

The background of the slide features a scenic landscape. On the left, a large, dark green mountain peak rises above a misty valley. To the right, a series of terraced rice fields are visible, with water reflecting the light. The sky is a pale, hazy blue. A large green rectangular overlay covers the left and center portions of the image, serving as a background for the text.

# BCG

THE BOSTON CONSULTING GROUP

# CICO Economics in Indonesia

Research findings

JULY 2019



BILL & MELINDA  
GATES foundation

# Overview of materials available on this microsite



Overview & key highlights from the research

Role of CICO for financial inclusion



Sizing the CICO access challenge



Exploring potential interventions



Illustrative country deep-dives



In Indonesia where cash is ubiquitous<sup>1</sup>, easy and reliable ways to conduct cash-in/cash-out (CICO) transactions are critical to a growing digital economy, and often a first step to financial inclusion. Bank and e-money agents are the backbone to an inclusive system.

Indonesia has made great strides in creating access to agent networks. But transactions are limited and economics unviable for agents and providers. The system as-is will struggle to be reliable or efficient, and to reach remote areas.

Enabling viability of current model and expanding reach emerge as top priorities from this research

1. >95% of total transaction volume in Indonesia in cash

Source: CGAP "The role of CICO in digital financial inclusion" August 2019; InterMedia Finclusion 2016; Global Data Payments Landscape in Indonesia;



# Context | BCG and MSC study focused on economics of DFS agent models in Indonesia and opportunities for enhancement

The Bill & Melinda Gates Foundation (BMGF) recognizes that in the near-term, a robust cash-in/cash out (CICO) infrastructure will continue to be relevant for many developing regions, especially to drive adoption of digital financial services among traditionally unbanked or underbanked populations

As a result, the Financial Services for the Poor (FSP) team seeks to understand the economics of the leading CICO models - especially financial services agents - and potential interventions to enhance economic viability and reach of these services to rural populations

Boston Consulting Group (BCG) and MicroSave Consulting (MSC) collaborated to understand the current state of CICO distribution and to identify opportunities to extend CICO distribution to rural areas, including:

- Economics of the CICO agent channel for providers and agents
- Profitability challenges encountered by traditional CICO network operators and individual agents
- Economics and potential of new and emerging models (e.g., digital payments platforms, ecommerce)
- Opportunities to enhance CICO model economics and increase reach to underserved populations, esp. in rural geographies

These findings will be shared with providers, regulators and advocates of inclusive finance in Indonesia to discuss the highest potential opportunities

Study included extensive primary research with providers, industry experts and agents



# Context | Study focuses on traditional & emerging DFS agent models



Non-banks

## 1 Agent banking models

>1M agents

- SoE and private banks appoint agents as branchless channel
- Agents are non-dedicated bank contractors adding DFS to another business
- Agents typically exclusive to a bank per regulation
- Offer variety of basic banking services incl. CICO, G2P payment disbursement

Banks



## 2 Payments e-money

>3M agents<sup>1</sup>

- Banks and non-banks issue digital payment products (e-wallet or card-based)
- Agents can be individuals or institutions (e.g. retailers)
- Services focused on OTC transfers and bill pay; cash-out services are limited
- Use cases exclude savings, inter-bank transfers, credit

*Note: 'E-money' segmentation refers to business operating model rather than license holder (i.e. company may use multiple licenses, license holder may be parent company)*

Banks, Telcos, FinTechs



## 3 E-commerce e-money

- Payment products embedded into online-to-offline (O2O) ecosystem
- Includes "unintentional agents" (e.g. drivers) and formal agent channels (e.g. retail partners)
- Focused on cash-in, in-platform payments (i.e. closed loop), bill pay, P2P transfers
- No direct cash-out

FinTechs



## 4 Self-serve models n/a

- Digital payment models focused on self-serve
- Mix of B2C and B2B products
- Do not leverage an agent channel
- *Note: Outside of scope*

Fintechs, Telcos



1. Go-Jek claimed 1M+ drivers in mid 2018; Grab/Kudo claim 2M+ micro-merchants; Mapan claims 180k agents 2. Represents largest players in segment, Not exhaustive or reflective of all study providers  
Source: Microsave report "Aligning regulations to enhance digital financial inclusion in Indonesia"; company websites; news search

# Executive summary

- 1 Access to trusted and reliable cash-in/cash-out (CICO) services is an important entry point to using digital financial services and to financial inclusion; agents are accessible & trusted providers of CICO services
- 2 In Indonesia, significant growth in agent networks (>1M laku pandai and >3M non-bank agents) has helped deliver CICO access to a vast majority of the population (87%)
- 3 However, coverage does not reflect the viability of the network, which is challenging for agents, providers and customers
  - Low transaction volumes means that agents earn little profit while providers cannot cover costs with fees
  - Many factors constrain demand, and efforts to increase demand (e.g. G2P digitization) are not changing economics
  - Current model has quality challenges (i.e. reliability, efficiency) incl. dormancy, reliability, account set up issues
  - Operational and competitive challenges mean limited motivation for agents or providers to invest in expansion
- 4 ~34 million remain outside the existing CICO network and unlikely to be served with current models - while a small share of the population, this socio-economic gap may widen as others engage in a digital economy
- 5 Regulators have a role in supporting a more vibrant CICO environment through agents by 1) Improving viability of existing agent models 2) enabling the extension of high potential models into under-served areas

# Agent-based models are an optimal channel for delivering CICO & other DFS



In Indonesia, an agent is any person that provides a **physical distribution point** for formal financial services, including digital financial services (DFS) and cash-in/cash-out (CICO)

Agents typically have another business - a shop, e-commerce services etc.

## Proximity



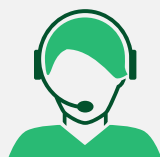
*Prior research shows being close to cash access points strongly correlated to use of financial services*

## Trust



*Agents are seen as part of the community and they instill trust with routine in-person interactions and "flexibility" (e.g. pay later)*

## Support

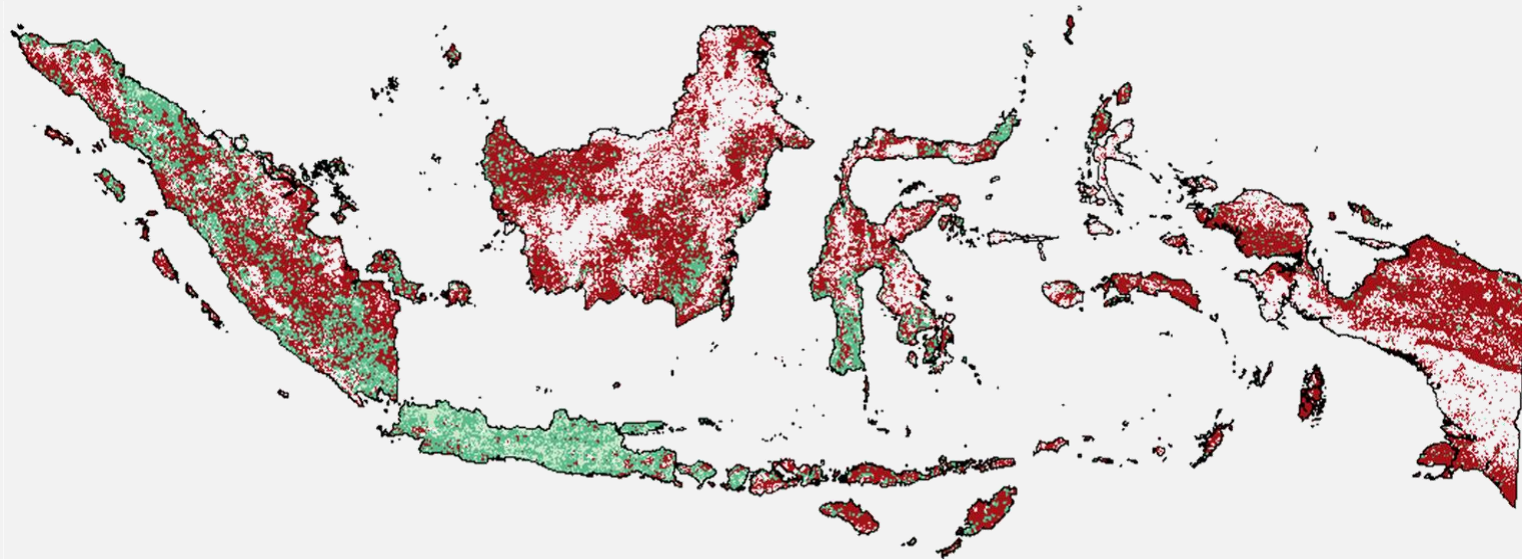


*Agents provide easy and high touch support (e.g. longer hours, personalized, troubleshooting to less financially savvy consumers)*



# Agent model expansion has helped deliver significant gains in CICO coverage...

Population access to bank, ATM or agent



Distance from financial services:



87%

of Indonesians  
have access  
within 5km of  
their home

+12.5%

Increase in  
banked  
population from  
2014-18<sup>1</sup>

Since laku pandai was launched in 2015, bank agent coverage has grown from 60k bank agents in the first year to >1M in May 2019 (compared to ~100k ATMS and ~32k bank branches)

Agent banking program contributed to an increase in the banked population from 35.9% in 2014 to 48.4% in 2018

1. Global Findex (age 15+ with financial institution account)

Source: Landscan 2017 population; CICO access based on bank and ATM location data and webscraped agent locations of BNI, BTPN, Mandiri, BCA; BRI agent locations not included due to data availability; BCG Analysis

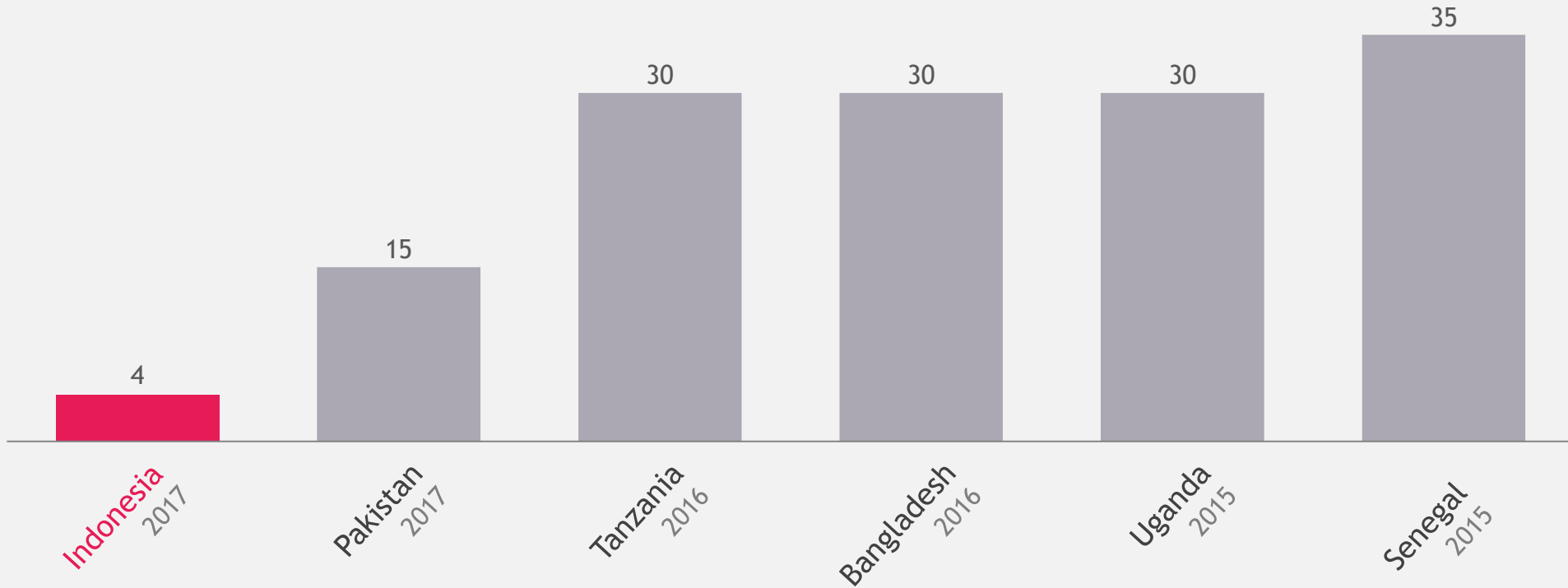


# ...but the transaction volumes are still very low



## Transaction volumes: Indonesia vs. global benchmarks

Median transactions per agent per day



Note: Outlet-level transaction volume

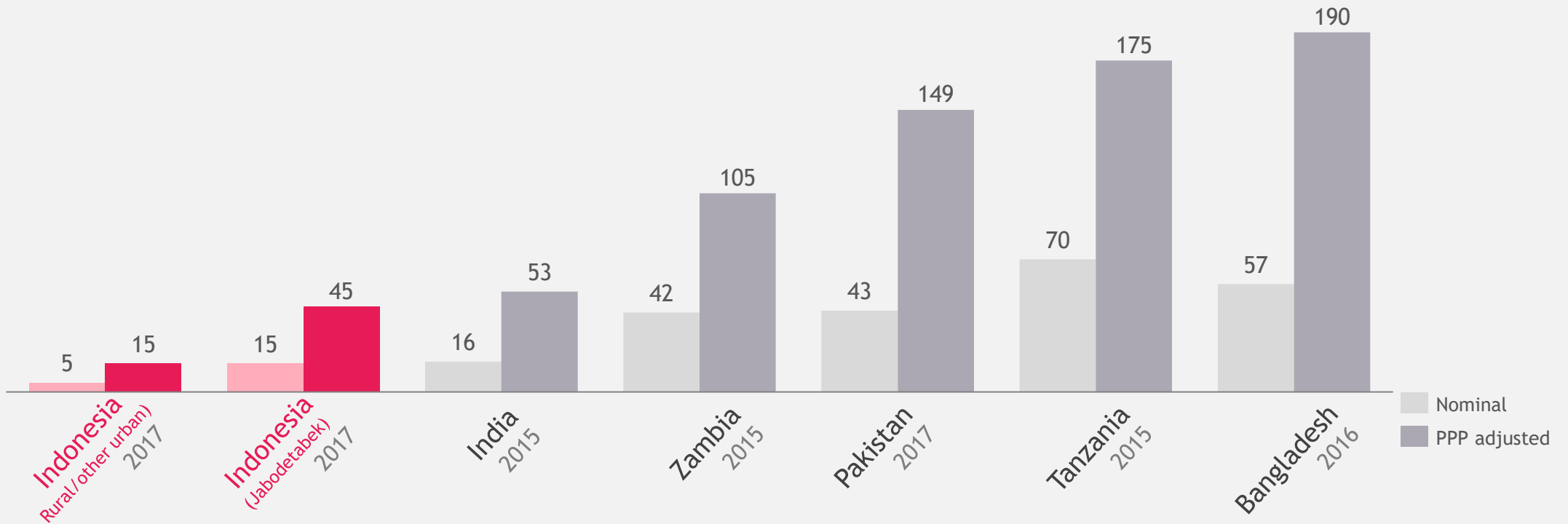
Source: Agent Network Accelerator (ANA) Research, Indonesia Country Report: December, 2017



# At this transaction level, the average agent makes very little money from the DFS business



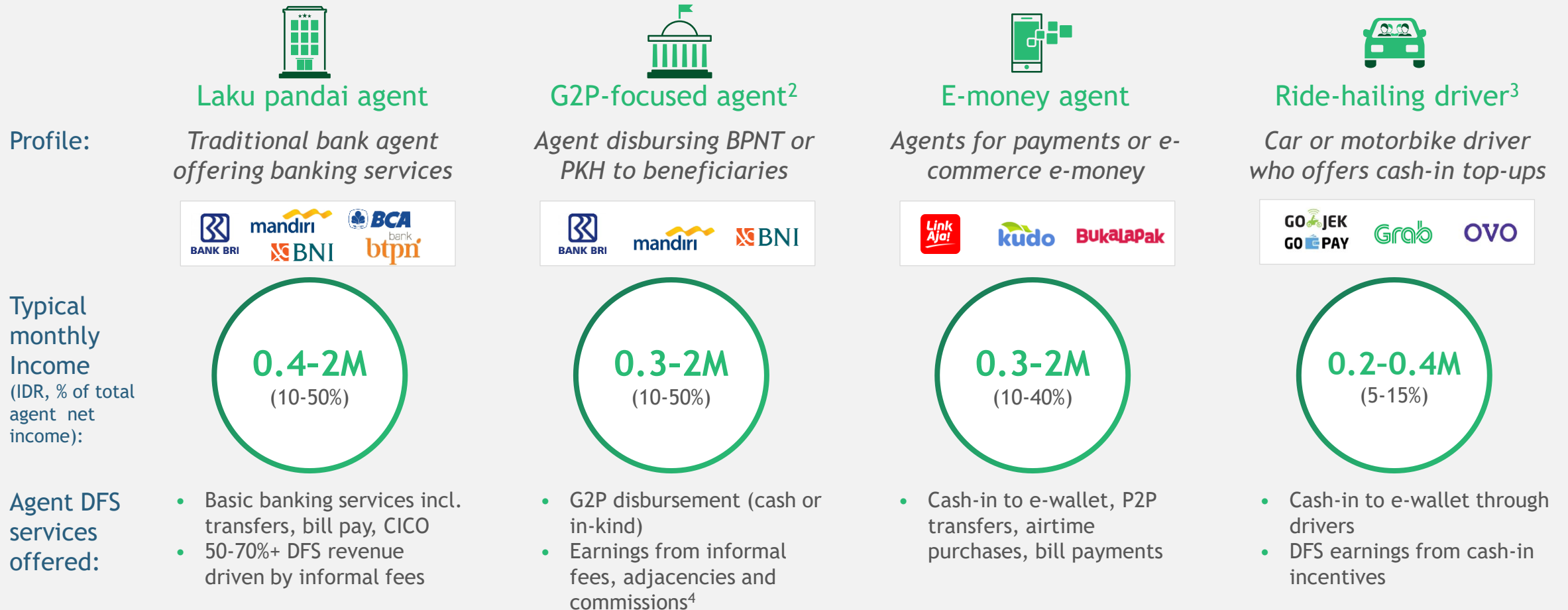
Median monthly profitability: Indonesia vs. global benchmarks  
\$USD





# In contrast, analysis of active agents shows DFS can be attractive "add-on" business when transactions are high

Based on active agents only



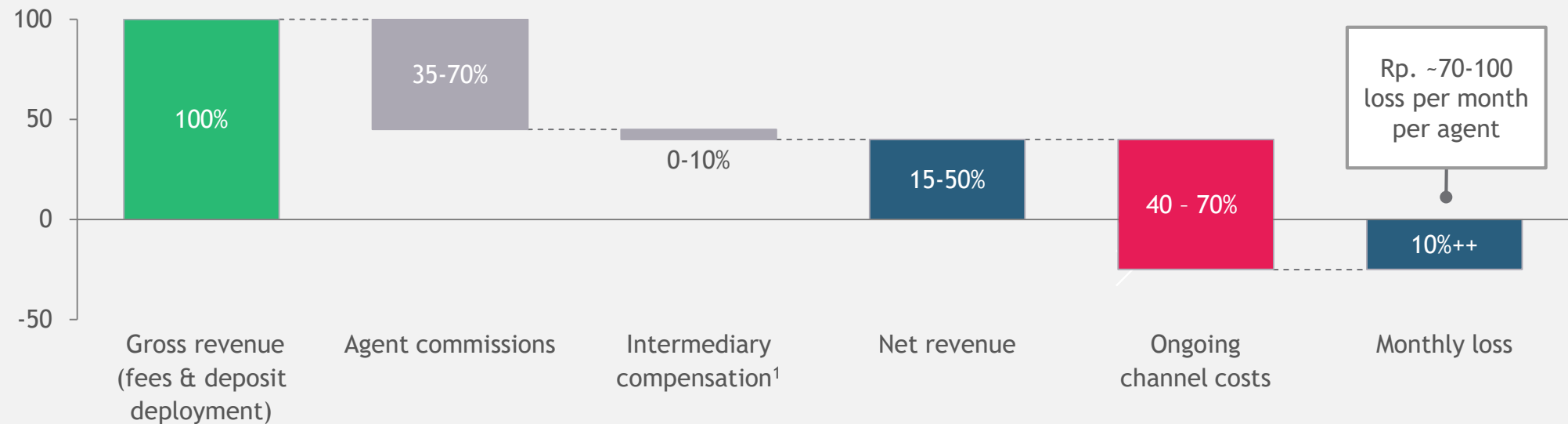
1. Estimated at 30-55% in 2017 ANA sample 2. Some G2P-focused agents also offer traditional laku pandai banking services 3. Calculated using % contribution towards average daily bonuses 4. As applicable  
 Note: Incomes reflect 2019 sample, i.e., active agents only; incomes assume allocation of overhead / shared costs to agent's non-DFS business; extreme outliers removed  
 Source: BCG/MSC CICO economics research, 2019; Agent Network Accelerator (ANA) Research, Indonesia Country Report: December, 2017



# In a low activity context, provider fee revenue cannot cover costs, and they lose money in this channel

## Agent channel economics: bank and payments e-money providers

Monthly economics per agent (as a % of revenue)



Typical values<sup>3</sup> :

Laku pandai agent banking	Rp. 550K	Rp. 350K	Rp. <20K	Rp. 200K	Rp. 300K	Rp. 100K
Payments e-money	Rp. 100K	Rp. 65K	Rp. <1K	Rp. 30K	Rp. 100K	Rp. 70K

1. Intermediaries include vendors such as bill aggregators; 2. Ongoing channel costs driven by field support, EDC depreciation and maintenance, marketing;

3. Typical values represent composites, developed based on economics observed across multiple providers

Source: BCG/MS CICO economics research, 2019

# A fundamental issue is lack of consumer demand for agent services

## Difficulty of use *products and channels*

21% do not use DFS because they do not know how to use the service

## Lack of consumer awareness *of services and locations*

40% of consumers do not use mobile money because they do not know what the product is for

## Lack of use cases *that are relevant to consumer needs*

18% of consumers cite lack of need as reason for not using DFS

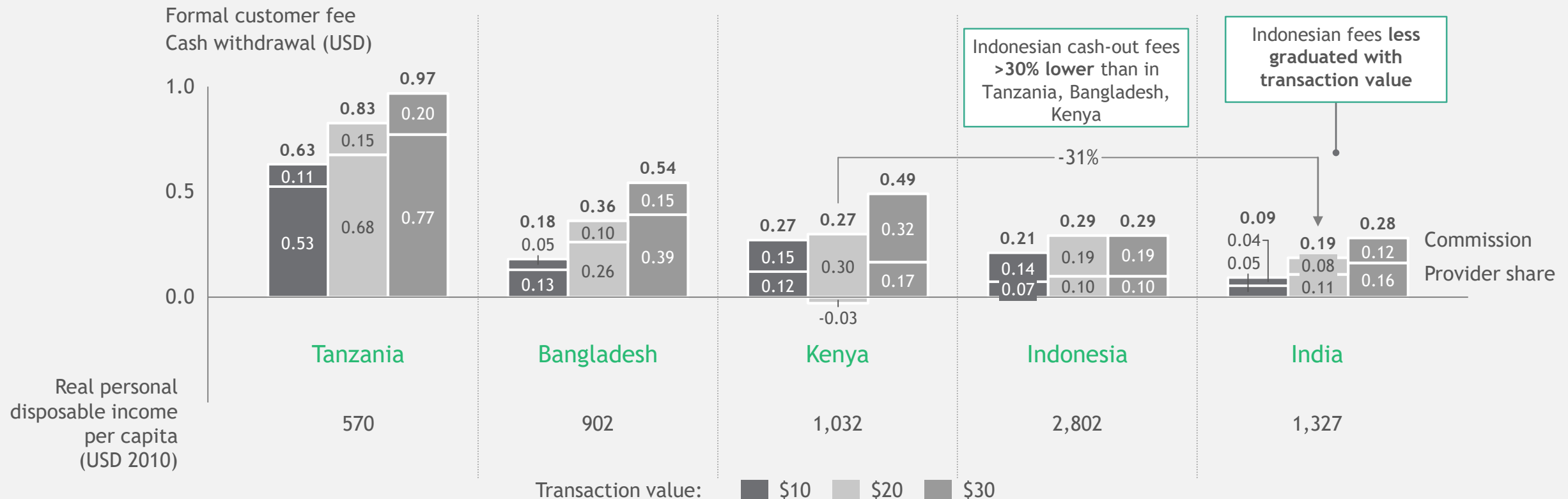




# Low customer fees also limit revenue potential...

Customer transaction fees in Indonesia also lower than global benchmarks

## Avg. customer fees by transaction value: Indonesia vs. global benchmarks

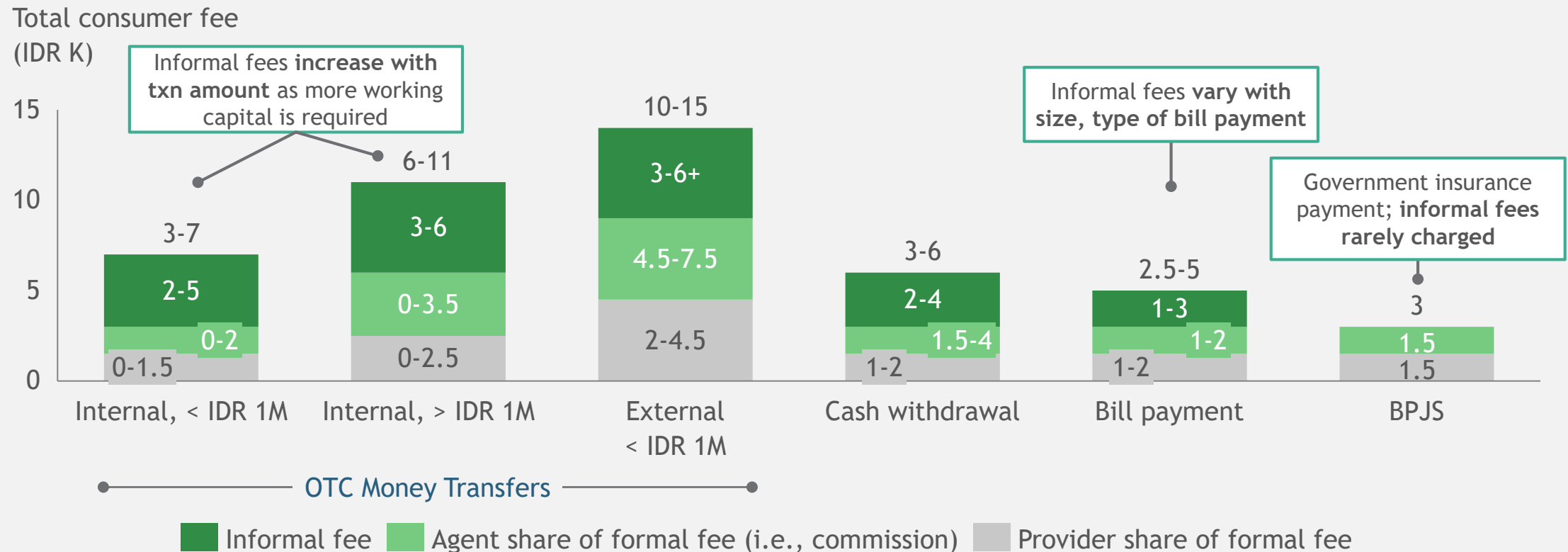


Note: Exchange rate from June 11, 2019; Includes Mpesa, Equitel, Halotel, bKash, Rocket, Airtel Payments Bank, Aditya Birla Idea, Bank Mandiri, Bank Negara Indonesia (BNI), Bank Rakyat Indonesia (BRI)  
Source: Economist intelligence unit; Provider websites; provider interviews; BCG analysis



# ...although agents make up some of it with "upcharging"

## Typical customer transaction fee paid to laku pandai agent (including informal fees)



Note: Data refers to laku pandai bank agents, but agents in other segments (e.g. payments e-money, e-commerce e-money) charge them as well on a less frequent basis  
 Source: BCG/MSC CICO economics research, 2019

# New use cases to drive demand & revenue (e.g., G2P digitization) are not having intended effect



Majority of providers cannot generate revenue from fees or deposit deployment

“

[G2P disbursement] is a cost center ... there is very little adjacent revenue from G2P customers using other services, paying bills etc.

*-Laku pandai executive*

“

We cannot earn net interest on the G2P deposit funds like we can for savings accounts

*-Laku pandai executive*



Agents may earn some revenue but are challenged overall

“

Sometimes clients voluntarily give me thank-you money: IDR 5000-IDR 10,000.

*-Agent, Banyuasin*

“

I used to serve PKH withdrawal but I stopped because I could not manage the liquidity.

*-Agent, Kupang*

Note: for G2P disbursement in Pakistan, India, Kenya and Nigeria, government pays transaction fees between 1-3%



# In current context, quality of consumer experience suffers



High agent  
dormancy

**>30%**

of agents are dormant



Driven by low demand,  
lack of support



Poor technology  
reliability

**>30min**

downtime per day



Driven by provider  
systems and  
connectivity challenges



Account  
Opening issues

**~7 days**

to open account



Bank account opening /  
KYC requires cannot  
typically be completed  
by agents



Inconsistent agent  
performance/support

**43%**

of agents lack regular  
provider support



Lack of 3<sup>rd</sup> party agent  
network managers to  
screen and support  
agents



# For agents, DFS will become an increasingly unattractive add on business if demand does not improve



## Working capital challenges

~30% active agents cite challenges with meeting & maintaining working capital requirements



## Exclusivity requirements

>33% agents report interest in adding additional providers in order to increase potential revenue streams



## Marketing & communication support

~30% agents cite poor marketing from provider which drives low customer awareness



## Competition

~30% agents cite too much local competition as a limiting factor for profitability

1. Estimated at 30-55% per 2019 ANA data

Note: Potential drivers based on % of agents citing each as obstacle to earning greater DFS profit (laku pandai, G2P, & e-money agents only)

Source: 2019 BCG/MSC CICO economics research; 2017 ANA data

# Recap: Challenges with existing agent models



**Low demand** for DFS results in low transaction volume for agents and providers



This low volume means the average agent earns little profit while high-performing agents **require a non-dedicated model** as DFS does not generate sufficient income alone



**Provider economics result in losses** as channel costs cannot be overcome by low transaction volumes and low formal customer fees



Despite increasing transaction volume, **G2P digitization is not improving provider or agent economics** due to its current structure



These economic challenges, coupled with operational challenges (e.g. lack of support, account opening issues), **drive agent dormancy and hinder the customer experience**

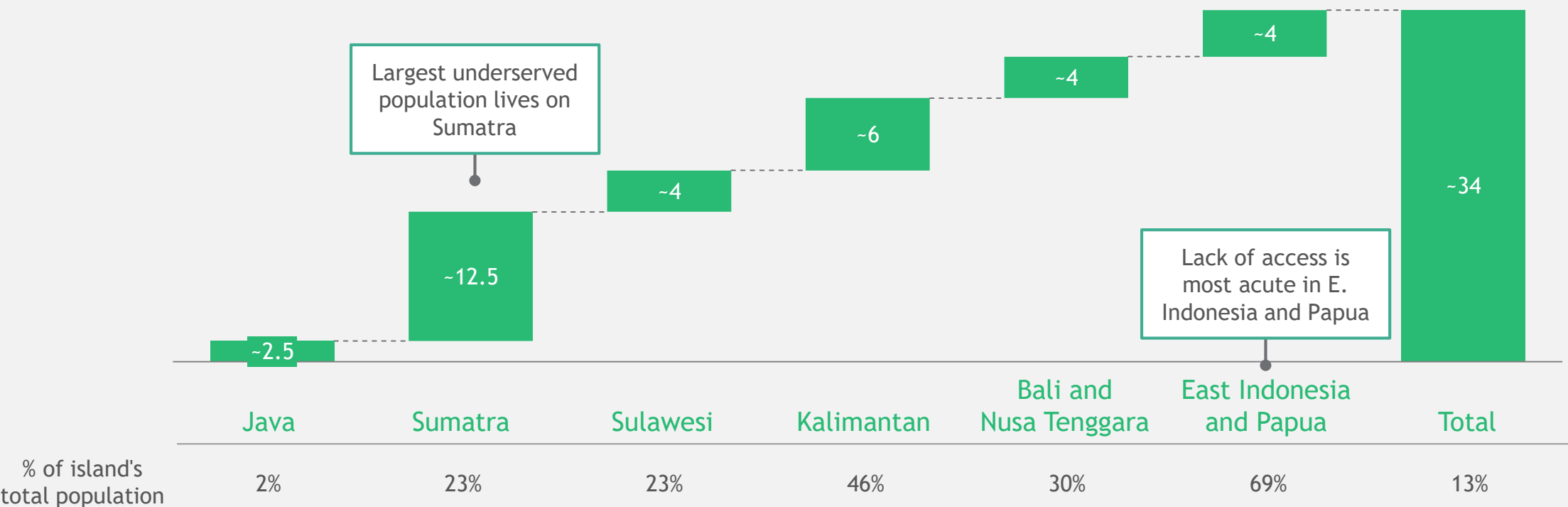


Operating challenges (e.g. high working capital requirements, high competition, exclusivity requirements) also make a **DFS a less attractive business for agents**, challenging the longer-term viability of existing agent points

To address these challenges, we need to improve viability of existing agent models

Furthermore, estimated that 34M people in rural areas still lack access today and need to be served

Distribution of population lacking CICO access by island group (M)



Source: Landscan 2017 population; CICO layer - webscraped locations of BNI, BTPN, Mandiri, BCA agents; BRI not included due to data availability; BCG Analysis

However, as agents become increasingly rural, the challenges already present in existing areas will only become more severe. Therefore, we also need to **enable the extension of high-potential rural models.**





# Providers may have a strategic or CSR rationale to build networks, but economic and operating challenges explain why they are not looking to actively expand rural access

## Bank-led models

Aim for lower cost distribution & corporate social responsibility ...

- “ We believe we will see a reduction in branch costs... We don't want to open more branches, but we'll use our agent network [to continue expansion]
- “ [Laku pandai] is currently marketing and CSR for us
- ... but require proximity to existing branch network
- “ We want our agents to be a maximum of 30 minutes from a branch
- “ The branch will know which areas are strategic, with enough of a crowd and economic activity

## Payments e-money

Maximize channels and use cases to build ubiquity ...

- “ We encourage self-serve as the main channel... it's currently 70-80% of transactions
- “ We are trying to build as many use cases as possible
- ... but focused on urban areas due to competitive 'whitespace'
- “ We are focused on tier 2 cities and second-tier merchants...where there is less competition
- “ We believe we need to create an end-to-end ecosystem in the rural areas...which is costly

## E-commerce e-money

Seek customer acquisition and ecosystem expansion ...

- “ E-commerce is only 5% of retail... financial inclusion is the opportunity to tap into that 95%
- “ We won't be profitable enough with just financial services, we will need to expand use cases
- “ For the next 100M people who are not near a mini-mart, we want our agents to serve as the top-up channel
- ... but see operational challenges too great for deep rural growth
- “ We have couple of hundred stores [on a remote island] ....but connectivity is a challenge and we're a tech company

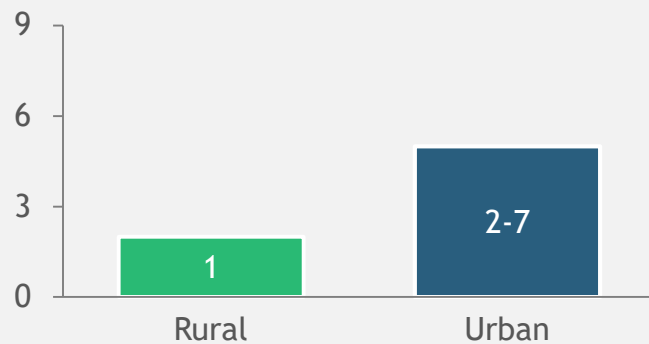


# Agents' challenges also increase in rural areas

Rural/remote agents face more costly re-balancing, higher working capital requirements and lower volumes

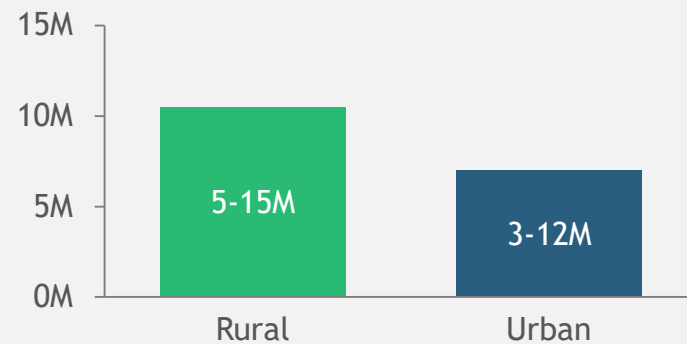
## Rebalance frequency<sup>1</sup>

No. of times/week



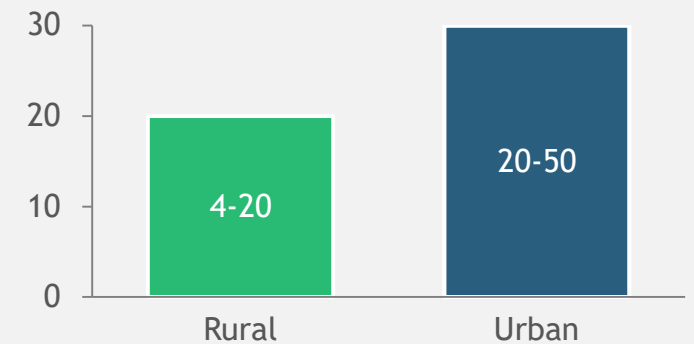
## DFS working capital

IDR M



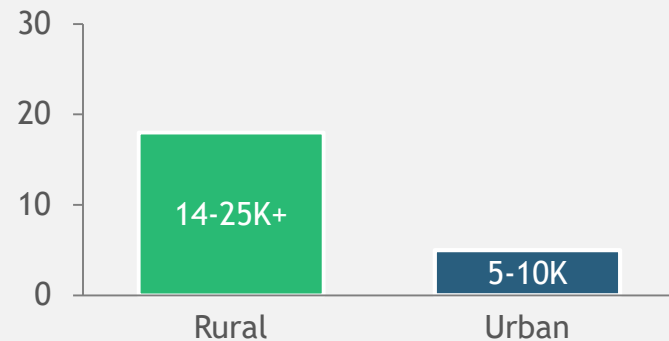
## Transaction volume

No. of txns/day



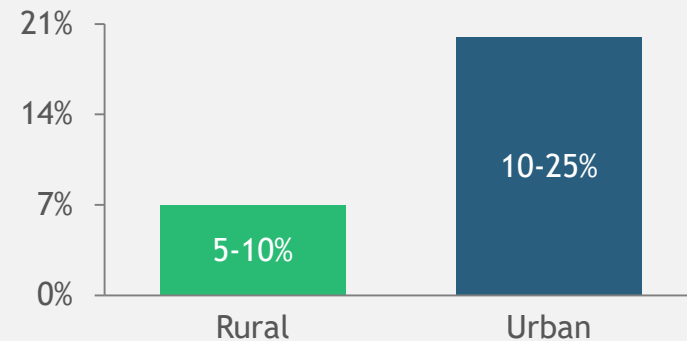
## Rebalance cost

Round trip transportation, IDR (K)



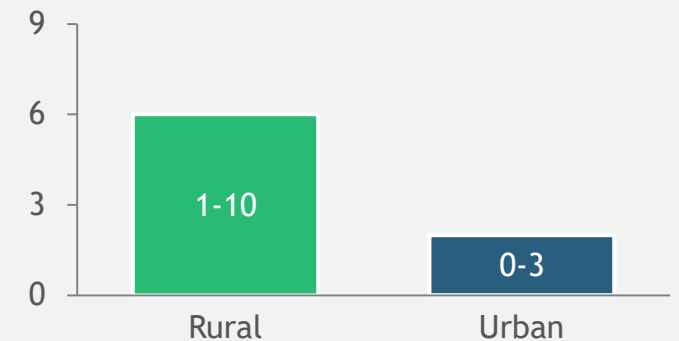
## Return on working capital

Monthly (%)



## Cash-out transactions

No. of cash-out txns/day



1. i.e., in-person cash deposit or withdrawal only

Note: Includes bank agents in 2019 sample only; peri-urban agents included in "rural" calculation; urban agents defined as <15min travel to bank branch/ATM, peri urban as 15-30 min, and rural >30 min

Source: BCG/MS CICO economics research, 2019

# Going forward, two-pronged approach required to supporting agent network viability and growth



Improve  
viability of  
existing  
models...

... Improve agent and provider viability in existing models and enhance value proposition for customers

- Address demand challenges by removing barriers to customer adoption and enabling providers to improve customer experience
- Improve fundamental economics so that prices are more aligned with cost to serve
- Design emerging use cases (e.g. G2P digitization) to be economically sustainable so providers can meet coverage and service requirements



Enable high-  
potential rural  
models...

... Enable the highest potential models (both new and existing) to scale into underserved rural areas

- Ensure providers can leverage the most efficient and scalable business models and channels to expand in rural areas
- Enable innovation in agent support models to address operational challenges that are exacerbated in rural areas (e.g., liquidity management)
- Enable rural agents to diversify their service offerings and provider relationships to improve economic viability

# Regulators have a role to play supporting this approach: Six potential priorities raised during this research



## Improve viability of existing models



**Provide e-KYC infrastructure for customer sign up and cost efficiencies**

Reduced costs per verifying customer from \$15.00 to \$0.50 in India and contributed to the opening 300M new accounts



**Support formalization of DFS fees to improve consumer protection & provider economics**

Close majority of gap between provider and agent breakeven while protecting consumers from predatory pricing



**Revise G2P model to drive sustainable provider revenue and incentivize expansion**

Incentivize additional coverage and quality as G2P payments are digitized



**Open up non-bank e-money provider recruitment to individuals agents**

Has potential to create >150K new rural access points with a full suite of e-money services, including CICO



**Permit third-party agent network managers for efficient agent services across segments**

Enable rural expansion by removing operational burden from providers' and supporting agents to achieve higher quality services



**Permit agent non-exclusivity in 'frontier' rural areas**

Produces >40% higher agent incomes in Bangladesh and Kenya vs. exclusive agents and enables operating model innovation

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