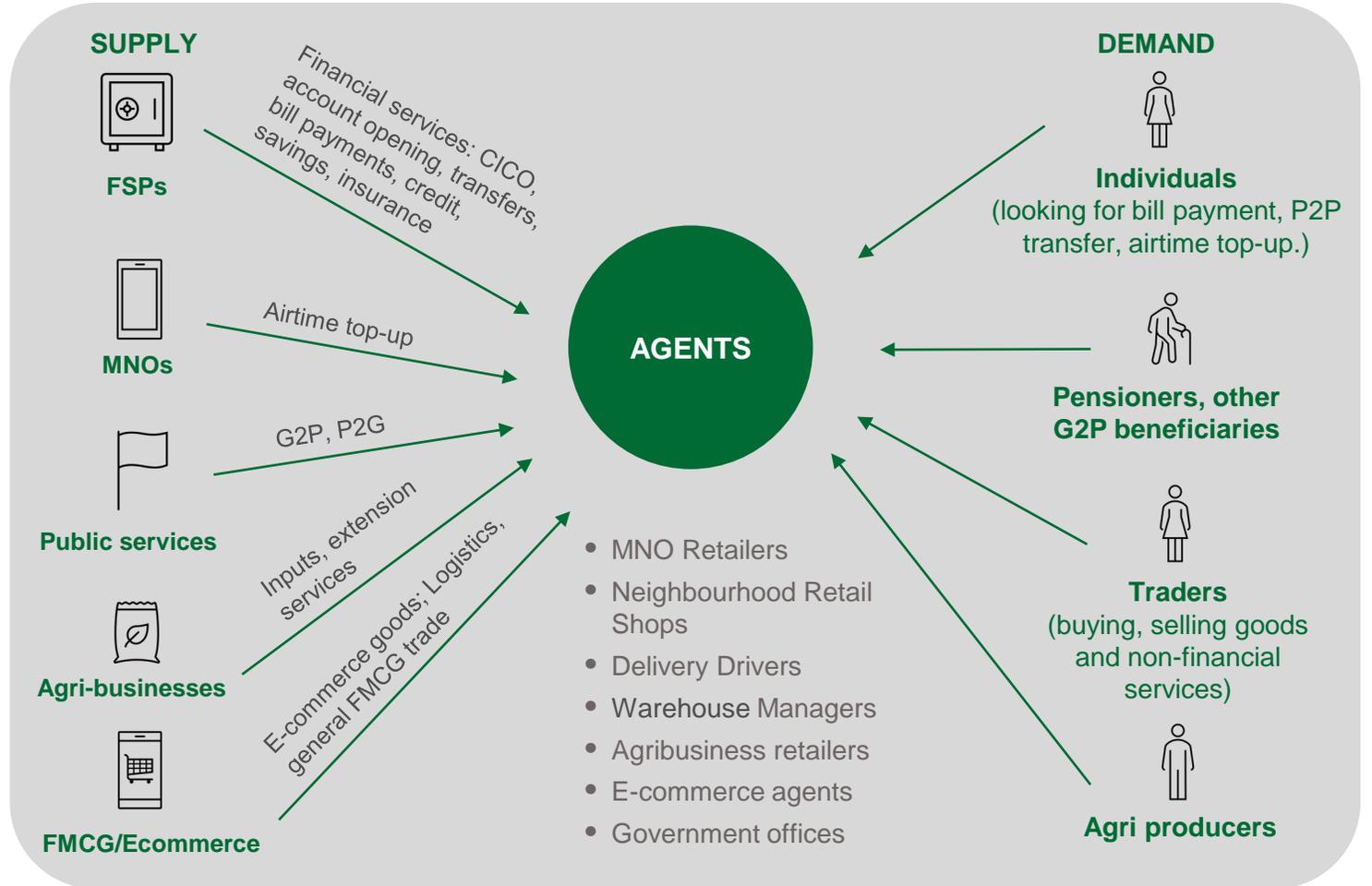
- E-commerce companies' desire to drive transactions beyond urban zones fuels rural agent network expansion
- China – Mature stage of e-commerce-led agent business models

New ANM Models are Allowing

TO GO FROM THIS:



TO THIS:

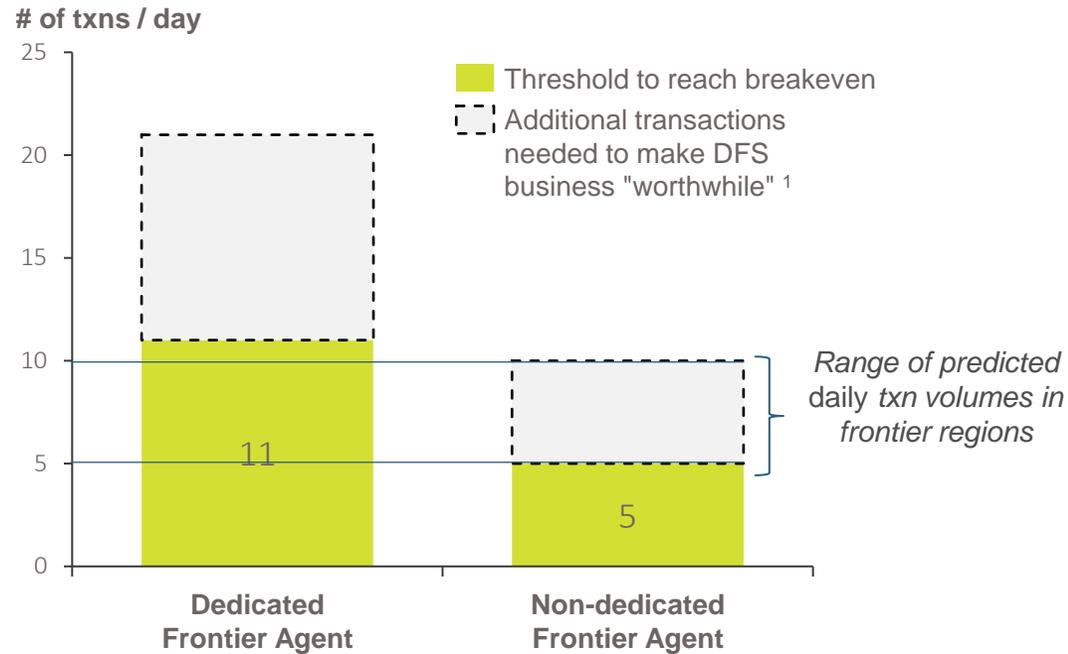


The speed and diversity of service aggregation observed has been greater among bank-led models in East and South Asia and Latin America relative to MNO-led models in Sub-Saharan Africa

Service aggregation through diverse agent profiles is key to increase average transactions per customer, agent revenue and viability

New ANM Models Show how Agent Non-Dedication and Non-Exclusivity are Drivers of Viability and Profitability at Rural Frontier

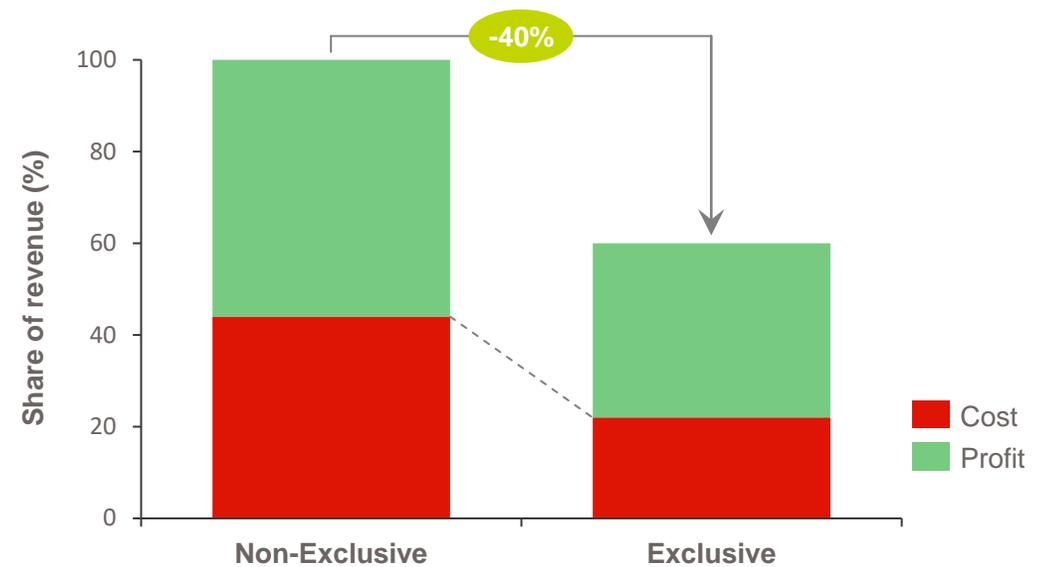
Non-dedication requires lower daily txn volume to reach agent viability



Rural agents are unlikely to reach enough txn to break even, let alone reach livable wage if agent has no add'l income

Rural agents can reach breakeven faster and more likely to find their effort to be "worthwhile" since fewer txn are needed

Non-exclusive agents tend to report higher revenue & profits vs. exclusive agents



Non-exclusive agents report 40% more total revenue than exclusive agents. Aggregate profits reported by non-exclusive agents are also higher than those of non-exclusive agents.

1. "Worthwhile" defined as sufficient revenue to compensate for capital investment and time/effort required to run the DFS business. Interviews with non-dedicated agents suggest at least 10txn/day to make business worthwhile, reflects ~50% of typical monthly income in a rural geography.

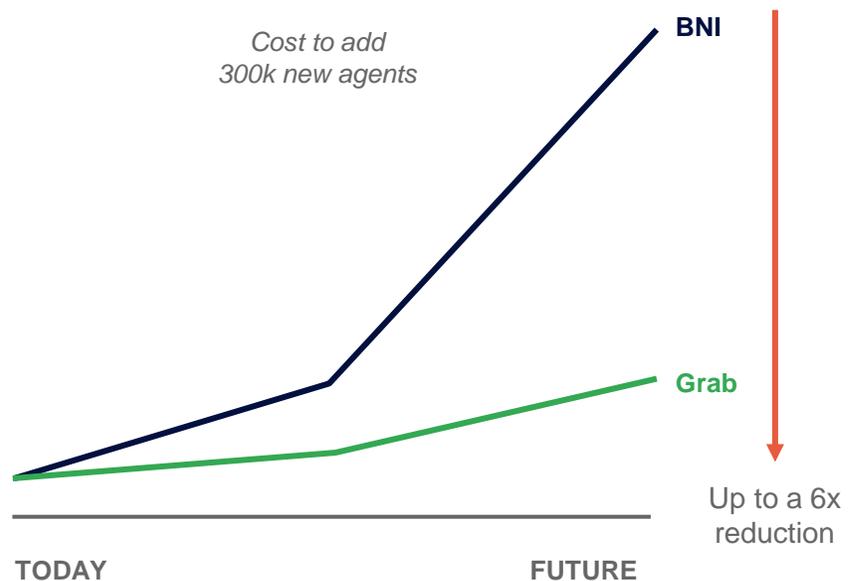
Source: BCG DFS Agent Interview Study, 2018; BCG DFS Provider Interview Study 2018. Figures come from comparing agent performance in India, Indonesia, Pakistan, Bangladesh, Kenya, Tanzania and Uganda

ANM – FSP Partnerships Lead the Next Wave of Agent Expansion in Most Emerging Markets



Example: BNI-GrabKios in Indonesia

- Bank-ANM collaboration to deliver micro-savings to low-income customers, where GrabKios acts as ANM and BNI as FSP
- Lower-cost till technology and greater economies of scope for GrabKios resulted in a **600% reduction in agent recruitment costs**



Example: Efficiencies by new-age ANMs in India

- CGAP assessment found that new age ANMs (non-exclusive and non-dedicated) are leveraging technology to **significantly reduce agent capex and opex**¹
- Although agent revenue per month is lower, costs are also lower, **enabling more agents to break even faster**

Agent particulars	Traditional ANM	New-age ANM
Capex cost (USD)	1,074	61
Opex cost per month (USD)	34	3.5
Revenue per month (USD)	162	25.5
Break even (months)	9	2

1. Digital technology reduces capex and opex through a reduction in costs for agent recruitment and equipment. Agent non-dedication and non-exclusivity not only increases agent revenue but also reduces liquidity management costs since it enables better balancing of CI and CO requests faced by the agent. Source: IDEO Colab (2019) and MSC (2020)

Interoperability is Increasingly Discussed as a Powerful Lever...

Done well, interoperability promises to improve long-term financial inclusion



Create new business opportunities



Improve economies of scale



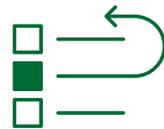
Create network effects



Increase attractiveness to consumers

... But Implementation Pace and Participation Decisions are Highly Nuanced and Context-Specific

Executed poorly, it can undermine outreach by limiting payments options

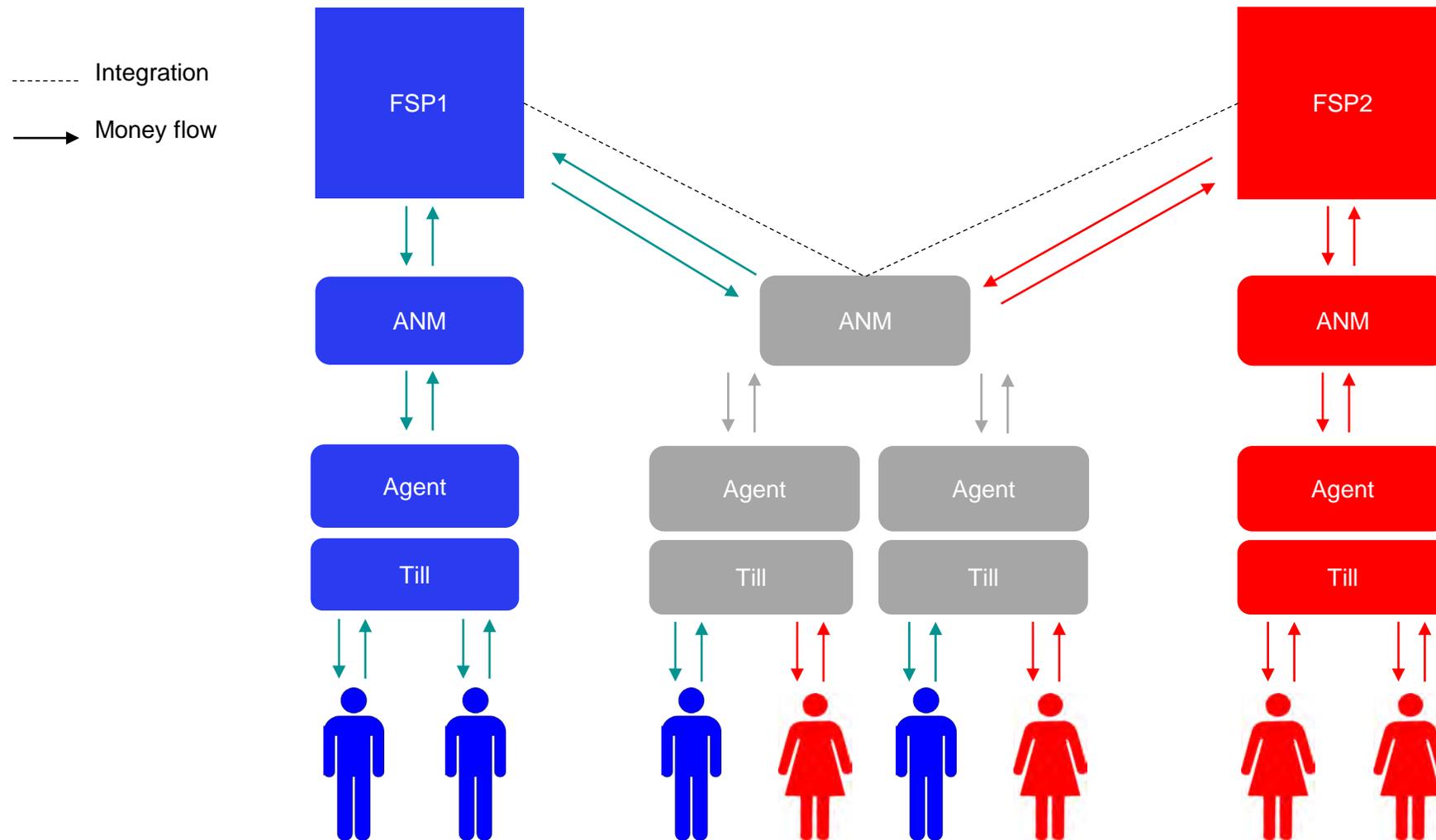


Perceived "free rider" problem can **disincentivize investment**, innovation and maintenance of infrastructure



Even if mandated in theory, in practice providers may modify fees and pricing such that interoperable payments are **too expensive** for consumers

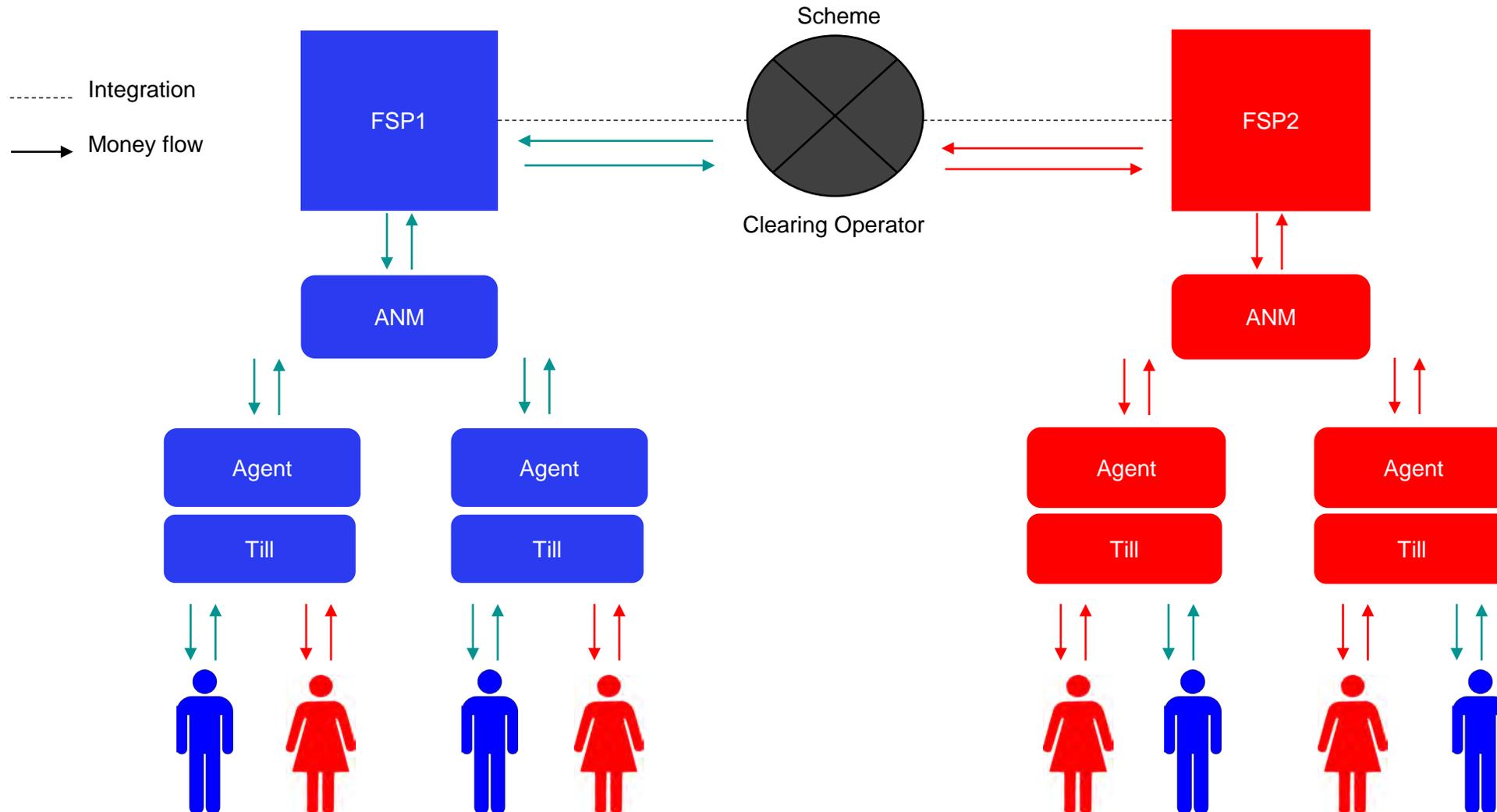
ANMs Allow for Agent Interoperability by Managing Transactions on Behalf of Different FSPs, Bringing Greater Customer Convenience and Choice



Non-exclusive ANMs enable interoperability *de facto* in markets dominated by closed loop payment systems or where there is an overwhelmingly dominant FSP

Agent interoperability means that customer of FSP1 and FSP2 can be served by the same agent

Beyond FSP-ANM Integration, Agent Interoperability may be Achieved through a Central Payment System



4. The Role of Regulation in Enabling Rural CIC0

Regulations should Seek to Promote those Features in FSP-ANM Partnerships that Enable Viable Rural CICO Networks

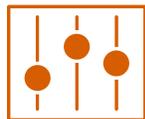
Agent regulation (both for bank and mobile money) should define the range of permitted activities, liabilities, and modalities of work for FSPs, ANMs and individual agents.

Therefore, agent regulation is key in enabling, over time, the type of features in FSP-ANM partnerships that are most associated with rural CICO viability, like agent non-exclusivity, non-dedication and interoperability.

At least three key regulatory objectives can set a path to viable rural CICO agents: (i) allowing for adequate agent tiering; (ii) allowing for adequate account tiering; and (iii) providing for FSPs to outsource adequate agent management and support, if they choose to.

To ensure adequate customer protection, FSPs should be liable for agent conduct and compliance, set principles for agent selection and monitoring, and review providers' internal controls and processes to mitigate risks.

Regulators Play a Crucial Role in Enabling and Shaping CICO Agent Networks



Regulators determine the **range of permitted activities** for different agent tiers; associated risks should inform liability and ongoing duties



Regulators determine **liability in agent agreements** between agents and principals

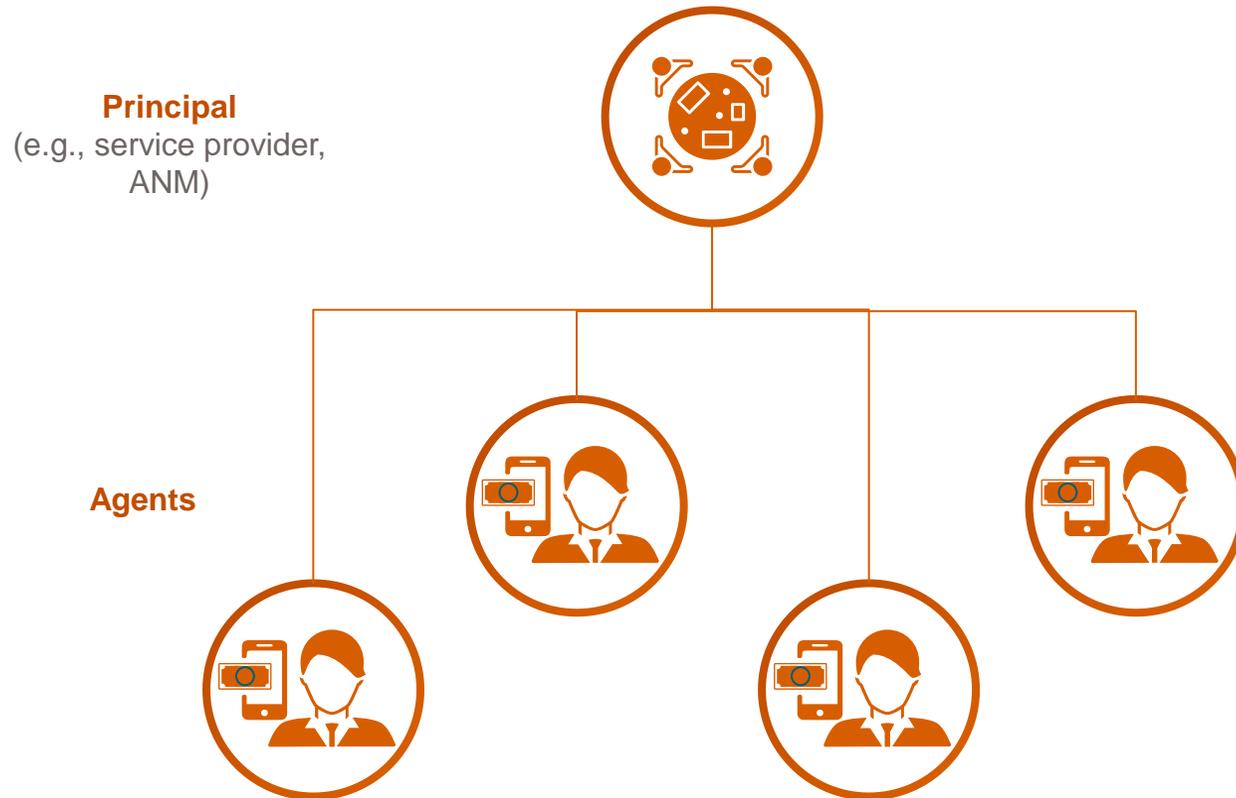


Regulators stipulate **ongoing duties of agents and principals**, including reporting, risk management, and technology responsibilities



Regulators can take a position on **agent exclusivity and agent interoperability**, based on tradeoffs in specific market contexts – particularly rural frontiers

Liability of Agents and Principals and Relationship to Permitted Activities



Every **agent** acts on behalf of a responsible **principal**

Regulators have two crucial roles in stipulating the principal's liability for its agent's actions:

- **Scope of liability** – regulators should take an **activity-based approach in assessing risk and corresponding liability**. E.g., cash-in and cash-out transactions do not increase bank liabilities but only transfer values between account-holders, whereas risks increase if agents are involved in advanced services such as credit assessments
- **Who acts as principal** – regulators should distinguish the **roles played in their specific markets** by service providers, agent network managers, agent aggregators, and other actors to allocate liability in a way that **enables and incentivizes growth**

In determining liability, regulators play a crucial role in ensuring an even playing field for providers

Principals are Generally Held Responsible for the Conduct of Their Agents Across Three Key Dimensions



Risk management

Regulators typically require principals to have appropriate **internal controls and risk management systems**, including agent training & liquidity management

In many contexts, it is helpful for regulators to **audit the process**, while **delegating supervision of agents** to principals



Security and technology

Some regulators may detail specific **technology requirements or restrictions**, as well as requirements for **IT-related risk management processes**



Reporting and records

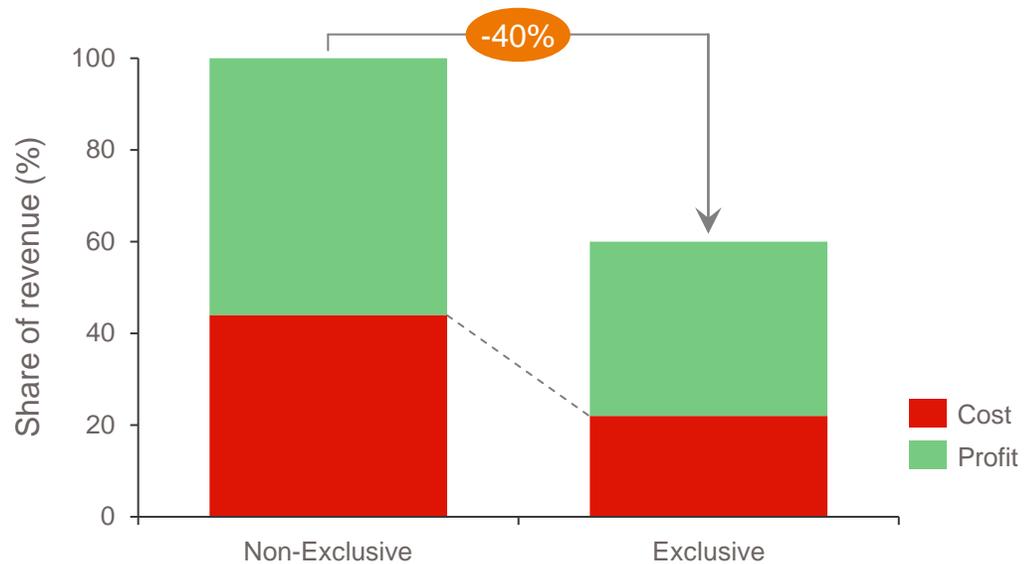
Many regulators are requiring principals and agents to report **transaction data**

This provides an opportunity to better understand uptake of DFS, particularly **segments that may be underserved, e.g., collecting gender-disaggregated data**

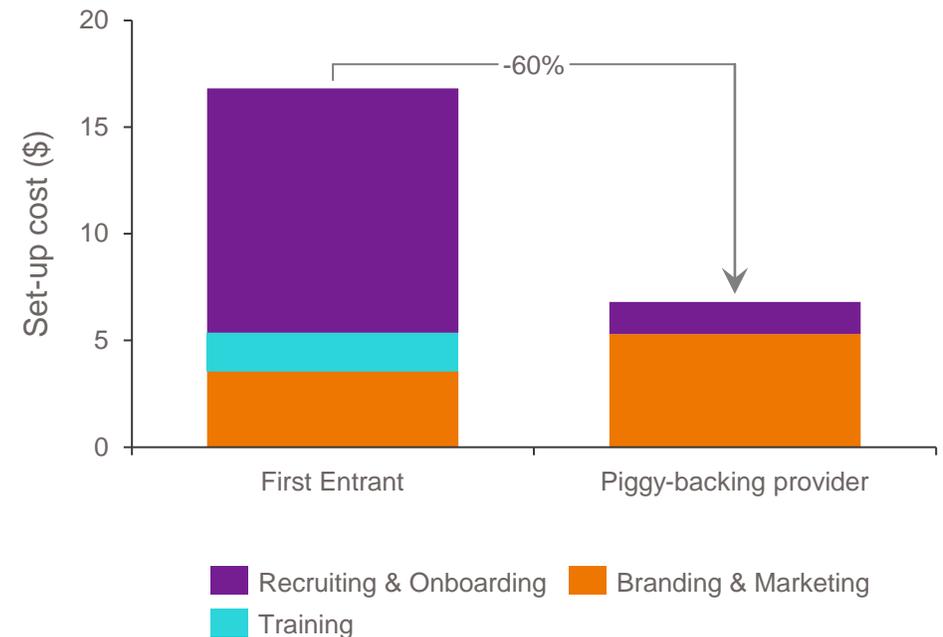
Regulators should carefully assess/**de-risk the costs** of these systems, ensure **customer data is protected**, and ensure that data is **comparable across providers**

Agent Exclusivity and Interoperability is Nuanced and Requires Balancing Provider and Agent Incentives and Viability

Rural frontier geographies tend to create conditions where exclusivity can be detrimental for agents



... However, providers are often reluctant to be first mover in frontier geographies without some limited exclusivity
First movers tend to bear much higher start-up costs



Source: BCG DFS Agent Interview Study, 2018; secondary research



CASE STUDY:

Agent Interoperability Enforced by the Competition Authority of Kenya (CAK)

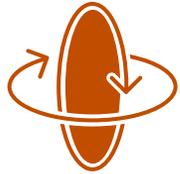
In 2014, Kenya's antitrust regulator ordered Safaricom to open up its extensive network of 85,000 agents to rivals – enforcing "**agent-level interoperability.**"

This allowed **M-Pesa competitors** to approach **M-Pesa agents** and sign them up to act as **their agents too.**

This is distinct from full **account or wallet interoperability**, as Airtel users could not send cash from their mobile wallet to the mobile wallet of M-Pesa users without incurring significant transaction costs until more recently, in **2018 – also under regulatory pressure.**

M-Pesa was **already extremely successful** at the time the CAK intervened – mandating interoperability **too early could have disincentivized further investment** in expanding access.

Comprehensive and Effective Consumer Protection Laws for DFS Address Key Dimensions in Consumer Risk



Scope and consistency

For protection to be effective, legal/regulatory framework must cover all relevant providers, channels, and products consistently



Transparency

Regulation should require providers to disclose general information on products in a transparent manner, take positive steps to ensure informed user consumption, and explain explicitly key terms and conditions



User resources and complaints

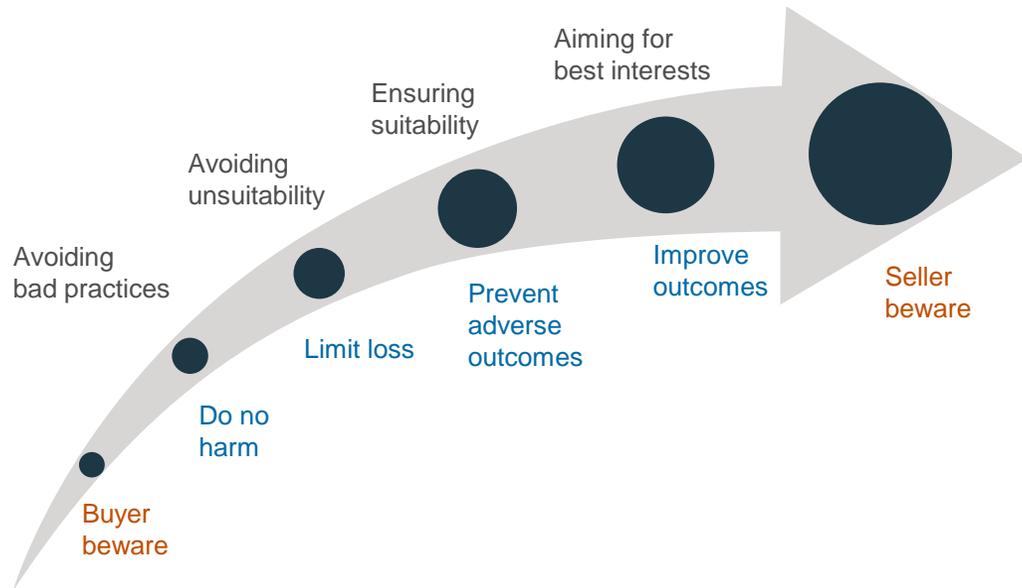
Regulators must require providers to establish an effective mechanism for receipt and handling of customer complaints; procedures should be easy to use and information easy to understand



Service delivery standards

Providers must have a digital platform that meets established minimum quality and security standards while meeting general requirement of service availability

Focusing on Customer Outcomes Entails Moving from “Buyer-Beware” to “Seller-Beware”



- Customer protection regulatory approaches have been moving from **buyer beware** to **seller beware** rules in several countries (e.g. Canada, India, Malaysia, Singapore, South Africa, UK)
- Approaches such as Treating Customers Fairly have moved to a focus on improving customer outcomes as key aspirational goals
- In practice, rules may still put emphasis on doing-no-harm, but customer outcomes are the north star

Customer Outcomes Framework from the customer perspective

	Suitability and Appropriateness	I have access to good quality services that are affordable and appropriate to my preferences
	Choice	I can make an informed choice among a range of products, services, and providers
	Safety and Security	My money and information are kept safe; the provider respects my privacy and gives me control over my data
	Fairness and Respect	I am treated with respect and fairness throughout my interaction with the provider
	Voice	I can communicate with the provider through a channel that I can easily access
	Meets Purpose	I am in a better position to increase control over my financial situation

There are Three Key Aspects that Determine how much Regulation can Enable Rural CICO Networks

Agent tiers

Adequate agent tiering enables scale by authorizing providers to **distribute financial services with various complexity levels through agents with different capability levels**, in terms of literacy/education, premises/equipment/security, liquidity, and incentives to support provider services.

Account tiers

Adequate account tiering promotes inclusion by **enabling customers with limited ID, low balances, and/or low transaction values** to open basic accounts that link them to DFS. Adequate account tiering makes more people eligible to use DFS and this drives demand for CICO and improves agent viability.

Agent management and support

Allowing the outsourcing of the agent management function to third parties enables scale and viability by **authorizing actors with specific network management skills** to help agents and FSPs sustainably distribute their services to a wider client base, including in rural areas.

Agent Tiering



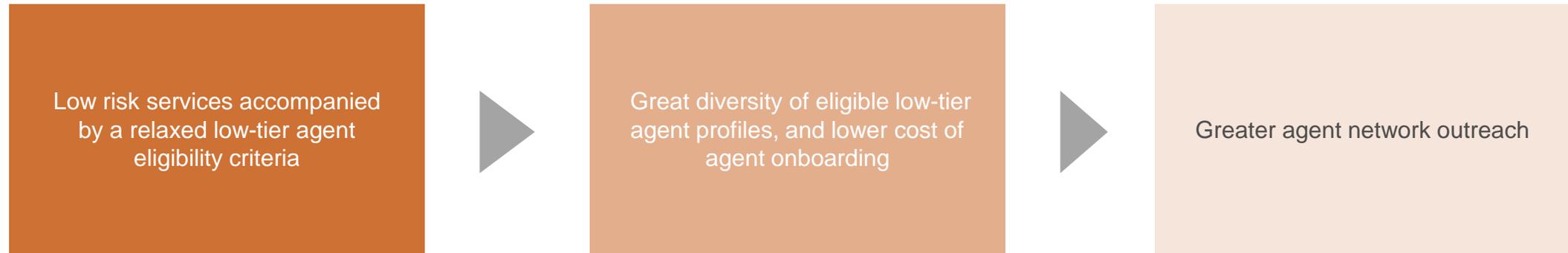
Photo: Marulanda Consultores

Agent Tiers*: FSPs can Use an Increasingly Wide Range of Agents with Different Capabilities and Reach to Distribute a Growing Suite of Services with Various Degrees of Complexity

	Low risk services	Medium risk services	High risk services	
Low capability agent	✓	~	~	▶ CICO-only agent or basic agent
Medium capability agent	✓	✓	~	▶ Regular agents
High capability agent	✓	✓	✓	▶ Full-service agents

*Regulation should define KYA requirements for agent eligibility and the list of permitted agent activities for each agent tier. Lowest agent tier usually is allowed to do CICO transactions up to a max value and assist in opening the lowest tier of customer account (refers to bank account if a bank agent or a wallet if mobile money agents). Higher tier agents can start assisting in processing customer requests related to credit or insurance; can do CICO of larger amounts; and can open higher tier customer accounts.

Basic (Lowest-Tier) Agents Play a Key Role as an Entry-Level Gateway for Customers into the DFS Dcosystem – Under the Right Conditions



An enabling regulation not only has tiers for agents but **gets the eligibility requirements (i.e. Know Your Agent) right so that FSPs can recruit those types of lower tier agents that exist in the market**

Examples of more relaxed KYA requirements observable across countries include:

- Individual entrepreneurs (natural persons) or microenterprises not formally registered as a business and without fixed premises
- Non-commercial entities like NGOs, associations, cooperatives, and non-profit microfinance institutions.
- Often, the agent's ongoing business such as a retail shop — independent of the agency functions — is required to be in operation for some minimum period (varying from six months to two years) to ensure the agent's business capacities and viability

Examples of Countries with Regulations Allowing Unregistered Individual Entrepreneurs to become Banking Agents

Brazil: The initial regulation in 2000 simply called for banks to use enterprises as correspondents (agents), including individuals, without the need for formal registration. This sparked the first large wave of agent network growth: some 250,000 agents reported in 2013, comprising 55% of all banking access points and covering all municipalities. Once agent networks matured, KYA requirements were made stricter.

Pakistan provides for tiered agents, defining qualifications for the two upper tiers but not for sub-agents (the lowest tier). **Ghana** and **Indonesia** take a similar approach. These measures are perceived to have enabled important growth in sub-agents with more peri-urban and rural reach. **Colombia** allows low-tier individual agents without a fixed location and does not require registration.

These regulations allow FSPs (and/or ANMs) to contract with unregistered entrepreneurs (often comprising the majority of enterprises) to provide DFS distribution services. It is providers, however, who sometimes ask for registration or other formalities of all agents – as part of their own KYA standards. Ultimately, FSPs are liable for the performance of any agent that represents them.

Over time, once agent networks reach greater scale, stricter requirements including enterprise registration may become the norm, as has happened in Brazil.

Customer Account Tiering



Photo: Anand Raman

Account Tiers: Progressive KYC Requirements Remove Entry Barriers for Excluded Customers and Offer a Pathway for Customers to Access more Complex Services Over Time – a Key for Financial Inclusion

FOR EXAMPLE:

Lowest KYC	Low	Medium	Full KYC
<ul style="list-style-type: none">• No photo ID• Any type of ID (e.g., letter from community leader, utility bill)• Lowest level of transaction volume and frequency allowed	<ul style="list-style-type: none">• SIM card in the name of the account holder• Alternative of e-KYC, depending on capabilities & reach of national electronic identity system• Higher transaction volumes and frequency allowed	<ul style="list-style-type: none">• Photo ID• Alternative of e-KYC, depending on capabilities & reach of national electronic identity system• Higher transaction volumes and frequency allowed	<ul style="list-style-type: none">• Photo ID• Proof of address• Proof of income• Alternative of e-KYC, depending on capabilities & reach of national electronic identity system. (But e-KYC system might not include proof of address or income)• Highest transaction volumes

In all cases: enhanced KYC if there is a suspicion of possible money laundering

The Combination of Lower-Tier Agents with Lower-Tier Accounts is a Powerful Enabler of Financial Inclusion and Rural Agent Viability

Basic or simplified accounts = accounts with simplified KYC and lower ceilings, adequate for low-risk services.

- Lower barriers for account ownership for rural customers, boosting potential demand for providers to develop tailored services
- Can be payment/e-money accounts or bank accounts – ideally both.



Basic agents = Simplified entry/KYA rules adequate for low-capacity agents prevalent in rural/poor areas

- They expand the pool of eligible rural agents thereby allowing greater geographical coverage
- They can help open lower tier customer accounts among more rural customers, and facilitate CICO to increase account usage



Increased demand for CICO at rural agents, enabling viable agent onboarding and performance while increasing customer account usage

Agent Management and Support



Photo: Anand Raman

There are Two Main Approaches to Outsourcing Agent Management and Support, and Many Mix-and-Match Models

Recruiting **master agents**
who manage their own sub-agents

Master Agent (MA)
“principal”, “primary”, or “super” agent

- **MA contracts directly with the FSP as an agent**
- **MA contracts retail agents** who do not need an individual contract with the FSP
- Often, MAs are at the apex of **their own retail chain, franchising business**, or other service enterprise (e.g., supermarket chains, petrol station chains)
- Accountable to the FSP for the sub-agents
- **FSP remains responsible for retail agents and delegates monitoring and compliance to MA**

Outsourcing to **third party ANMs**

Agent Network Manager
ANM

- ANM need **not be an agent itself**
- **ANM does not contract directly with retail agents** but facilitates a contract between the retail agent and the FSP
- Can recruit and manage retail agents from **across industries and commercial activities** (e.g. pharmacies, grocery shops, agro-dealers, warehouses, appliance stores)
- **FSP remains responsible for all its agents**

The two approaches are not mutually exclusive.

The same person or entity may be a master agent and at the same time become an ANM for one or more FSPs -- assuming all regulatory criteria are met (i.e. non-exclusive ANM or MA, which enables better agent unit economics).

Terminology of ANM and MA varies a lot, although roles and functions are similar across markets.

In this deck we define ANMs to include all types.

It is Important for Regulation to Describe the Roles and Responsibilities of ANMs and Their Regulated Financial Institution (FI) Partners*

Approaches that enable rural CICO expansion:

ANMs explicitly provided for in regulation

Regulation should clearly state that FIs can outsource agent management functions to ANMs (or Master Agents). But FIs retain full accountability over the actions of agents. This creates legal clarity.

Covered under general outsourcing rules

Full accountability of FIs implies the contract with ANMs should include risk management practices. It is recommended to let FIs and ANMs define what those practices should be, but require them to include the practices in their contract.

Enable non-exclusive ANMs

Avoid imposing ANM exclusivity to a single FI, and allow for FIs and ANMs to define such contract feature. Global evidence suggests non-exclusive ANMs allow for more viable agent points.

Avoid silence on ANM outsourcing

When regulation is silent on whether FIs can work with ANMs, it creates legal risk and uncertainty and disfavours FSP investments in partnerships with ANMs.

*See country examples of how ANMs are provided for in Appendix

5. Regulations to Promote Gender Equity

Regulation should Identify and Address Context-Specific Gender Constraints that Prevent Women from Participating as Customers and Agents

Although the gender gap in financial services access and use is decreasing globally, it persists to date with various degrees of severity in most countries.

Given that CICO is a strong driver of DFS use, the lack of women's access to adequate CICO networks helps explain the persistent gender gap in DFS. Therefore, removing barriers for women to use CICO contributes to more gender-equitable digital financial systems.

Gender barriers are complex and context-specific. Regulation should focus on identifying them and addressing them in various ways to increase women's participation in CICO networks as customers and agents. Examples include making it easier for women to meet KYC and KYA requirements, eliminate discriminatory regulation based on women's marital status, and requiring FSPs to report sex-disaggregated data on customers and agents to inform provider practices, policy and regulation.

Women Represent a Significant Fraction of the Global Financially Excluded Population

Progress has been made to address the gender access/usage gap in recent years:

The number of women holding financial accounts grew by **600 million** between 2011 and 2020

In this period, **140 million** women opened their first financial account specifically to receive G2P payments – signaling strong momentum in public sector-driven initiatives to address gender equity

However, much work remains to be done to achieve gender parity

182 million women worldwide remain without a financial account (2021)

6 percentage points is the average gap between men and women in likelihood of owning a financial account among developing economies (with high variability across countries) (2021)

About **60%** of all unbanked adults in China and India are women



Improving gender equality at a faster pace can unlock enormous global value - as much as ~\$28 trillion¹ to be added to global GDP by 2025 if labor market gender parity is achieved (increase of 26% compared to baseline projections)



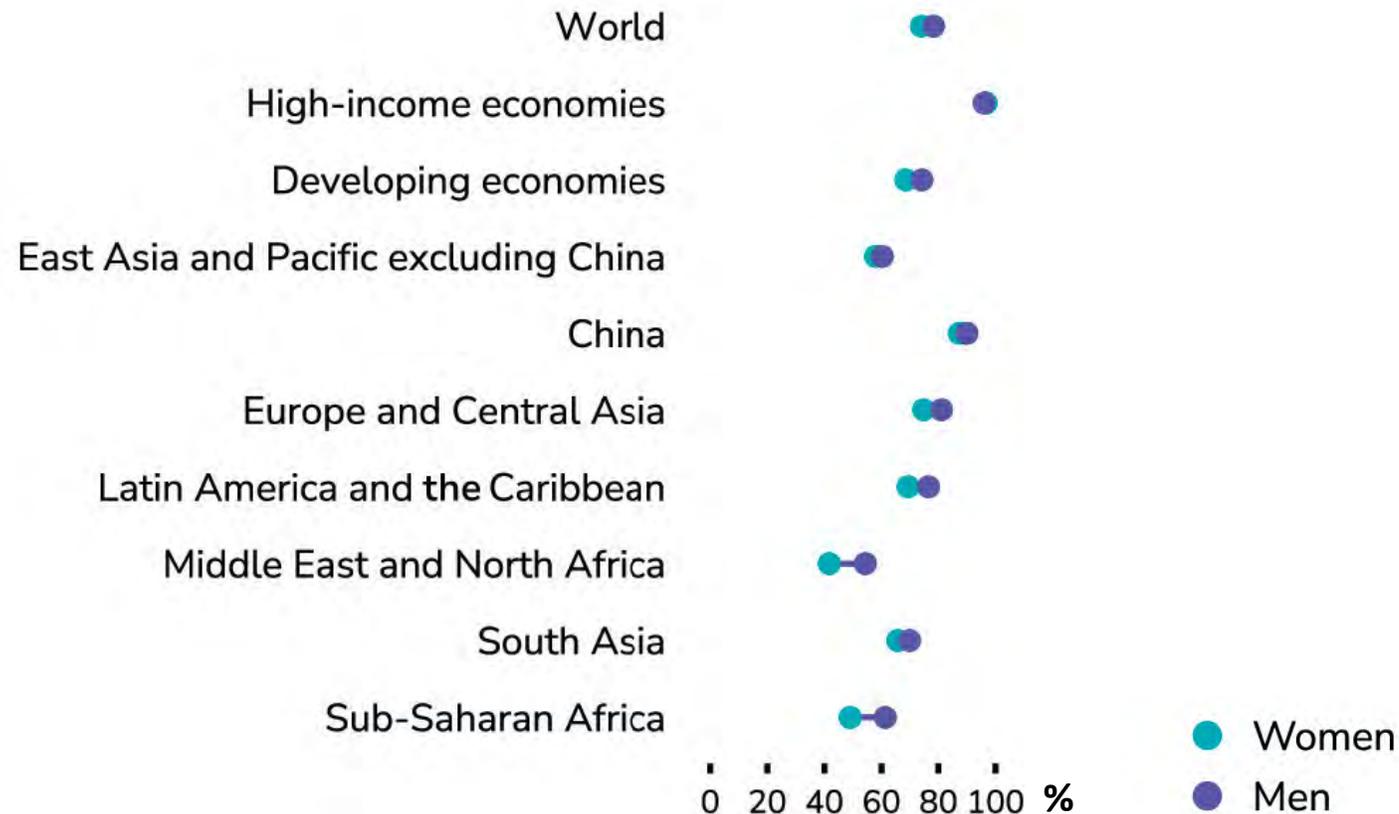
DFS: key mechanism in addressing the financial access/usage gender gap

It is essential for women to access and use digital transactions and for women entrepreneurs to access digital finance to achieve gender equality in financial services

- GFPI

Women Continue to Face Barriers to Financial Inclusion Across Geographies...

Women and men with financial accounts by regions of the world (2021)



The gender gap varies across the world. Currently it is more pronounced in Sub-Saharan Africa (13 percent) and the Middle East and North Africa (12 percent).

Source: Global Findex 2021

... Including Barriers to Accessing/Using CICO Services



Example: In Nigeria, Diamond Y'ello faced challenges to convert women customers and encourage active usage

- From 2014-2016 MTN, Nigeria's largest mobile network operator (over 63M subscribers), and Diamond Bank partnered to launch Diamond Y'ello, a mobile-based bank account facilitated by agent networks
- Only 36% of all accounts were held by women, of which 2% were active
- Women's active account adoption/engagement faced three major obstacles:
 - Overcoming old habits and status quo
 - Limited first impressions of products and agents
 - Transaction distrust in products and agents

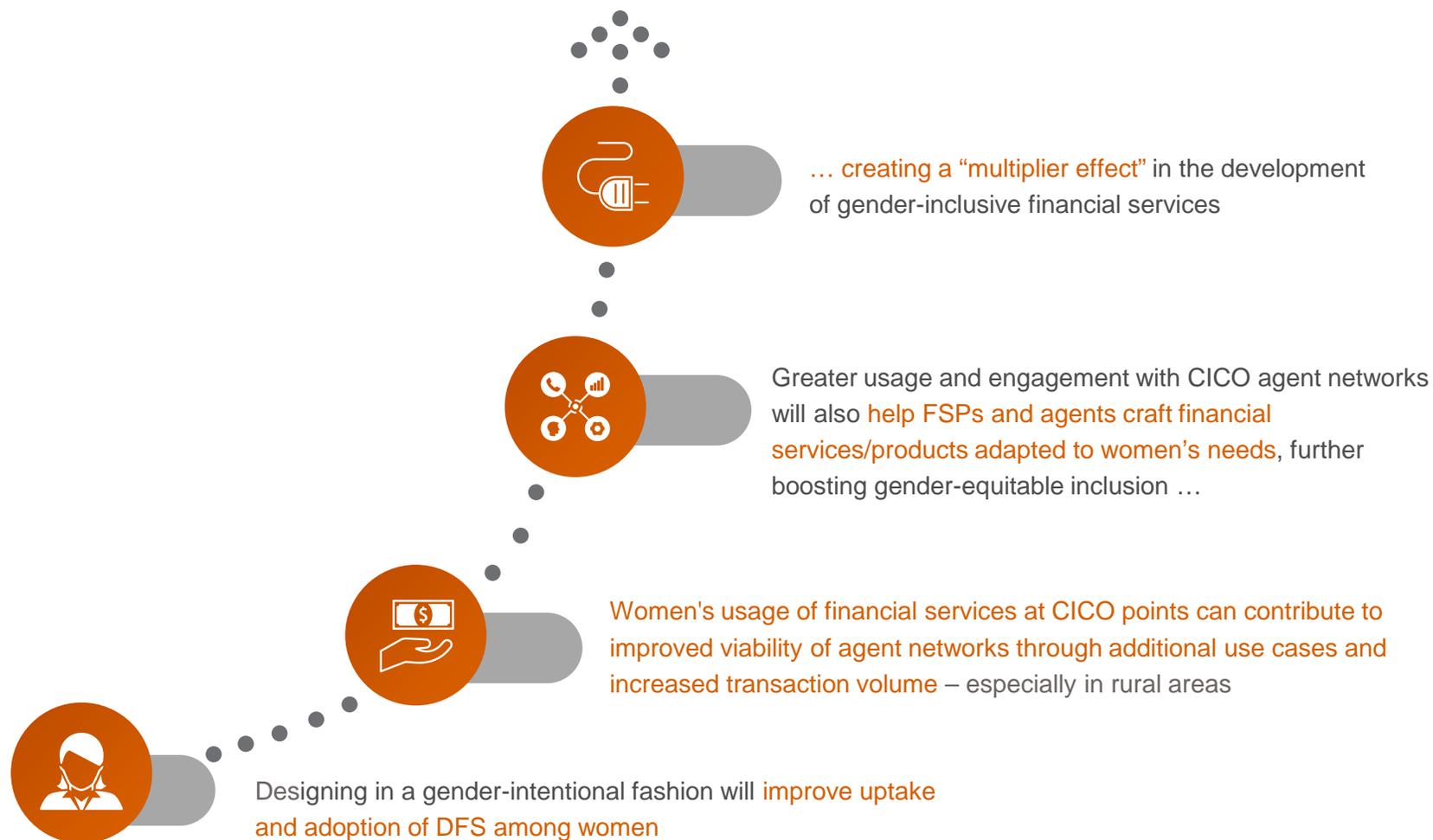


Example: Jazz experienced an acquisition issue among women customers in Pakistan due to its agent network composition

- In 2017 Jazz, Pakistan's largest mobile wallet provider, identified the women's market as a priority segment for its e-money service Jazzcash
- While women who were successfully onboarded demonstrated strong usage, only 11% of all clients were women
- Acquiring women customers was challenging because 95% of Jazz agents were men—transacting with male agents disrupted social norms
- Women faced several behavioral biases limiting their adoption of mobile money through Jazz's agent networks:
 - Services' lack of relevance for women's needs
 - Providers' lack of awareness of how their service delivery processes are inconvenient for women
 - Social norms that prevent women to visit agents

Source: Women's World Banking

Taking a Gender Lens in Designing Solutions can Accelerate the Process of Reaching Full Financial Inclusion



The more women and girls that use [DFS] platforms, the more of their data inform new products, innovations and decisions by the private and public sectors ... this can accelerate gender equality

- GFPI

Regulation Promoting Equitable CICO Networks should Explore Context-Specific Barriers to Women's Participation as FSP Customers and Agents

Women as customers

- Address regulation constraints that make it harder for women to have an ID, register a business and inherit assets
- Address regulation constraints that disadvantage women's credit or account-opening applications if single
- Modify regulation to enable women who have low mobility due to social norms to apply for accounts
- Modify regulation to recognize women head of households
- Request FSPs to report sex-disaggregated data on their customers

Women as agents

- Address regulation constraints that make it harder for women to meet Know-your-Agent requirements (e.g. ID, business registration, minimum revenue)
- Address regulation constraints that disadvantage women's applications to be an agent if single
- Account in regulation for agent types that are better suited to serve women, given discriminatory social norms (e.g. roaming agents and women agents)
- Request FSPs to report sex-disaggregated data on agents and their performance

Source: [World Bank \(2018\)](#); [CGAP \(2021\)](#)

6. Customer Protection

Customer Protection Should be Embedded into Agent Regulation

Regulators should hold providers liable for agent conduct and compliance, set principles for agent selection and monitoring, and review providers' internal controls and processes to mitigate risks.

It is therefore important to establishing regulation that defines what FSPs are accountable for, clarify what aspects of agent operations they should monitor, and requires the establishment of FSP's own mechanisms to monitor agent behavior.

Key Agent Risks Regulators Should Consider

Misbehavior by agents



Reputational risk



Operational and IT risk

Weaknesses in the systems and internal controls specifically related to agents

Agents performing KYC



ML/FT risk



Consumer risks

Agent frauds, lack of cash, manipulation, harassment, abuse, discrimination, compromised privacy

Protective Regulation Holds Providers Liable for Agent Compliance and Conduct, Sets Principles for Agent Selection, Training, and Monitoring

Regulation should specify explicitly that DFS providers are liable for the acts and omissions of their agents, employees, and third party service providers (e.g., agent network managers, master agents, super agents, or other distributors)

Regulators should establish and supervise:

- Requirements for agents engaged in DFS delivery, e.g. identification requirements and other qualifications
- Conduct regulations. There should be no material differences between agents of banks and agents of nonbanks for a consistent supervisory framework and to create a level playing field that protects consumers and fosters competition and innovation

Regulators should require that DFS providers:

- Conduct adequate compulsory onboarding and ongoing training of agents
- Require agents to display relevant information for consumers, such as prices and fees, in a visible manner
- Provide a toll-free complaints channel for agents to contact the DFS provider
- Conduct regular monitoring of agents to ensure they offer safe and reliable services and comply with all relevant operational, legal, and conduct requirements
- Maintain an adequate framework for agent liquidity and float management
- Submit standardized electronic reports on agent onboarding, trends, sanctions, and bans that will enable the regulator to monitor trends in the development of the agent business and emerging risks

Source: [ITU Focus Group Digital Financial Services: Main Recommendations](#) (ITU, 2017)

Consumer Protection Provisions in Agent Regulations Require FSPs to Ensure Their Agents Adhere to Consumer Protection Rules and Principles

Regulatory aspect	Details	Country examples
Treating customers fairly	Equitable, honest and fair treatment of all customers, notably of vulnerable groups	Ghana
Transparency	Transparency and the disclosure of clear, sufficient and timely information on the fundamental benefits, risks and terms of any product or service offered in an objective and accessible form	Ghana
Informing customers of rights and responsibilities	FSP must implement measures to ensure customers are adequately informed of their rights and responsibilities	Ethiopia
Complaints and redress mechanisms	FSP must provide a dedicated customer care number to lodge complaints by its customers, establish a complaints redressal mechanism, ensure that complaints are resolved within seven days, and keep records of complaints and how they are resolved	Ethiopia
Data protection and privacy	Protection of customers' privacy as well as tangible and intangible assets related to the service, notably including personal details, financial information and transaction data	Ghana
Responsible business conduct	Responsible business conduct of all staff and authorized agents	Ghana
Information available at agent locations	Name of FSP, FSP logo, list of services offered, notice if network is down that no transactions will be carried out, list of charges and fees per service, contact info for FSP, and certificate of agency from FSP	Ethiopia

Source: [Bank of Ghana Agent Guidelines 2015](#), [National Bank of Ethiopia Use of Agents Directive 2020](#)

7. Geospatial Mapping

Geospatial Agent Coverage Data is a Powerful Tool to Inform Regulation that Better Enables Rural CICO Networks

For regulators to monitor how and which type of agent networks are expanding to underserved and excluded areas (or not), it's imperative to complement agent density data with measures of agent geospatial coverage.

Unlike agent density, which measures number of agents per capita, geospatial coverage captures how the number of agents varies with the population density in each part of the country.

Geographical coverage can be combined with other data sets, like economic census, ITC infrastructure, and merchant location data to develop more accurate predictions of areas where new agents can be viable but have not been activated by FSPs due to information asymmetries.

Regulators can engage in an industry dialogue to agree on the type of geospatial data FSPs can feasibly report. The analysis of such data can be very valuable to inform regulators if KYA, KYC and agent outsourcing regulations need to be improved to further CICO network expansion.

To Inform Regulation it is Critical to Go Beyond Collecting Agent Density Data and Measure Geospatial Coverage to Understand CICO Access

While agent density can be a helpful macro-level measure, customer access is more nuanced and highly impacted by geography



Agent density

Agent-focused metric; typically defined as the number of CICO network agents per 10,000 population

Does not account for spread of agents, density of population, or other factors determining access

Helpful metric for defining overall market maturity, but does not pinpoint access gaps



Geospatial coverage

Consumer-focused metric; typically defined as % of population located within a geographic radius from CICO access point¹ (bank branch, ATM, agent)

Accounts for variations in population density, infrastructure connectivity, and economic activity

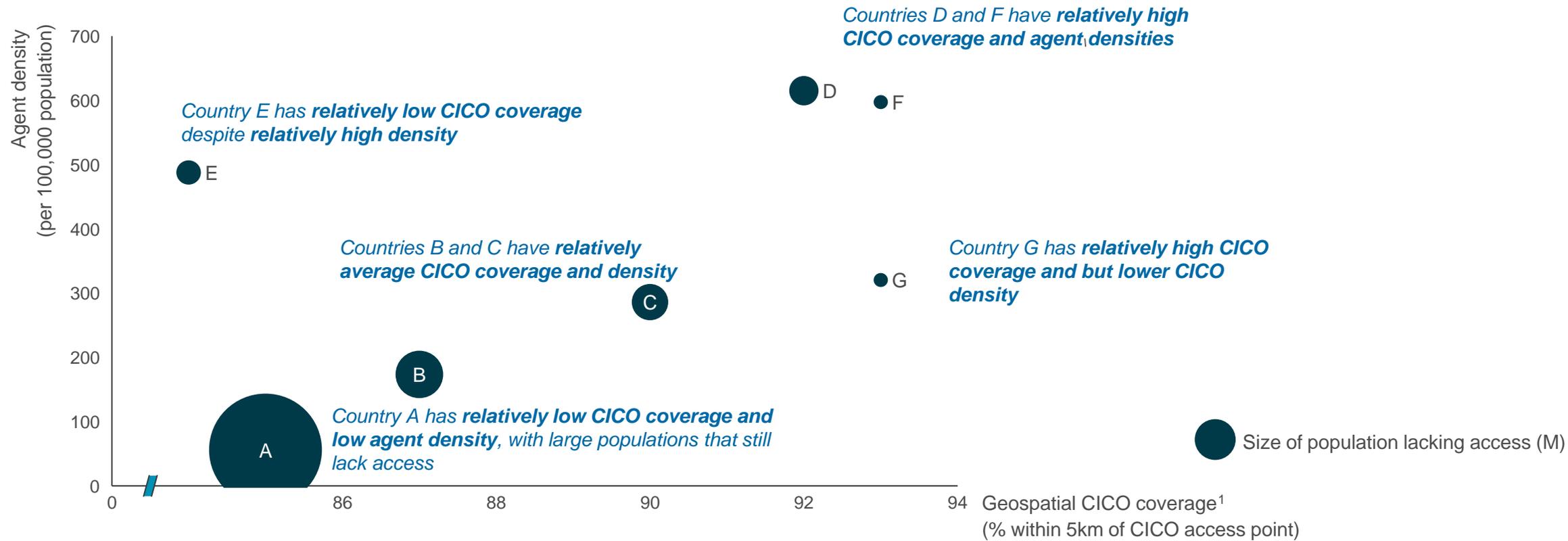
Helpful metric for identifying gaps & homing in on root causes affecting network expansion

1. Unless otherwise noted, coverage defined as % of population located <5km from CICO access point (bank branch, ATM, agent, per analysis of Financial Inclusion Insights (FII) survey. Fraym provides probabilities of CICO access by distance bands (<1km, 1-5km, >5km)

Source: Landscan – population; Fraym CICO layer based on FII consumer survey data; BCG analysis

Comparing Measures of Agent Density and Geospatial Coverage Illustrate Importance of Holistic Measurements to Assess Real Access

Illustrative: Agent density vs. geospatial CICO coverage for 7 countries (2017-2020 data)



1. Coverage defined as % of population located <5km from CICO access point (bank branch, ATM, agent, per analysis of Financial Inclusion Insights (FII) survey
 Source: Landscan – population; Fraym CICO layer based on FII consumer survey data; Esri bank & ATM POI; insight2impact FSP Maps; IMF FAS 2017; BCG analysis

Customer Travel Preferences and Behavior are Important Inputs to Determine Appropriate Radius of Access

Illustrative:



India



Indonesia



Pakistan



Bangladesh



Tanzania



Kenya



Uganda

Market research reveals:

Government planning conducted with village as the unit of analysis

Village boundaries averaged ~2.5km radius

5km is the max median distance travelled daily

20km is max distance traveled for less frequent causes

Rural individual travel is mostly focused within the village due to lack of vehicle ownership

5km is max typical distance for health-related travel

<40% of rural population own bicycles

Vast majority of rural residents currently travel <5km for financial services

Rural secondary school children walk an average of ~3km to get to school

In 85% of regions, average travel is <5km for firewood

~5km typical distance traveled for weekly market trips

~6 km median distance traveled by lowest income quintile for fertilizer market

Daily trips usually limited to within 5km

~12km is a typical distance for weekly trips

Potential target radius based on market research:

1km in urban;
2.5kms in rural

5km

5km

5km

5km

5km

10km

Customer research to determine travel preferences should include subjects from different segments, e.g., women, who may face different constraints on mobility

Note: If travel time rather than distance is reported, assumed a travel time of 5km/hour; 2. Some studies lack detail on primary mode of transport for the population of interest.

Sources: GIZ, Improving access to financial services in Indonesia (World Bank, 2010), Rural Transport and Health – A Pakistan Perspective (NED University of Engineering and Technology, 2019), The Reality of getting from point a to point b in rural Kenya (2016), Tanzania Household Budget Survey Main Report (HBS, 2012), Study on energy for cooking in developing countries (OECD, 2006), Market access and child labour (Muhumuza, 2012), Rural transport and livelihoods in Uganda (Naiga, 2015), Challenging pathways to safe water access in rural Uganda: From supply to demand-driven water governance (International Journal of the Commons, 2015)

Geospatial Data is Valuable to Inform Public-Private Collaboration*

Measuring/investing in the collection of geospatial data provides value outside of just enabling interventions geared toward financial inclusion...



Geospatial data can be leveraged to support broader public/ private use cases:

- Development of transportation and telecommunications infrastructure
- Public health programs and infrastructure e.g., national immunization programs
- Leveraging ITC and health programs to expand agent networks

...and has implications for national economic policymaking/ strategy



Government stakeholders can draw upon geospatial data as a proxy for understanding economic activity at a sub-national level to inform economic strategy and resource allocation e.g., distribution of G2P payments

Public- and private-sector stakeholders must align on common objectives and use cases for developing/maintaining geospatial data, in addition to defining clear roles for how either side will contribute to collecting the data

*See country examples in Appendix

8. Appendix

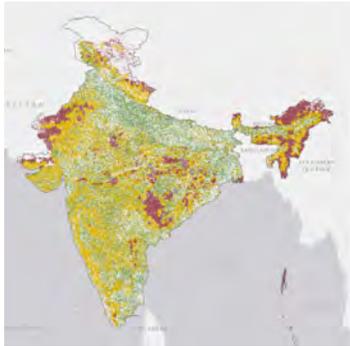
Examples of Agent Geo-Spatial Mapping



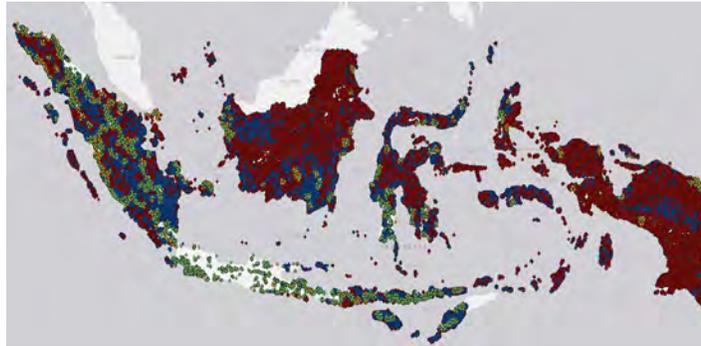
Photo: Emilio Hernandez

Geospatial Mapping Methodology has been Used to Identify New CICO Access Points Needed and Their Likely Viability in Various Countries

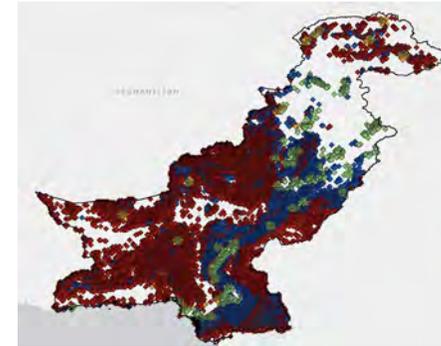
India



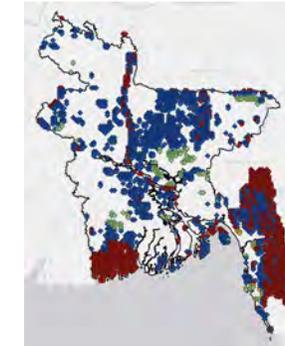
Indonesia



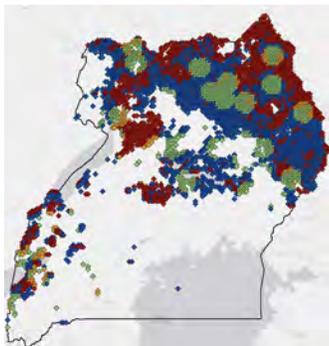
Pakistan



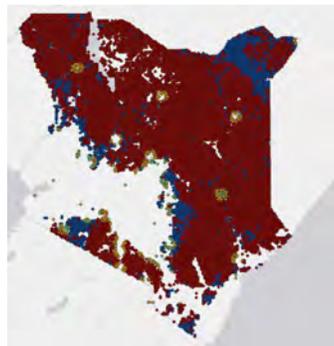
Bangladesh



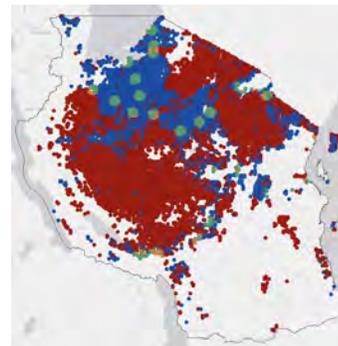
Uganda



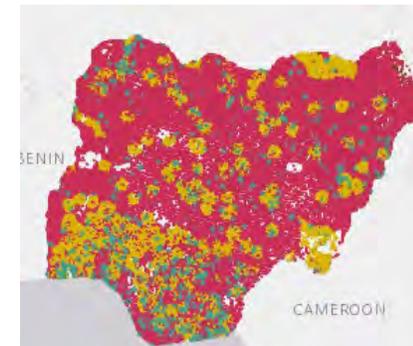
Kenya



Tanzania



Nigeria



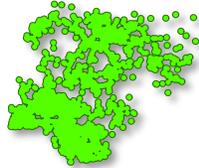
Viability:

-  Economically & operationally viable
-  Economically viable, operationally unviable
-  Economically unviable, operationally viable
-  Economically & operationally unviable

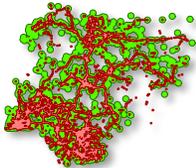
Note: Shading of colors in maps may vary based on user interface, but general color scheme (red, yellow, green, blue) is consistent across all countries.

Detail: Example of Agent Geospatial Mapping Analysis

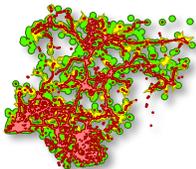
Financial infrastructure



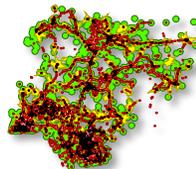
Economic activity



Cell towers



Power connectivity



Overlaying maps



a Data preparation and preprocessing

- Processed and converted addresses of ~4,000 POIs into LAT/LON
- Prepared data using Alteryx
- Mapped banks, cell locations, power infrastructure, and economic activity POIs

c Spatial Intersection and Funnel Methodology

- Calculated population coverage for individual layer—cell towers, economic, power and financial POIs
- Performed geospatial intersection using geoprocessing tool in ESRI's Spatial Analyst
- Created layers and intermediate report/summary using Alteryx modules

b Population-based Catchment Analysis

- Generated drive time polygons across various scenarios—5 mins, 10, 15, 30 mins etc. using street network dataset
- Population catchment summary to achieve 80% of the population

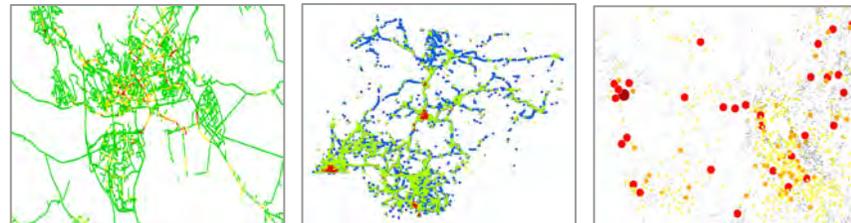
d Visualizations

- Visualized multiple layers with their corresponding coverage areas using ESRI's ArcGIS online
- Added dynamic functionality, allowing option to zoom in/out, select layers, and see corresponding details

Single view and spatial framework of multiple layers

Population-based catchment analysis summary report

Visualization dashboard—ArcGIS online



Modeling proposed locations/territories on an interactive dashboard

Generated catchment summaries

Scenarios	Drive time (Mins)	Banks		Banks + ATMs		Banks + ATMs + Power/Mobile Connectivity	
		Total Population Covered	Population Coverage (%)	Total Population Covered	Population Coverage (%)	Total Population Covered	Population Coverage (%)
1	5	43,591,548	23%	44,052,530	24%	43,356,363	23%
2	15	79,499,180	43%	79,859,470	43%	77,304,241	42%
3	30	104,986,214	56%	105,377,549	57%	95,149,814	51%
4	45	124,786,740	67%	125,159,839	67%	104,340,443	56%
5	60	139,798,211	75%	140,129,720	75%	108,877,141	58%
6	70	148,012,657	79%	148,229,498	80%	110,715,907	59%
7	72	149,515,568	80%				

Catchment Summary Report

Examples of How ANMs have been Provided for in Regulation



Photo: Anand Raman

Globally, ANMs are Addressed Differently with Varying Degrees of Regulation

Some countries provide explicitly for ANMs.

1. Regulations clearly state the powers and duties of ANMs, their eligibility criteria and accountability
2. This is advantageous in allowing:
 - a. The outsourcing or delegation of functions that may otherwise require a financial license, and
 - b. The unbundling of network management from high-level agent functions.

Other countries have outsourcing provisions in their financial regulations, which are understood to allow for the use of ANMs.

1. This enables a similar pure-ANM arrangement (assuming this is otherwise legal).
2. In the absence of explicit rules, the ‘default’ provisions—and therefore what a typical ANM contract consists of—may be unclear.

A third approach is to provide for high-level agents that may also take on ANM functions for one or more FSPs.

1. A key cross-cutting issue is whether regulators allow ANMs and master agents to be **non-dedicated** (multiple business lines) and **non-exclusive**.
2. This enables them to aggregate diverse services while enabling some level of interoperability and supporting the viability of agent networks.

Example: India and Colombia

ANMs are often private contractors that also engage in other nonfinancial businesses, or they are themselves agents and have networks of service points. ANMs have devised agent management models that enhance rural agent viability. Regulators let FSPs and ANMs decide if their contracts are exclusive or not, resulting in leading ANMs being non-exclusive. The governments of both countries gave subsidies to providers and their agent networks that helped them kickstart rural operations.

- India's PMJDY G2P scheme resulted in the rapid opening of bank accounts, bringing 404 million Indians into the formal banking system between 2014 and 2020.
 - The total number of [agents \(business correspondents\)](#) rose from 35,000 in 2010 to 988,000 in 2019.
 - From 2011 to 2017, [the rural adult population with access to a bank account](#) rose from 33% to 80%.
- India now has a fully interoperable agent network (Aadhaar-enabled*) which allows cash withdrawals for any provider from an agent point. Therefore agents can be exclusive to a single provider but still service customers from other providers.
- Colombia developed [two distribution models](#):
 - A direct model, used by banks with an expansion strategy that allows them to generate enough transactions to ensure a sustainable business model at the agent level.
 - An outsourced model, using diversified ANMs, which assures high enough transaction levels at agent points by aggregating financial transactions with other types of transactions, e.g., lottery sales, top-ups or postal services.

By 2018, Colombia had [banking agents in 100% of the country's municipalities](#) and [81% of adults had access to a financial account](#) (compared to 72% and 56% in 2008).

*Aadhaar-enabled means accounts are linked to a unique personal identification number, which can be verified using a wide variety of ID documents

Example: India – Regulations

The India regulations do not mention ANMs per se. Agents (business correspondents) may have their own networks of outlets or franchises, and banks have the ability to contract out functions including the management of agent networks. The agent managers may themselves be banking agents (BCs), or the provider may outsource agent management services to a third party that is not contracted as a BC.

RBI's *Guidelines on Outsourcing* (2006) provide a framework for banks seeking to outsource components of their financial services.

- *Outsourcing* = a bank's use of a third party (affiliated or not) to perform activities on a continuing basis that would normally be undertaken by the bank itself. No prior approval by RBI is required. Nor are the issues of exclusivity and dedication addressed, leaving the parties free to choose.
- Banks continue to be responsible for outsourced functions. They should have a Board-approved outsourcing policy and establish monitoring and control functions for outsourced activities. Banks should not outsource core management functions, e.g., internal audit or decisions on KYC compliance, loan approval, or investment management.
- Appropriate due diligence should be performed to assess the capability of any service provider to comply with obligations in its outsourcing agreement. This includes checking past experience, competence, financial soundness, business reputation, security and internal control, and vetting of employees. Key provisions of outsourcing agreements are defined in detail.
- RBI reviews implementation of the Guidelines, especially for *material* outsourcing (i.e., critical for business operations, reputation, profitability).

Example: Colombia – Regulations on Agents and Outsourcing

- Colombia's regulations, like India's, do not mention ANMs.
- A 2010 decree enables FSPs to **contract third parties that specialize in providing technical and administrative services to agents** (correspondents), including management and processing of data.
- The 2020 decree on agents (see above) provides that **FSPs may enter agreements with their agents concerning whether and in what manner the agents may use their offices, branches, franchisees, and platforms to carry out the FSPs' business**. Such agreements must state the FSPs' responsibility to ensure the integrity and quality of the services provided in this way.
- **Thus, the regulations allow for agent management functions according to these two models.**
 - They do not prescribe what functions the agent managers (third parties or correspondents) should perform. Rather, the rules encourage banks to report their contracts with the agents/managers to the regulator and to include clear contractual provisions addressing risk mitigation as well as the bank's continuing legal responsibility for agents' actions.
 - Critically, the rules leave it open to the principals and agents/agent managers to choose a non-exclusive contractual arrangement.

Example: Ghana – Explicit ANM Provisions

Ghana's Payment Systems and Services Act (2019) distinguishes ANMs from master agents.

- An “agent network manager” is an entity to which a principal has outsourced part or all of the operational responsibilities associated with managing its banking, e-money, or payment services agents. This includes recruitment, training, compliance monitoring, liquidity management, and general support. The ANM is not a high-level agent and does not contract the agents. The direct contractual relationship with the agent remains with the principal.
- A “master-agent” is a legal person who has an agreement with a principal to contract and manage agents that provide banking, e-money, or payment services to customers on behalf of the principal—i.e., a high-level agent. A master agent must meet such eligibility criteria as financial soundness, cash-handling capabilities, and systems for security and internal control. Bank of Ghana has authority to directly supervise agents and master-agents as needed.
- Either an ANM or a master-agent may handle recruitment, training, compliance monitoring, liquidity management, and general support for agents. ANMs are not agents themselves (although they could become agents if qualified). Master agents are themselves agents, thus have contracts with subordinate agents and with the FSP. Issues of exclusivity and dedication are left to the discretion of the parties.
- There are no eligibility requirements spelled out for ANMs, though FSP principals have strong incentives as well as a fiduciary duty to select and monitor them carefully. In contrast, master-agents are subject to eligibility criteria, due diligence processes, and regulatory oversight.

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