Wallet and OTC Transactions: Understanding financial incentives

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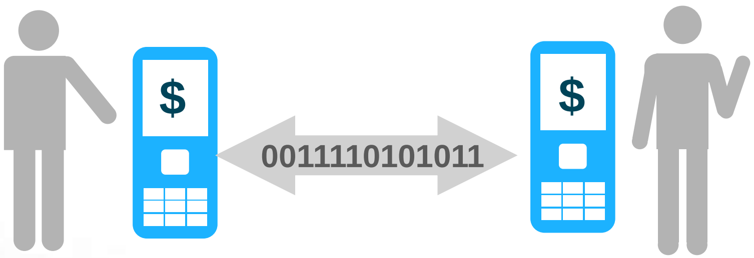
Wallet and OTC transactions

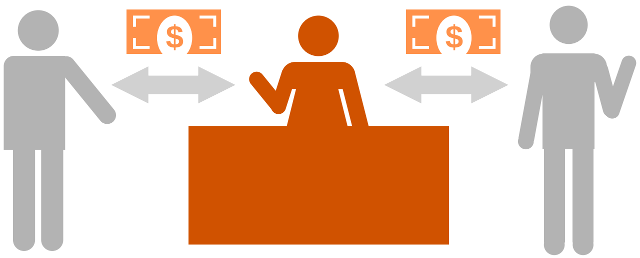
In markets where multiple types of person-to-person (P2P) transactions are available, customers must decide whether they should they send and receive money via **mobile wallet** or make transactions **over the counter (OTC).**

Wallet



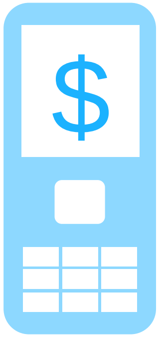
A transaction between two users via digital wallets, and not involving an agent.

OTC



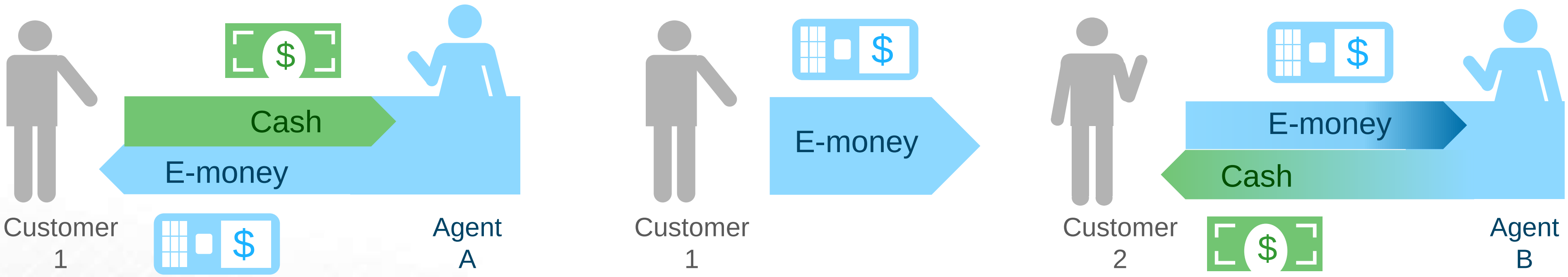
A transaction where some portion of the transfer is intermediated by an agent.

The typical P2P wallet transfer promotes active wallet use



The typical P2P wallet transfer involves sending and receiving via wallets without the intervention of an agent; requiring that **both customers are registered wallet users.** The transaction **promotes active wallet use**.

The typical P2P wallet transfer:



Cash-in: Customer 1 visits Agent A with cash, and adds funds to their account. The transaction is free, and the agent earns a commission.

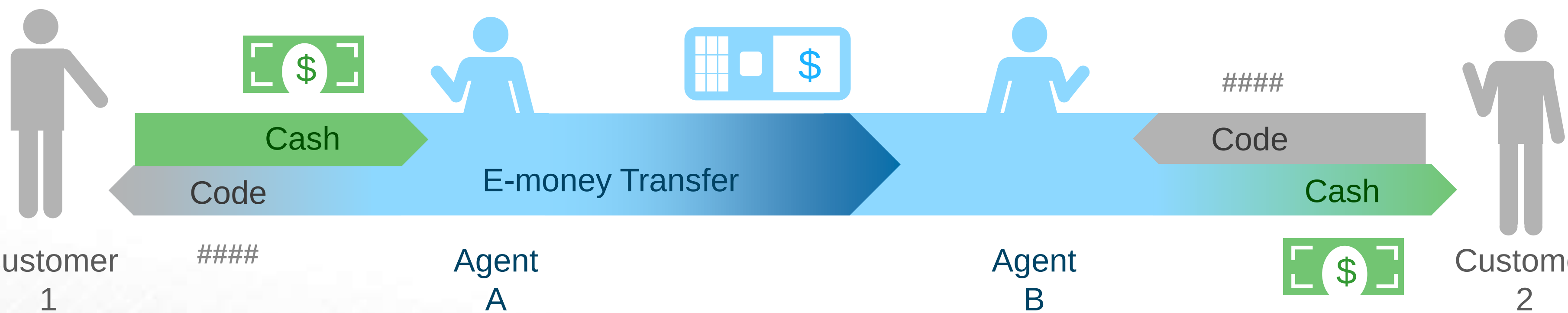
Transfer: Customer 1 sends money via their wallet to another customer, typically paying a fee for the service.

Cash-out: Customer 2 receives funds into their wallet free of charge, but pays a fee to withdraw cash from Agent B, who earns a commission.

Formal OTC transfers are less likely to promote wallet use

The typical formal OTC ‘cash to cash’ transfer involves **no use of mobile wallets**. Agents manage the electronic funds transfer, and **customers are less likely to be mobile wallet users**.

The typical formal OTC ‘cash to cash’ transfer:



Cash payment: Customer 1 provides cash to an agent and pays a transfer fee.

Transfer: Agent A makes the funds available for “pickup” at any other agent location, and earns commission.

Disbursement: Agent B is provided a code from the receiving customer, disburses cash, and earns a commission.

Cash receipt: Customer 2 picks up cash from the receiving agent, and does not pay a fee.

A wide variety of transactions can be considered OTC; though in all cases at least one party does not use a wallet

	OPERATION	DESCRIPTION	USE
Formal OTC	Cash to cash	A sending customer provides funds to an agent, who conducts an authorized transaction to a non-wallet user (typically using a phone number or national ID to identify).	Popular in Asia, and where services do not interoperate. Disallowed in many markets.
	Wallet to cash	A wallet user initiates an authorized transaction to a non-wallet user. Similar to the above, the receiving customer withdraws funds from an agent.	Popular where services do not interoperate and where formal "cash to cash" is forbidden.
	Cash to wallet	A sending customer provides cash to an agent, who performs an authorized transaction via an agent account, sending to the wallet of a registered user.	Less popular, due to availability of formal "cash to cash" or informal direct deposit.
Informal, "rogue" OTC	Informal cash to cash	A sending customer provides cash to an agent, who performs a transaction unauthorized by the provider and relies on collusion with another agent to provide funds in cash to a receiving customer.	Highly variable in form, and prevalent only in specific markets (e.g., Bangladesh).
	Direct deposit	A sending (registered or unregistered) customer performs an unauthorized cash deposit directly onto the wallet of a registered user. Typically to avoid transaction fees.	Popular in wallet markets, also as a work-around for lack of wallet interoperability.
	Direct withdrawal	The receiving (registered or unregistered) customer performs an unauthorized cash withdrawal from the wallet of a registered user. Typically to avoid transaction fees.	Uncommon; requires collusion. Many providers actively control against this behavior.

Wallet vs. OTC: why does the difference matter?

While both wallet and OTC transactions allow users to effectively transfer funds, **wallet use provides a number of benefits**.

FOR CUSTOMERS	**Allows easier access to financial services**: Promotes rails for transactions beyond remittances (e.g., bill pay, credit).	**Cheaper**: Wallet transactions are often cheaper than OTC transactions, especially for multiple transactions before cash-out.	**More convenient:** More services can be accessed remotely and instantaneously, without the need to travel to an agent.
FOR PROVIDERS	**Builds service loyalty**: Builds brand loyalty, particularly critical to ARPU in MNO-driven models.	**Lower cost channel:** Reduces cost through fewer agent commissions paid *(assuming multiple transactions between cash-in/out).*	**Data gathering:** Allows providers to gather detailed individualized customer data for cross-selling and other uses.

Wallet vs. OTC: why does the difference matter?

OTC can serve a valuable role for customers and providers

- Offers a route to quickly scale models
- Provides a channel to adopt users of other competing wallet services (i.e. other SIMs)
- Provides an option for those without the comfort, literacy, technical understanding, or phones necessary to perform wallet transactions

However, CGAP's research starts from the premise that wallets:

- Better promote meaningful financial inclusion
- Offer providers a more stable long-term value proposition

For more on the value proposition of OTC, refer to the Microsave/Helix paper OTC: A Digital Stepping Stone, or a Dead End Path? and CGAP's blog series Mobile Money: OTC versus Wallets

Drivers of OTC: financial, emotional, and logistic

Despite the value provided by wallet use, OTC remains popular among customers for many reasons. This study focuses specifically on the role **financial incentives** play in driving specific behaviors.

Financial factors

- Deliberate Strategy
- Price to customers
- Commission for agents

Emotional factors

- Historic habits and behavior
- Trust
- Comfort with Technology
- Ease of use with OTC

Logistic factors

- Limited non-P2P use case
- Registration difficulty
- Availability of OTC/Cash-in
- Limited transaction frequency
- Literacy and language
- Population density

A framework for understanding the role of financial incentives

Understanding how financial incentives impact wallet/OTC use requires segmenting markets by their approach to wallet development. CGAP has observed **two approaches for developing wallet markets**:

1. Allow/promote formal ‘cash to cash’ OTC between unregistered users early on; using measures including financial incentives to encourage the transition to wallets and to control for informal OTC.
2. Prohibit formal ‘cash to cash’ OTC between unregistered users (either by regulation or strategy) and focus on wallet adoption from the start; using measures including financial incentives to control for informal OTC.

How well do financial incentives support each approach?

What can pricing/commission structures and current behaviors within each type of market tell us about incentives?

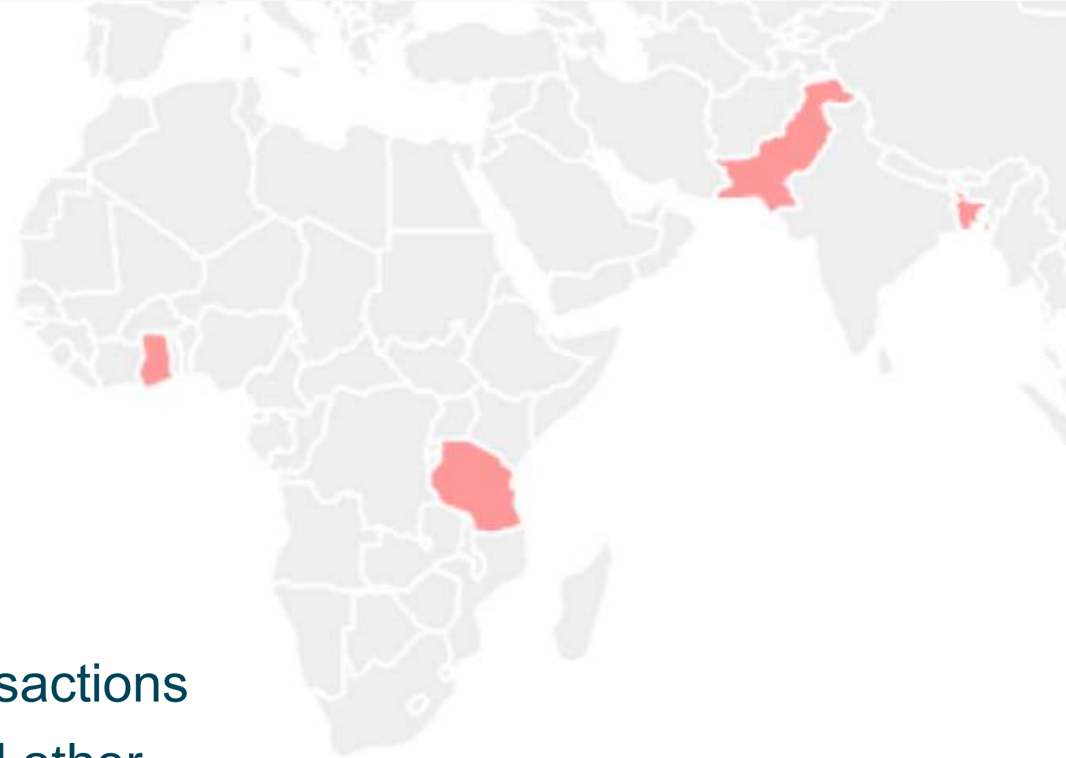
Evidence collection across markets

CGAP selected **four markets across Africa and Asia** that represent different limitations on formal ‘cash to cash’ OTC and incidence of both formal and informal OTC.

	Formal ‘cash to cash’ OTC Permitted	Formal ‘cash to cash’ OTC Not Permitted
Low informal OTC market	 Pakistan	Tanzania
High informal OTC market	Ghana	 Bangladesh

 **Majority OTC country**

Evidence collection across markets



CGAP partnered with Altai Consulting to perform fieldwork and gather evidence across each focus market.

Analysis is based on:

- Provider and agent interviews
- Agent ‘mystery shopping’ and test transactions
- Analysis of provider, Central Bank, and other externally available data

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Warning: A note on the complexity of pricing/commissions...

Objects in mirror are closer than they appear. CGAP selected a US$20 price point for analysis, the average P2P transaction in most markets. A US$100 transaction may not look the same.

No U-turn. Wallet prices and commissions are measured in a single "full loop." That means one cash-in, one P2P transaction, and one cash-out. More P2P transactions before cash-out mean cheaper pricing per cycle.

Use only as directed. All transactions represent only on-network P2P. Transactions with other providers and for other use cases (e.g., merchant payments) may have entirely different pricing structures.

Break glass in case of emergency. OTC and wallet numbers include amounts for both sending and receiving in aggregate. The distinction between parties in select places are highlighted where relevant.

Markets where formal 'cash to cash' OTC was a deliberate strategy

Providers in both **Pakistan and Ghana** at one point pursued formal 'cash to cash' OTC as a way to gain scale, but have since **attempted to move toward increased wallet use through pricing and incentives** (among other strategies).

	Formal 'cash to cash' OTC Permitted	Formal 'cash to cash' OTC Not Permitted
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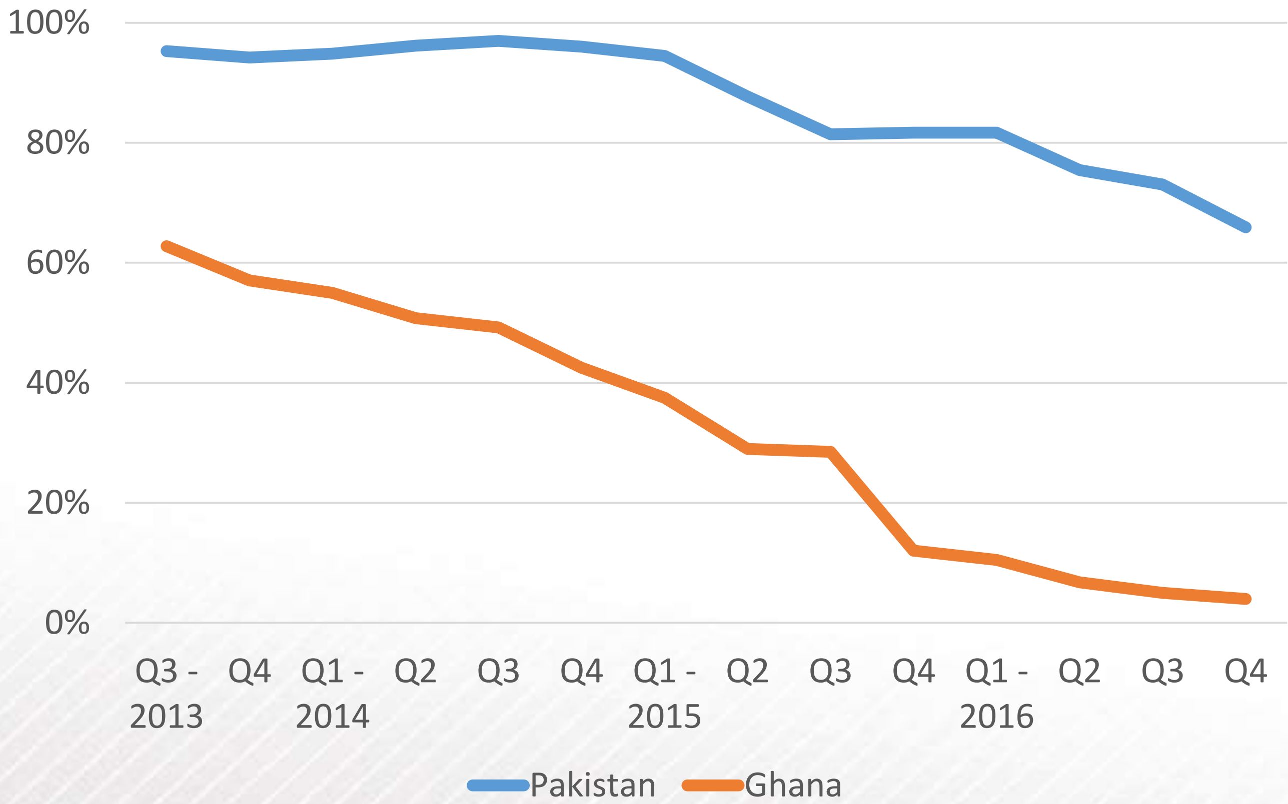
Majority OTC country

Historical wallet vs. formal OTC transaction volume

Formal OTC 'cash to cash' as a percent of total P2P volume



Both markets have made progress, but **Ghana has made larger steps toward wallet use.**

Data obtained from Pakistan Branchless Banking Newsletters (2013-2016); Bank of Ghana reporting; and provider data.

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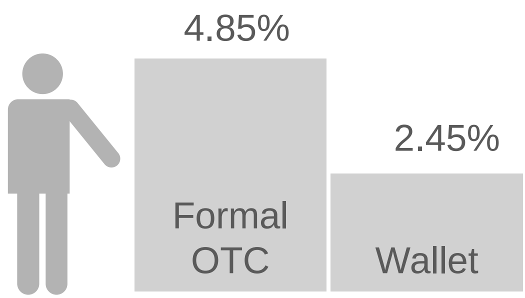
Pricing and commissions in Ghana

Pricing for formal "cash to cash" OTC has been actively managed as part of **a successful campaign to reduce formal OTC** in Ghana. Commissions remain in line with pricing, without negative impact to wallets.

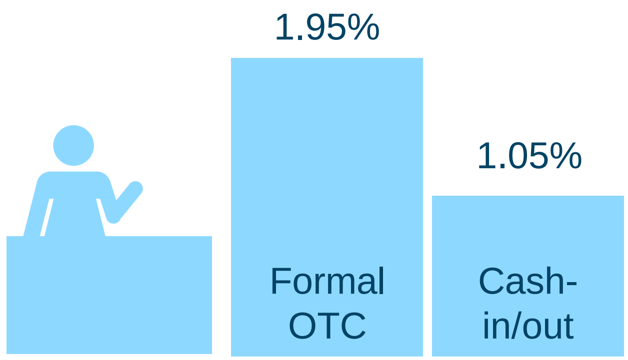
Customer Pricing



The price of a US$20 OTC is **2x** the price of a wallet P2P transfer "full cycle."

Notably, OTC pricing has been raised by providers by a factor of 5x to incentivize wallet use.

Agent Commission



Agent commissions were adjusted as customer pricing changed.

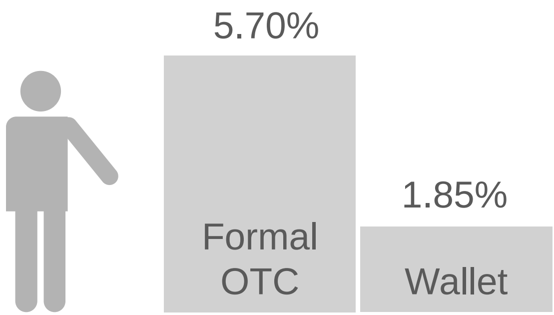
Special commissions have also been instated for account activation, and for each time the customer buys airtime during the first 30 days of use.

Formal OTC pricing is measured as the cost to the sender for a 'cash to cash' transfer. No fee is charged to the receiving customer. Formal OTC agent commission is measured as the aggregate commission to sending/receiving agents for the same transaction. Wallet pricing is measured as per 'full-loop' definition on Slide 10. Wallet agent commission is measured as the aggregate of Cash-in and Cash-out commissions.

Pricing and commissions in Pakistan

Wallet pricing has been made *almost free*, yet **formal OTC ('cash to cash') remains prevalent despite being as much as 3x more expensive for consumers**. Commissions continue to favor OTC, but their impact on consumer behavior appears minimal.

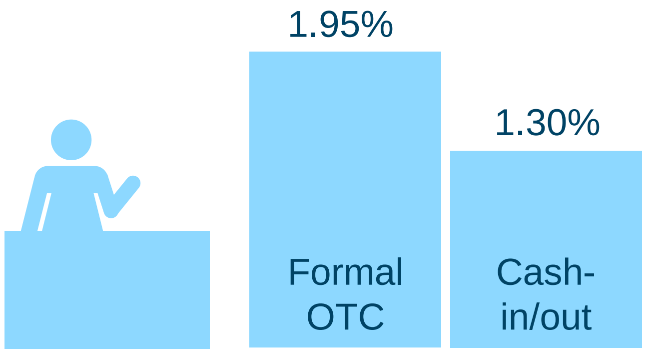
Customer Pricing



OTC, despite being more popular in Pakistan, costs customers **3x the price of wallet** for the average P2P transaction.

Non-price incentives also favor wallets, including free airtime and SMS and data incentives to encourage mobile wallet use.

Agent Commission



OTC send and cash-in commissions are being aligned by providers to reduce agent incentives to direct customers toward OTC transactions, but…

Target-based compensation on sending OTC is also paid to some agents, depending on the franchise. Anecdotal evidence suggests such compensation can account for up to 60% of agent MFS revenue.

Formal OTC pricing is measured as the cost to the sender for a 'cash to cash' transfer. No fee is charged to the receiving customer. Formal OTC agent commission is measured as the aggregate commission to sending/receiving agents for the same transaction. Wallet pricing is measured as per 'full-loop' definition on Slide 10. Wallet agent commission is measured as the aggregate of Cash-in and Cash-out commissions.

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Conclusions from pricing evidence

Pricing incentives can be effective in moving formal OTC ‘cash to cash’ markets toward wallet use, but…

- MFS customers are less price-sensitive than expected. Large incentives offer only moderate changes in behavior.
- Effective campaigns stretch beyond transaction pricing to airtime and other financial incentives.
- Registration remains critical, as does removing the non-financial barriers to wallet behavior.
- For Pakistan, historical biases also contribute to sticky OTC use (e.g., previously difficult DFS registration process, agents who served OTC only, etc.). Recent gains in wallet use appear to be driven by market growth rather than reducing OTC.

Conclusions from commissions evidence

Do agents have a proverbial "thumb on the scale" in promoting formal OTC 'cash to cash' transactions?

Not really.

- Agents often have moderate financial incentives to promote OTC, yet evidence from agent interviews and mystery shopping within each market suggests they do not typically have (or use) significant leverage to direct transactions.
- Preferences of peer networks and the momentum of existing behaviors appear to weigh more heavily for consumers.
- Registration denial by agents may be a barrier where MFS registration with an agent is required—but financial incentives to agents have been used effectively to overcome the barrier.

Markets where formal ‘cash to cash’ OTC was not a deliberate strategy

Providers in **Tanzania and Bangladesh** did not pursue formal ‘cash to cash’ OTC as a way to gain scale (for a mix of regulatory and strategic reasons), instead they concentrated on **building wallet use from the beginning**.

	Formal ‘cash to cash’ OTC Permitted	Formal ‘cash to cash’ OTC Not Permitted
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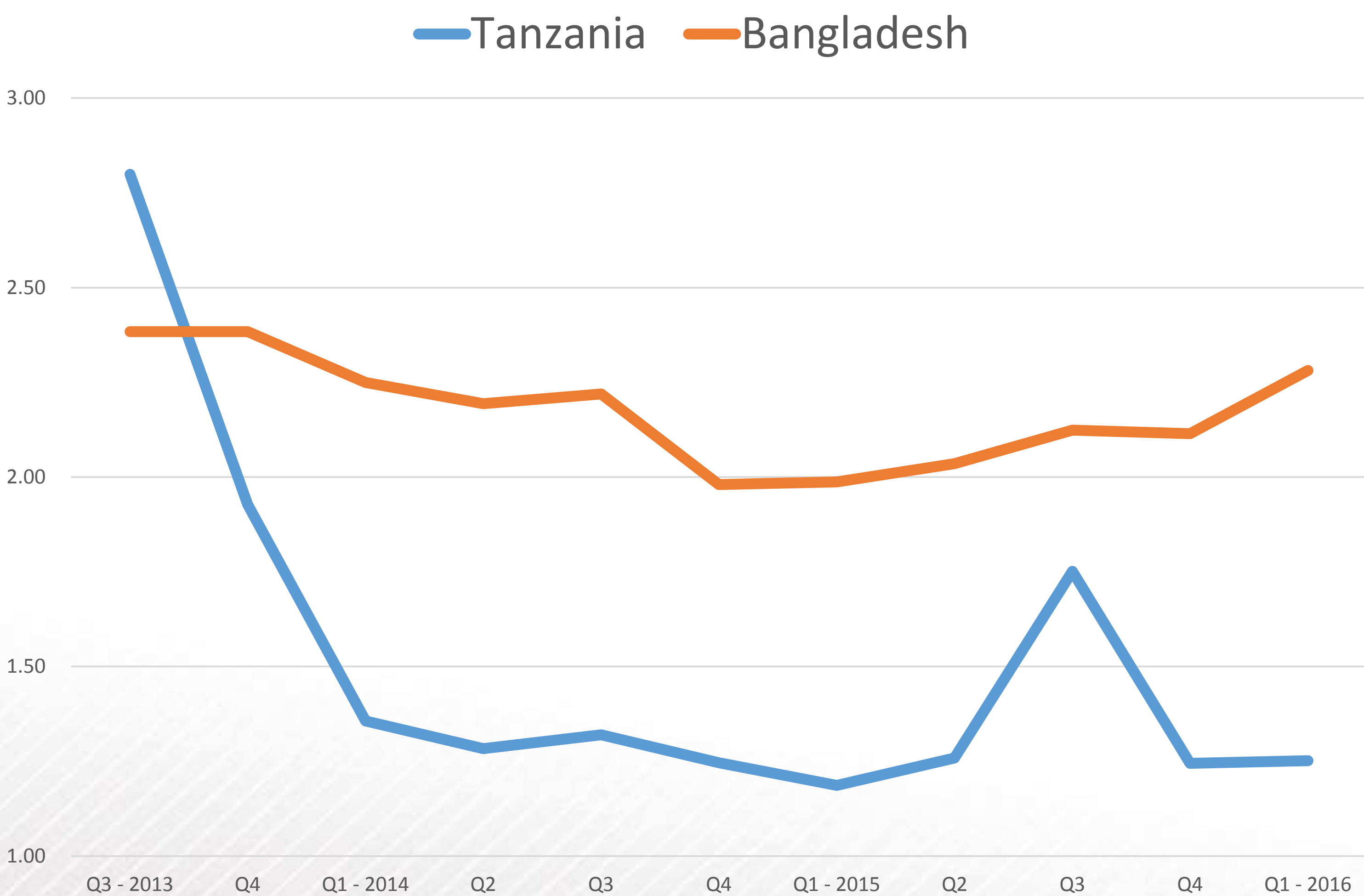
Majority OTC country

Informal OTC in Tanzania and Bangladesh



The **cash-out to P2P ratio** is a measure of informal OTC, because withdrawals typically continue to reflect consumer use, even when work-arounds are found for P2P wallet transfers.

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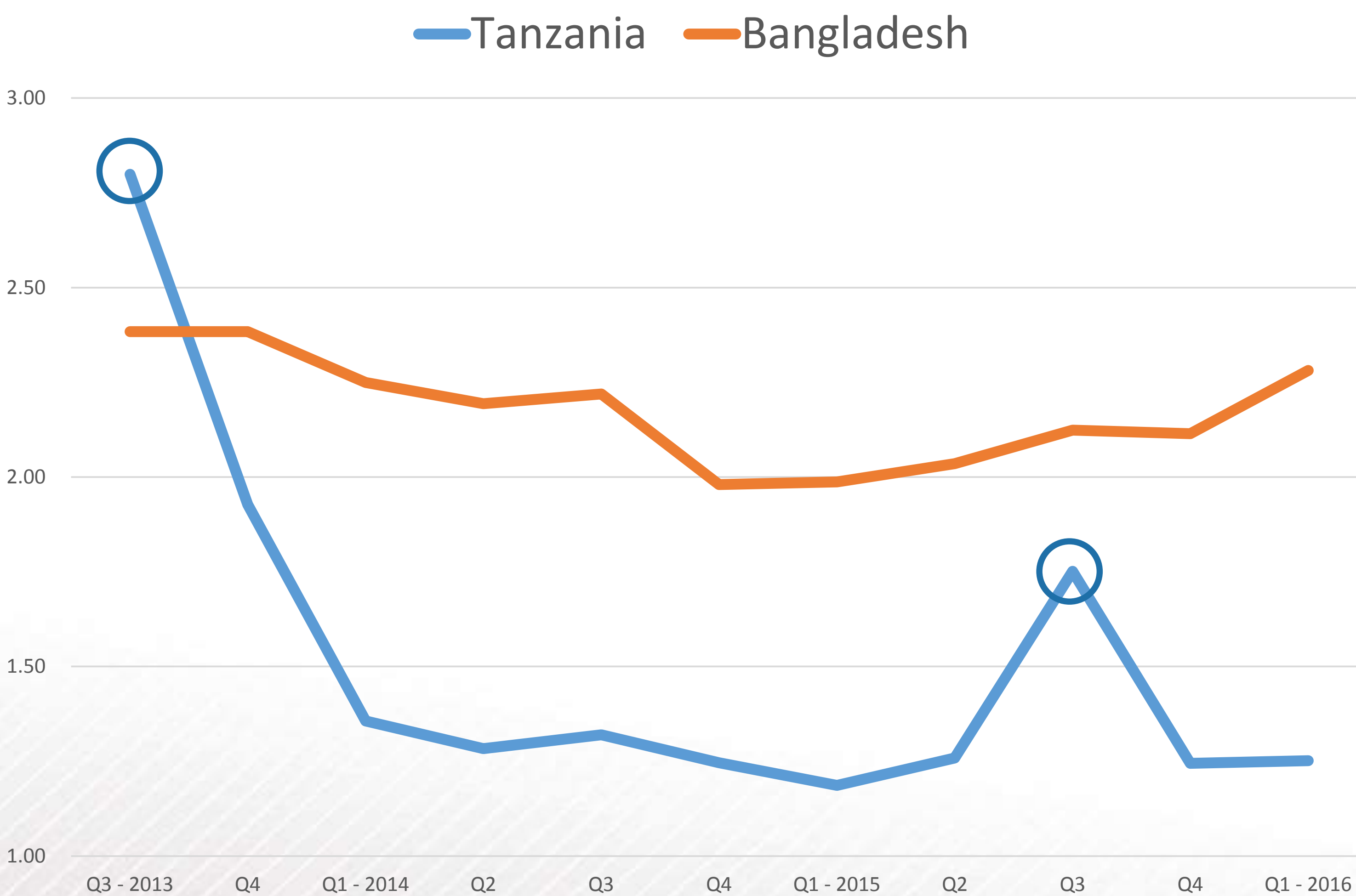
Data obtained from Bangladesh Bank and Bank of Tanzania reporting, as well as provider data.

Informal OTC is prevalent in Bangladesh, selective in Tanzania



Informal OTC through agent direct deposits is ubiquitous. The ratio is likely even higher than shown due to liquidity rebalancing between agents' personal phones.

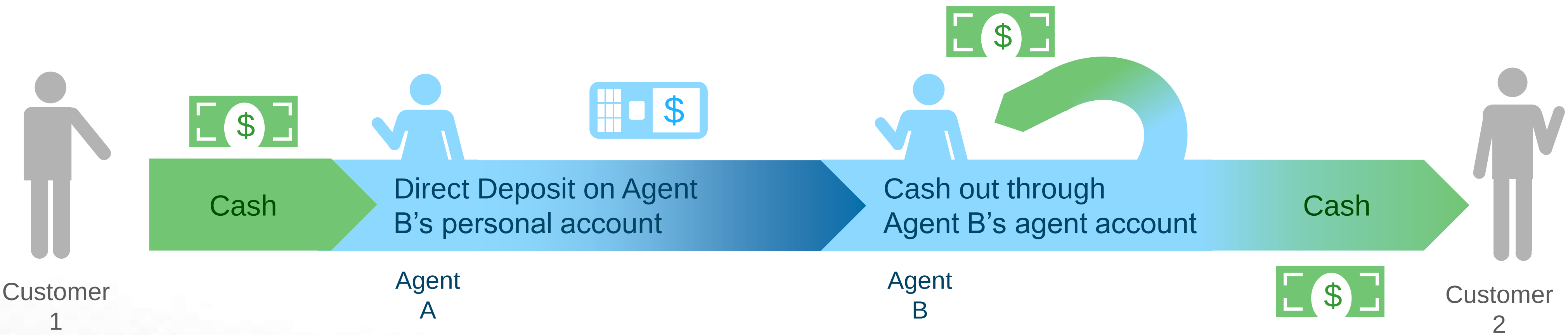
Tanzania, while primarily a wallet market, has witnessed periodic shocks of customer direct deposits among some providers.

CGAP

Data obtained from Bangladesh Bank and Bank of Tanzania reporting, as well as provider data.

Informal OTC in Bangladesh

A typical informal OTC transfer in Bangladesh involves **no use of mobile wallets by consumers**. To manage the electronic funds transfer, **agents leverage both personal and agent accounts**. Receiving agents may use upwards of 20 personal accounts (and phones) for receiving funds to bypass account-level transaction limits.



Cash Payment: Customer 1 provides Agent A with cash and receiving agent details, pays an informal fee.

Transfer: Agent A uses their agent account to perform a direct deposit onto the personal account of another receiving agent.

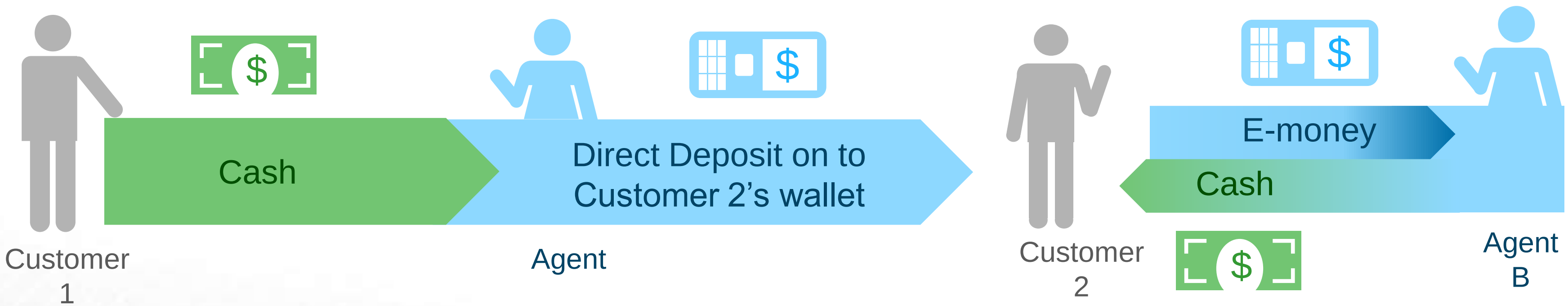
Disbursement: The receiving agent (Agent B) uses their agent account to cash-out from their own personal account.

Cash Receipt: The receiving customer (Customer 2) takes cash from Agent B.

Note: While the transaction described represents the form of informal OTC CGAP has found to be most common in Bangladesh, multiple methods exist, including direct deposit. Refer to the Helix ANA Survey Bangladesh Report for additional detail.

Informal OTC in Tanzania

The most common informal OTC transfer in Tanzania is the direct deposit. A sending customer performs an **unauthorized (by the provider) cash deposit directly onto the wallet of a registered user**. Commonly free to the sender, some agents charge informal fees for long-distance transfer—effectively risk-adjusting pricing to account for provider GIS controls which identify and limit commissions for rogue transactions.



Cash Payment: Customer 1 visits an agent with cash, sometimes paying an informal fee for the service.

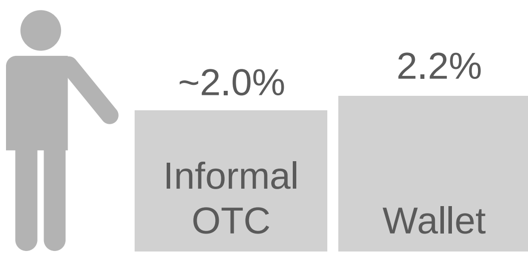
Transfer (deposit): Agent A uses their agent account to deposit directly onto the personal account of the receiving customer (Customer 2).

Cash-out: Customer 2 receives funds into their wallet free of charge, but pays a fee to withdraw cash from Agent B, who earns a commission.

Pricing and Commissions in Bangladesh

Informal OTC and wallet transactions are similarly positioned in the market in terms of both pricing and commissions. There is limited financial incentive to move users away from an entrenched informal OTC behavior.

Customer Pricing

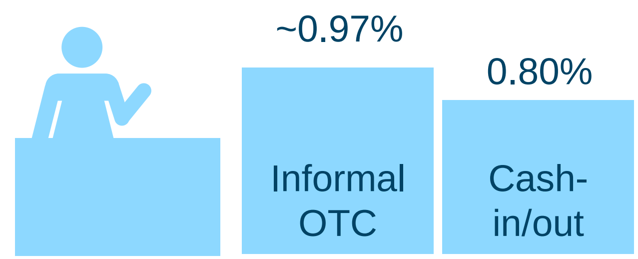


Informal OTC is slightly cheaper than alternatives, but customer pricing among options is comparable.

Customers are paying to cover the cost of a cash-out fee (1.85%) + a small margin (~0.15%).

Pricing structures are weighted heavily toward cash-out rather than transfer (15/85).

Agent Commission



Informal OTC is slightly more attractive, but only to the receiving agent and the difference is minimal (~.15%).

Agents earn their commissions for informal transfers (on the model in question) through:

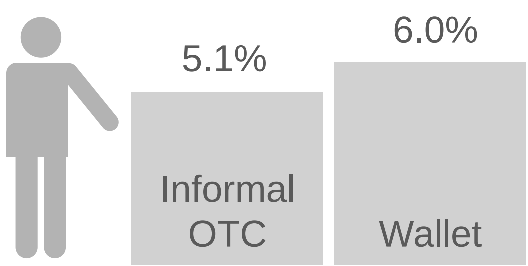
- Sending agent: Cash-in commission
- Receiving agent: Cash-out commission + margin between OTC fee and cash-out fee

Informal OTC pricing is measured as the cost to the sender as per the models specified on slide # 20. No fee is charged to the receiving customer for the Bangladesh model described. Informal OTC agent commission is measured as the aggregate of formal and institutionalized-informal commissions to both sending/receiving agents. Wallet pricing is measured as per 'full-loop' definition on Slide 10. Wallet agent commission is measured as the aggregate of Cash-in and Cash-out commissions.

Pricing and Commissions in Tanzania

Informal OTC pricing remains moderately cheaper assuming no informal fees (not consistently collected in Tanzania). However, current pricing is the result of actions taken by providers to reduce the financial incentives associated with informal OTC.

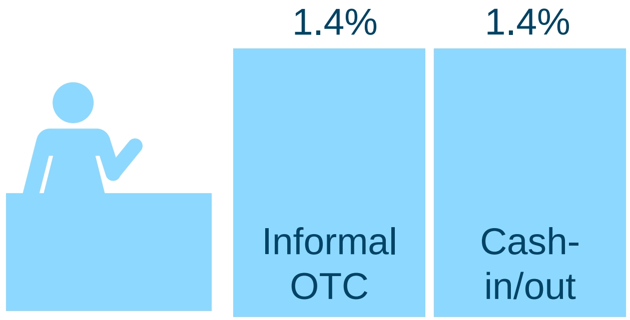
Customer Pricing



Despite fees higher than any of the other markets studied, Tanzania also has the highest percent of active wallet users among the four markets.

Similar to Bangladesh, fees are weighted toward cash-out over P2P (85/15), in part to discourage informal direct deposits bypassing transfer fees.

Agent Commission



Assuming no reversal, commissions between informal OTC and wallet are the same (i.e. cash-in and cash-out commission).

Informal fees are infrequently collected by agents in Tanzania, but may be imposed where there is distance between sender/receiver and agents feel commission reversal by the provider is likely.

Informal OTC pricing is measured as the aggregate of the informal price to the sender (if charged) and the cash-out fee to the receiver. Informal OTC agent commission is measured as the aggregate cash-in/cash-out commission for the same transaction. No informal commission has been included. Wallet pricing is measured as per 'full-loop' definition on Slide 10. Wallet agent commission is measured as the aggregate of Cash-in and Cash-out commissions.

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Conclusions from markets with formal OTC restriction

Financial incentives may have limited impact in determining the way markets with formal 'cash to cash' OTC restrictions develop.

- With similar OTC constraints and incentives, Tanzania developed into a majority-wallet market, Bangladesh moved toward informal OTC.
    - Why? Historical reasons include easier registration in Tanzania; MNO- vs. bank-led service dynamics; and literacy and character set differences impacting UI/UX in each market.
- Pricing in both Bangladesh and Tanzania moderately favors informal OTC, but sender/receiver dynamics have been managed in both markets to minimize the effect.
- Commissions do not appear to drive informal OTC in either market. Agents in Tanzania earn the same, those in Bangladesh earn only 0.15% more. Informal OTC is more commonly an agent response to customer need.

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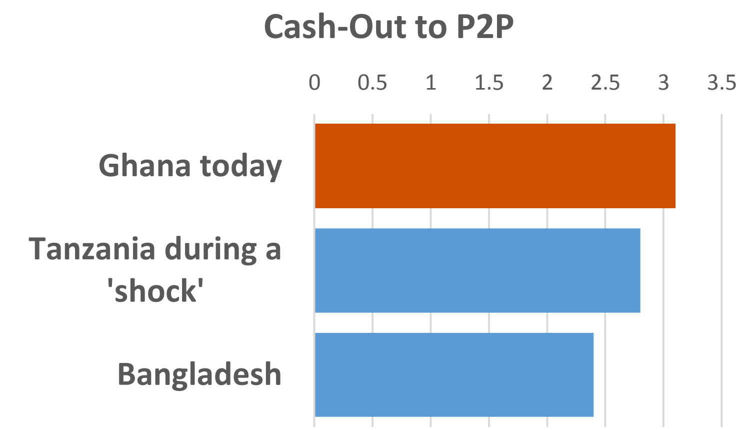
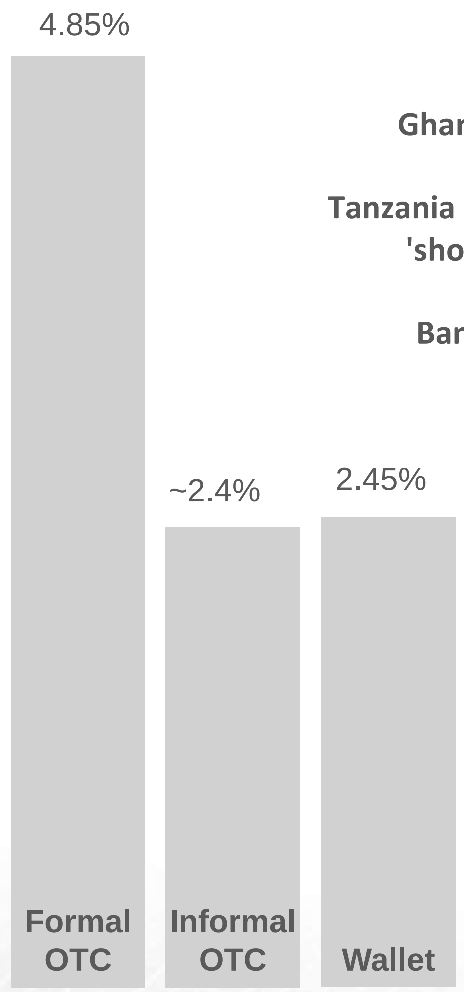
However.. returning to Ghana

Permitting formal ‘cash to cash’ OTC is no guarantee that informal OTC will not become an issue.

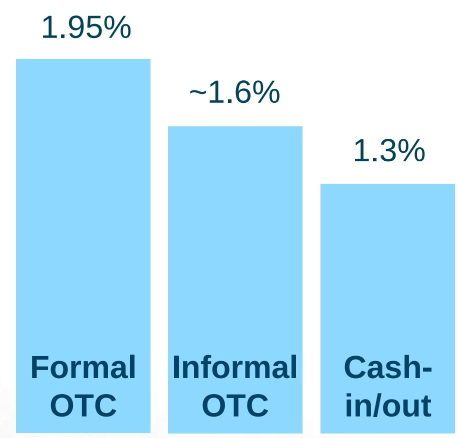
Ghana today…

- Bangladesh averages above 2x, Tanzania has hit 2.8x during a Direct Deposit shock, the **Ghana market averages 3.1x**.
- Most agents in Ghana will conduct the transaction and ask for a fairly standardized **informal fee of ~1%** of the transaction amount (similar to a regular P2P transaction).
- Informal fees are partially an agent response to provider measures such as conditional commissions, where an agent is not paid cash-in commission unless a subsequent transaction is made within 30 days.
- So far, efforts to curtail direct deposits in Ghana have had limited long-term impact.





Customer Pricing

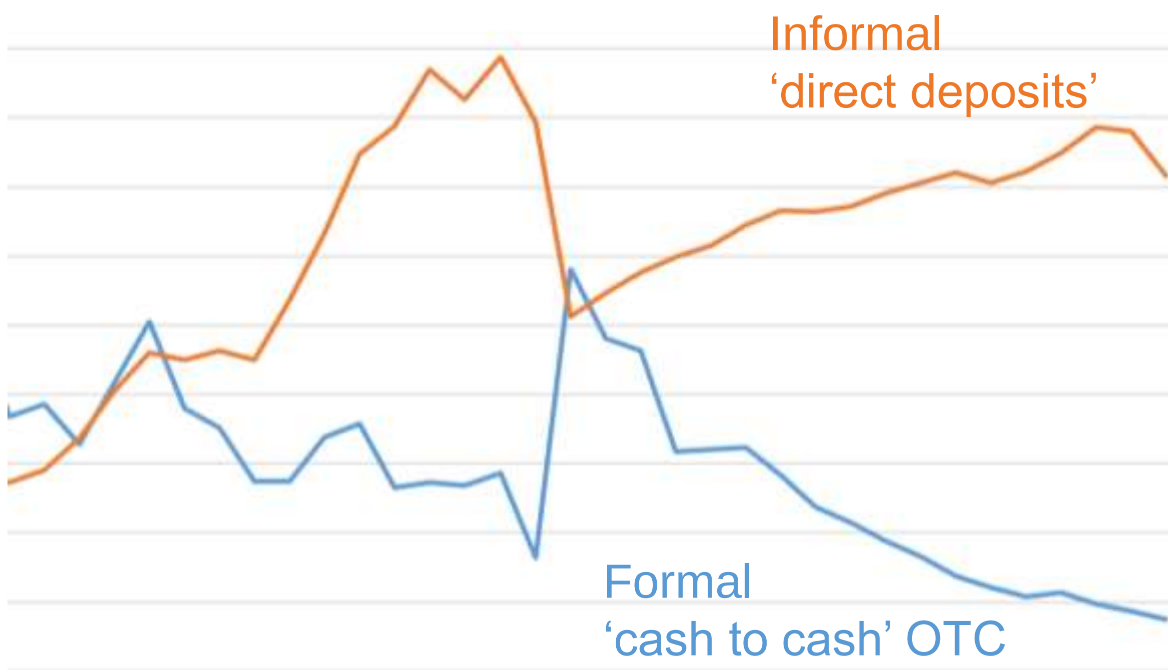


Agent Commission

Even with incentives, behaviors are difficult to change

The chart at right shows a **24-month historical period** during which a Ghanaian provider used financial incentives to control for OTC behavior.

Informal OTC appears inversely correlated with formal OTC, i.e. when incentives and other controls pushed users away from one type of OTC, they appeared in another – the 'whack-a-mole effect'



The effect implies that OTC behavior is the result of a deeper customer preference, awareness, or comfort with certain forms of transaction.

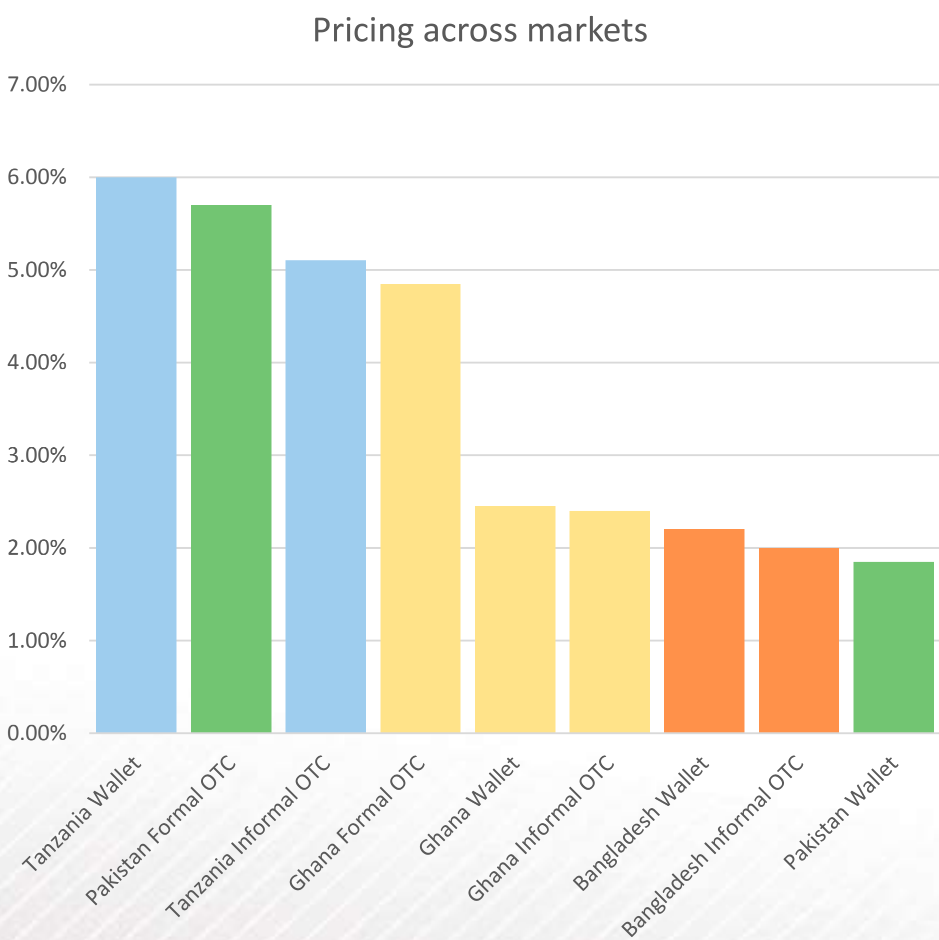
Provider transaction profitability

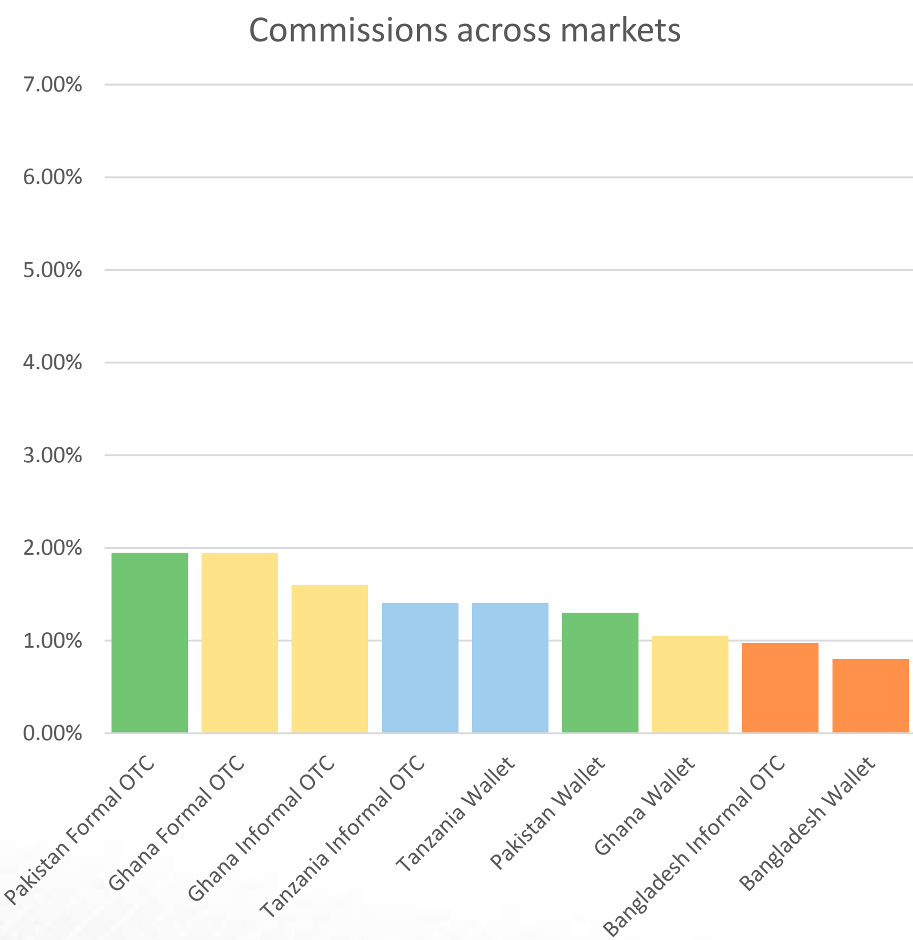
CGAP’s analysis starts from the premise that providers have a vested interest in driving wallet use. Arguments revolve around building the rails for future opportunity, customer loyalty, and for MNO-led products, wider ARPU impacts.

What about the profitability of transactions today?

Do providers have a direct financial incentive to promote OTC?

Rates Compared – US$20 Pricing and Commissions





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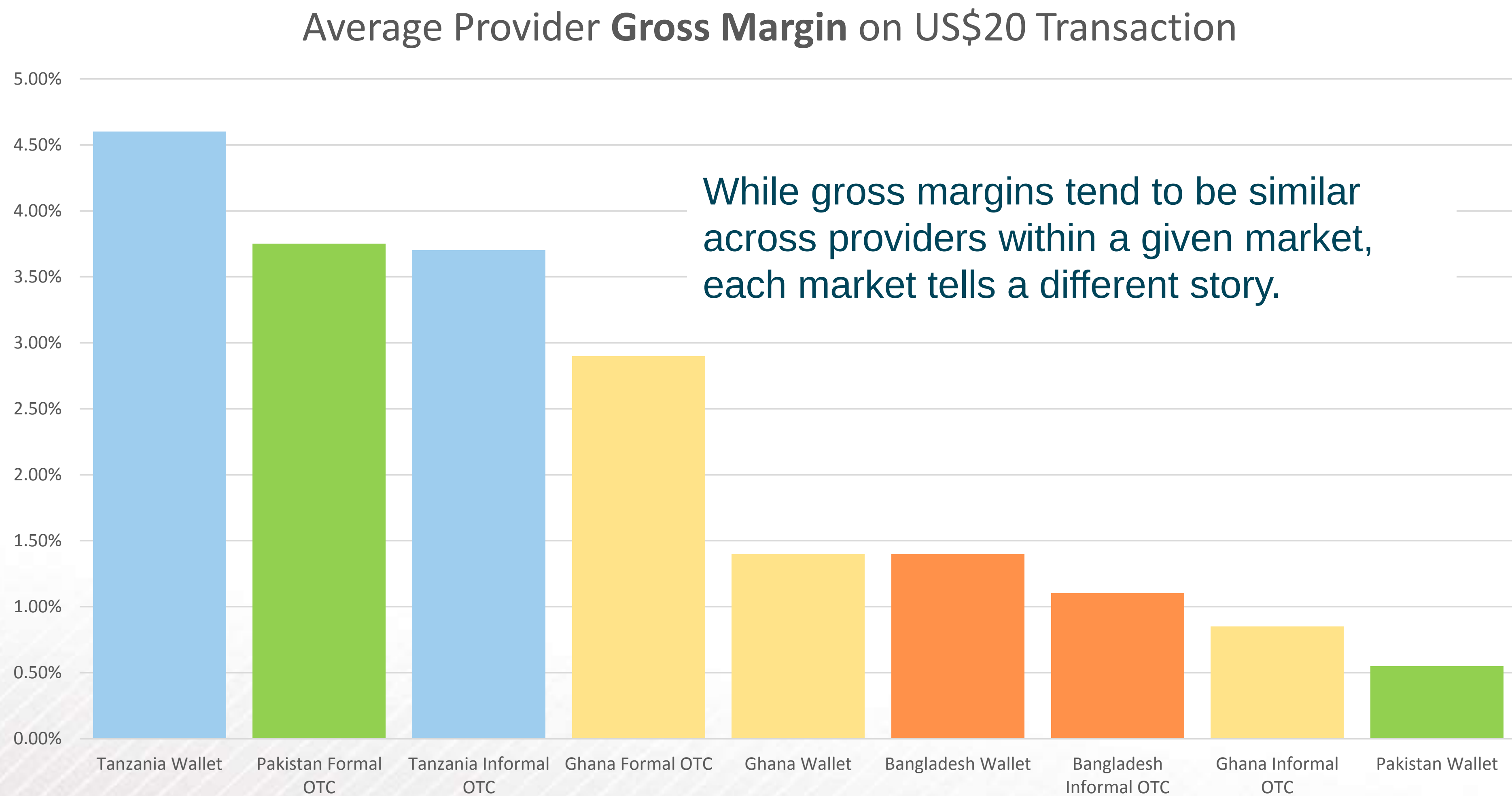
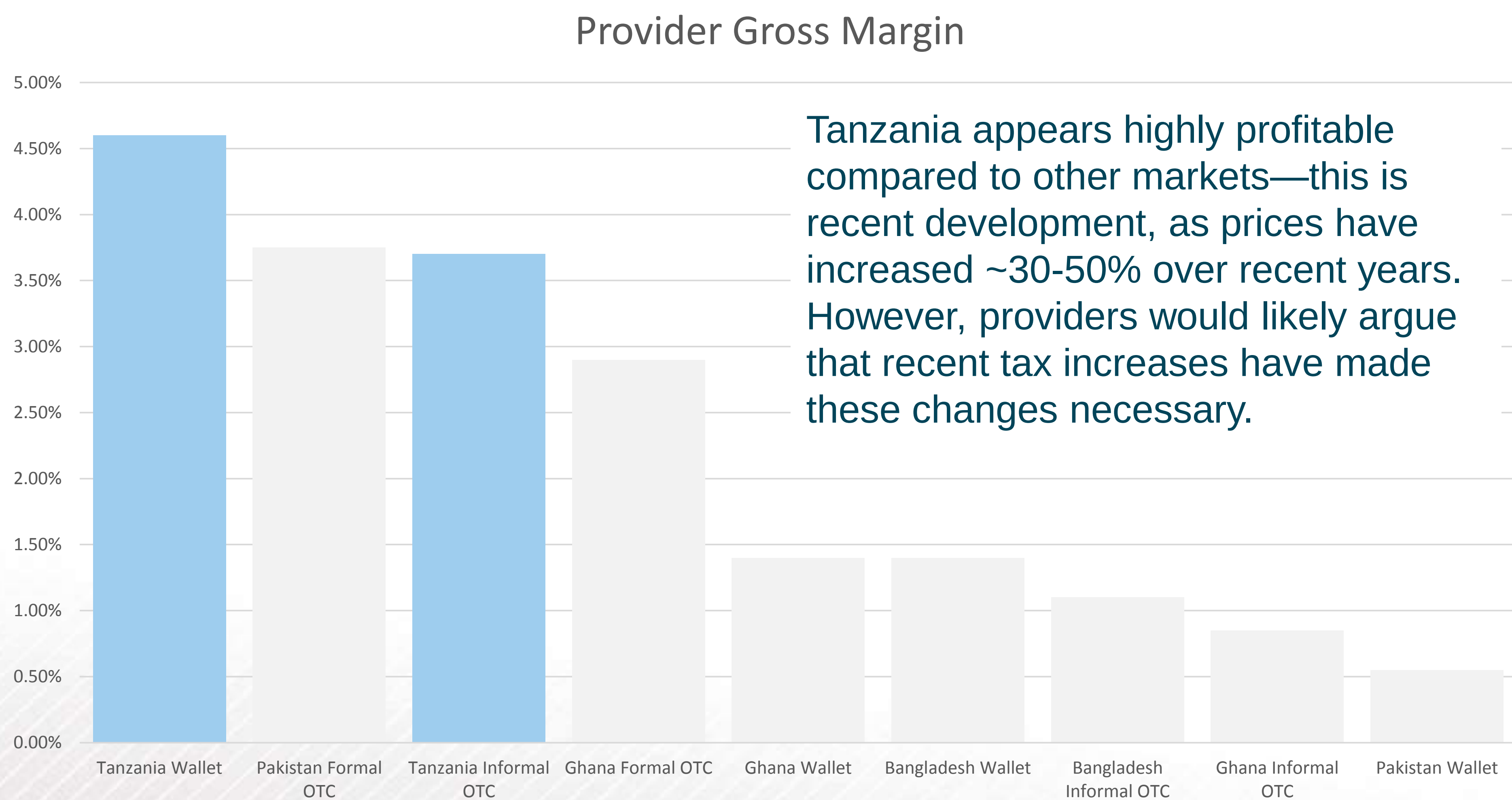
Can transaction profitability tell us about motives?



Provider Margins: Tanzania



Tanzania appears highly profitable compared to other markets—this is recent development, as prices have increased ~30-50% over recent years. However, providers would likely argue that recent tax increases have made these changes necessary.

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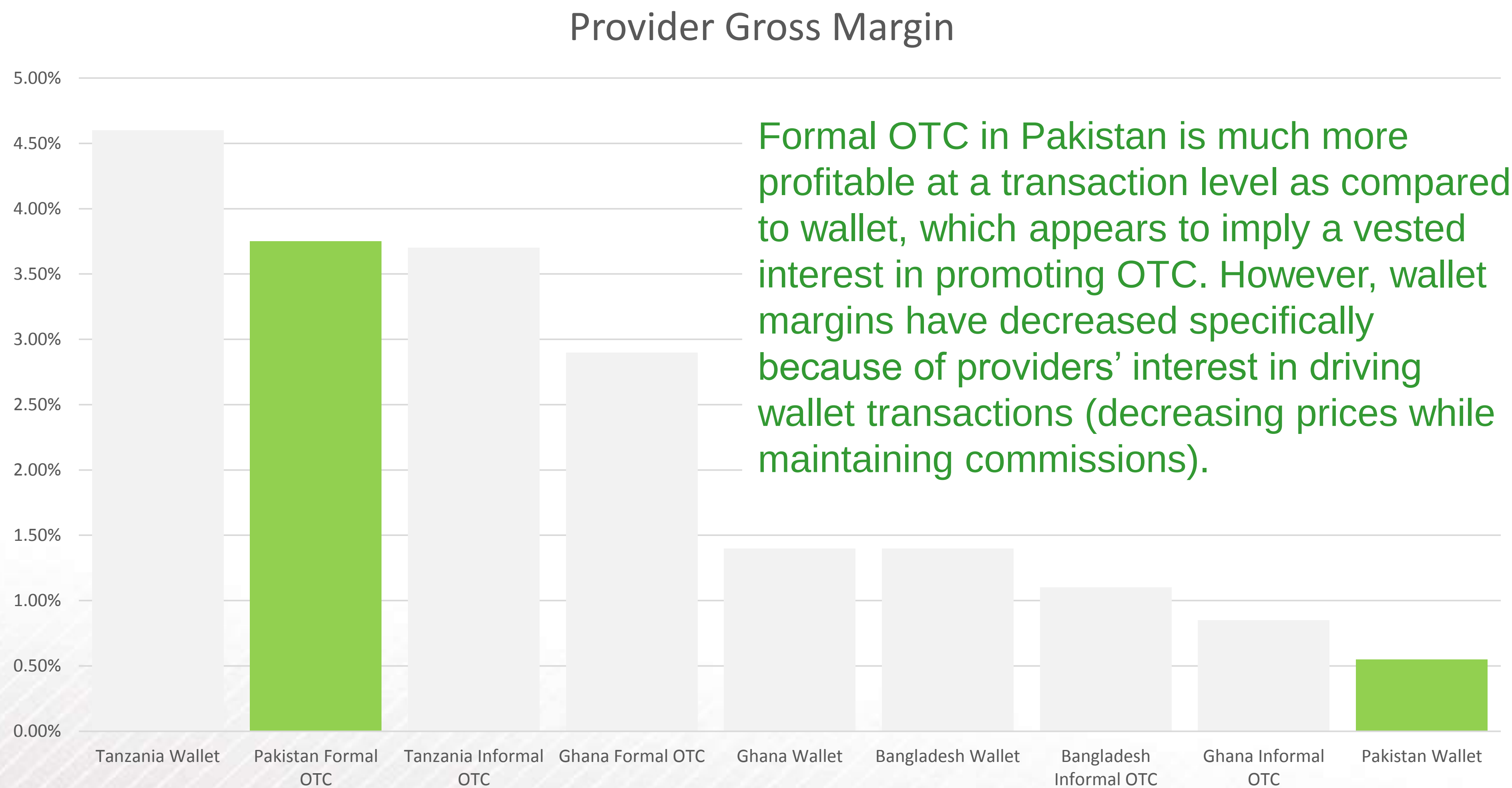
Provider Margins: Pakistan



Formal OTC in Pakistan is much more profitable at a transaction level as compared to wallet, which appears to imply a vested interest in promoting OTC. However, wallet margins have decreased specifically because of providers' interest in driving wallet transactions (decreasing prices while maintaining commissions).

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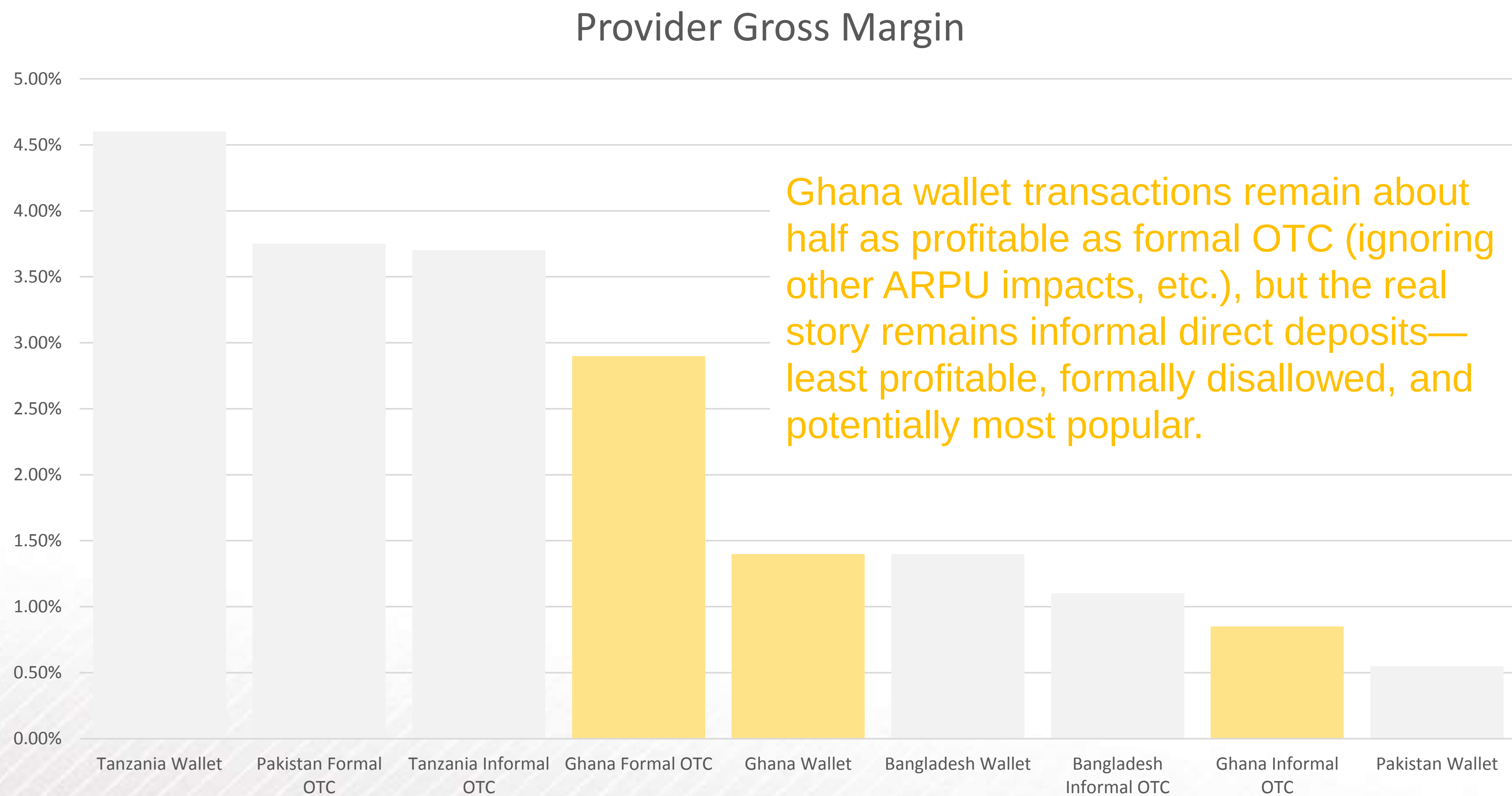
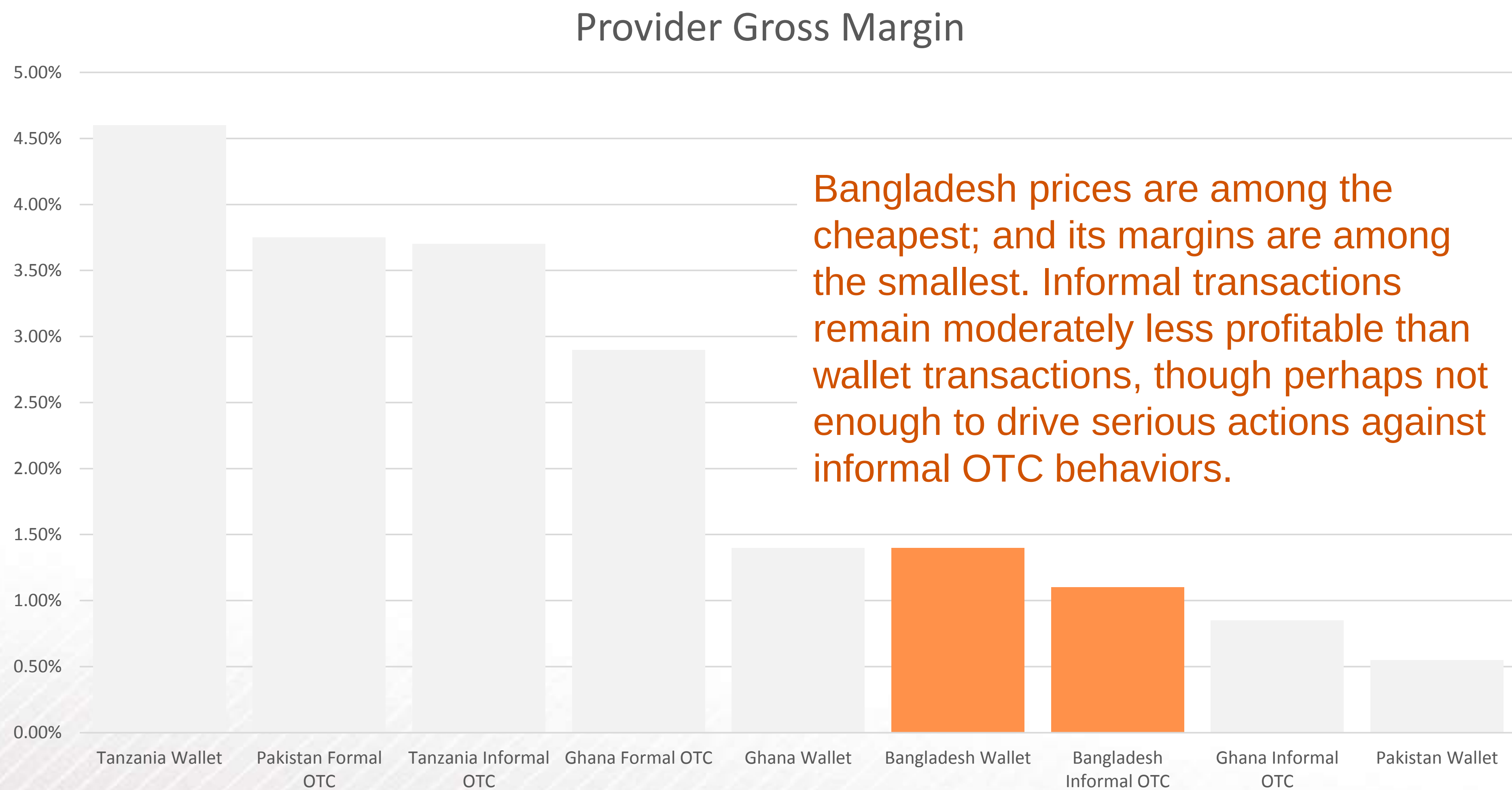
Provider Margins: Ghana



Ghana wallet transactions remain about half as profitable as formal OTC (ignoring other ARPU impacts, etc.), but the real story remains informal direct deposits—least profitable, formally disallowed, and potentially most popular.

Provider Margins: Bangladesh



Bangladesh prices are among the cheapest; and its margins are among the smallest. Informal transactions remain moderately less profitable than wallet transactions, though perhaps not enough to drive serious actions against informal OTC behaviors.

Key findings

Customers are relatively price inelastic, as long as there is liquidity and they can transact reasonably well (e.g., OTC and wallet pricing in Pakistan).

Pricing does not stand out as a key driver that explains the contrast between “wallet countries” and “OTC countries,” but financial incentives can be a tool to shift behavior (e.g., incentives used in Ghana and Pakistan).

Agents may or may not be incentivized by the amount they earn to drive OTC, but this effect is inherently limited due to other more significant behavioral factors (e.g., legacy behavior, registration, peer networks).

Forbidding formal OTC is not always effective in promoting wallets. Limiting formal OTC can simply drive consumers to forms of informal OTC (e.g., Bangladesh).

Combatting informal OTC is possible, but highly dependent on circumstance (e.g., provider responses in Tanzania and Ghana).

Ultimately, OTC behaviors are just that – behaviors, rather than economic choices. They are the result of a complex mix of market factors, which include financial incentives, but remain dominated by more fundamental customer characteristics.

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