FINANCIAL ACCESS MAPS

FOCUS NOTE

By Ignacio Mas and Andrew Elliott

15 April 2014

Where's the Cash?

The Geography of Cash Points in Tanzania in 2014

The availability of physical locations where one can exchange cash for transferable or storable electronic value is an essential component of financial access. The rapid spread of mobile money and POS-based solutions, coupled with the retail agency model, has profoundly altered the landscape of the retail payments market, and is poised to equally profoundly transform the economics of financial service delivery in Tanzania.

In keeping with its mission of tracking and promoting financial inclusion, the Financial Sector Deepening Trust of Tanzania (FSDT) has completed the second census of cash outlets in the country. The data for the first edition was collected during April-July 2012, and the current data set was collected during November 2013-February 2014. Data collection for both editions was undertaken by Brand Fusion, and the data is available publicly for free from www.financialaccessmaptz.com.

Beyond reflecting the sheer passage of time in a rapidly evolving space, the new dataset is more comprehensive than the first edition because it includes: (i) retail agents for all mobile money providers, not just M-PESA; (ii) retail outlets with a point-of-sale (POS) terminal, whether it is used by third-party payment service providers or by banks to accept merchant payments, and (iii) offices of SACCOs (semi-formal savings and credit cooperatives). As before, the census also includes branches and out-of-branch ATMs of commercial banks, branches of community banks and microfinance institutions, post offices and major bus stations. The survey instrument used this time also asked a broader set of questions to agents.

This report highlights some of the key findings from the second edition of the cash outlet census, and updates the earlier Where´s the Cash? report which FSDT published in January 2013. Overall, the results from this census are very much in line with those of the previous one, and point if anything to an acceleration in the trends in territorial coverage with cash access points. This report also highlights the surprising spread of POS-based agents of Max Malipo and Selcom.

In reading this report, it is necessary to remain aware of some of the limitations of the underlying data. First, retail outlets in the census were all visited and hence must have been open for business at the time of the survey, but there was no verification of the number of cash-based transactions they have conducted or of their liquidity levels. Thus, many retail agents could be inactive or unreliable as cash points. Second, direct comparisons in the absolute numbers of outlets between the two editions of this census are hazardous because the collection targets and methodology have changed quite significantly. It is noteworthy that the number of microfinance institutions and post offices has dropped, likely reflecting a difference in definitions and methodology than a market reality. Third, as is typical in a field data collection effort of this magnitude, the data collected is incomplete, as some of the more detailed questions were not answered by some of the respondents. Still, despite these caveats, the census does help to give us a good understanding of the geography of cash points in Tanzania.

Breakdown of outlets by type of service provider

The census revealed 55,875 outlets. Figure 1 shows various breakdowns of these outlets by type. 81% of these (45,341) are mobile money agents, and a further 12% (6901) are retail agents of non-bank POS-based payments providers. Merchant POSs, i.e. stores that have a POS only to receive payment from their customers and do not offer third party payment services, represent less than 1% (407). The remaining 3226 outlets are dedicated outlets for financial or postal services. Within these, SACCOs are the most widespread category (1161 outlets), followed by ATMs (975) and commercial bank branches (616). The smallest categories are microfinance institutions (294), post offices (180) and community banks (37).

It should be noted that these figures overstate the total number of physical outlets, because outlets that offer multiple types of services might be counted in more than one category. For instance, 44 microfinance institutions, or 15% of the total, are also mobile money agents; 133 SACCOs, or 11% of the total, are also mobile money agents; and 22 post offices, or 12% of the total, are also agents of mobile money or POS-based payment providers. We were not able to discern from the data how many of the POS-based agents were also mobile money agents.

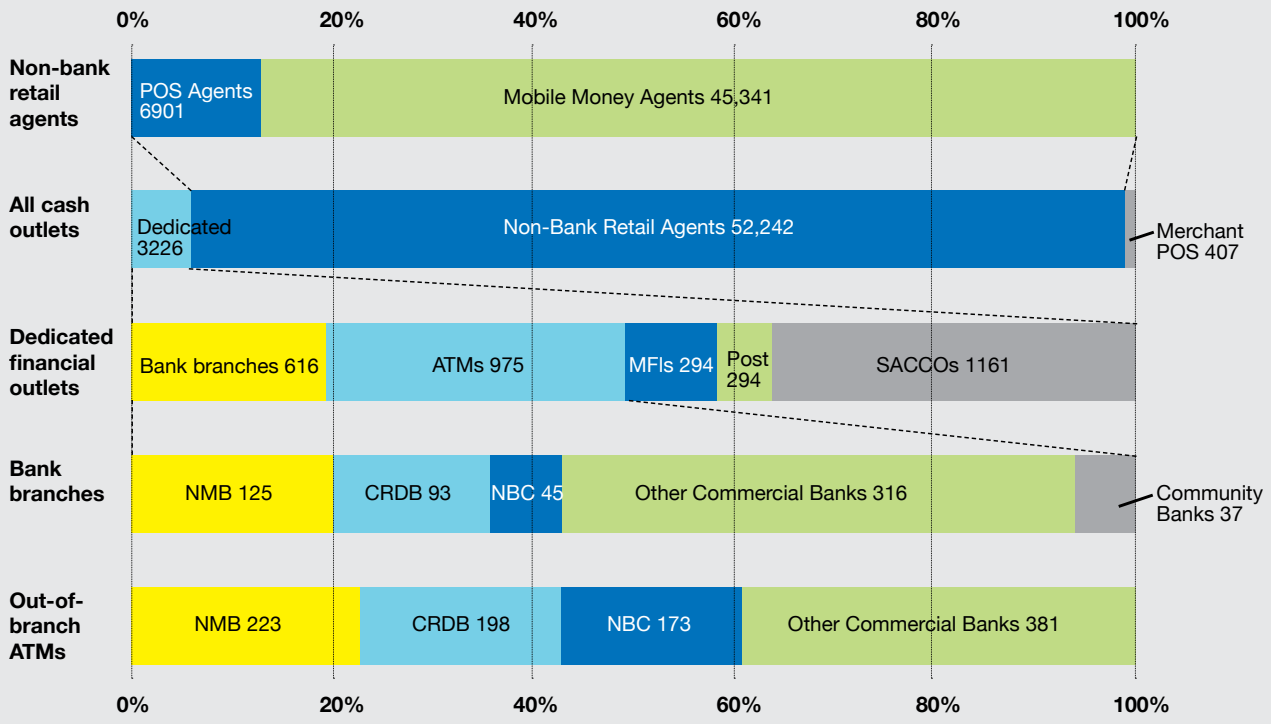

Figure 1: Distribution of Cash Outlets by Type
(The numbers are the total number of outlets of each type, across Tanzania)

Figure XX also shows the share of the three leading banks in total banking outlets. NMB, CRDB and NBC together account for 43% of bank branches and 61% of ATMs.

Mapping the outlets across the territory

Figure 2 displays the density of cash outlets over the map of Tanzania, for the more widespread types of outlets discussed above. The intensity of the color represents the density of agents of that type within territorial blocks of roughly 60km x 60km. It can be seen clearly from the charts that mobile money agents are the most spread out. In second place are POS-based agents of third party payment providers, which follow a similar deployment pattern as mobile money agents. SACCOs seem to be relatively more prevalent in the central and southern areas.

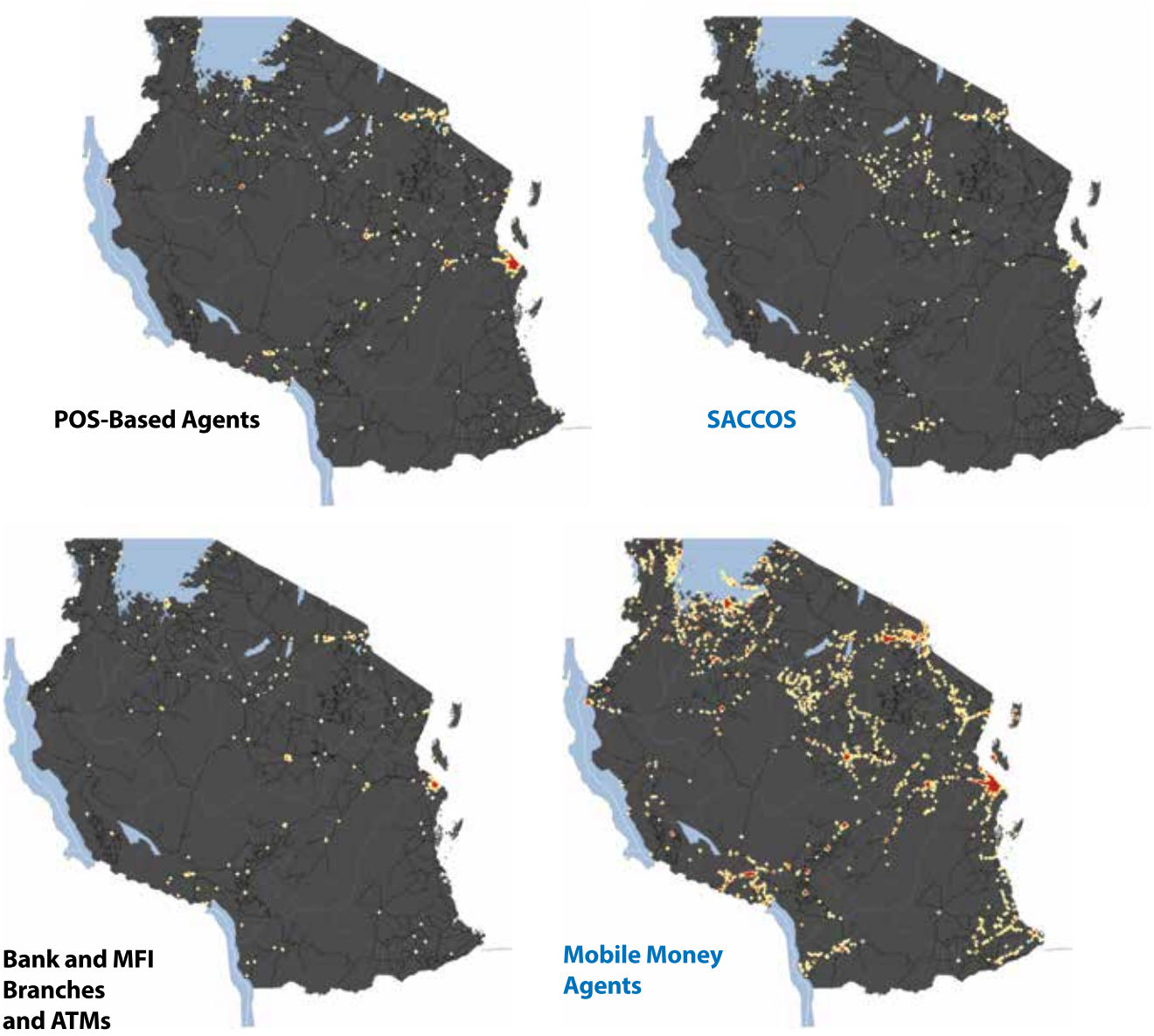

Figure 2: Density of cash outlets, by type, across Tanzania

The color on of the dots represents the number of outlets of each type in a square kilometer radius

The first column in Figure 3 shows the share of districts that have at least one cash outlet of each type listed. The other two columns give a weight to each district proportional to its population and landmass, respectively. Mobile money agents are present in over 80% of districts, followed by SACCOs which are present in over 70% of districts – regardless of how districts are weighted. All other types of outlets have a heavier preponderance in districts with larger population density, as seen from the shortfall in presence with respect to landmass versus population. Post offices, banks and microfinance institutions are present in 50-70% of districts by population, but only 40-60% by landmass.

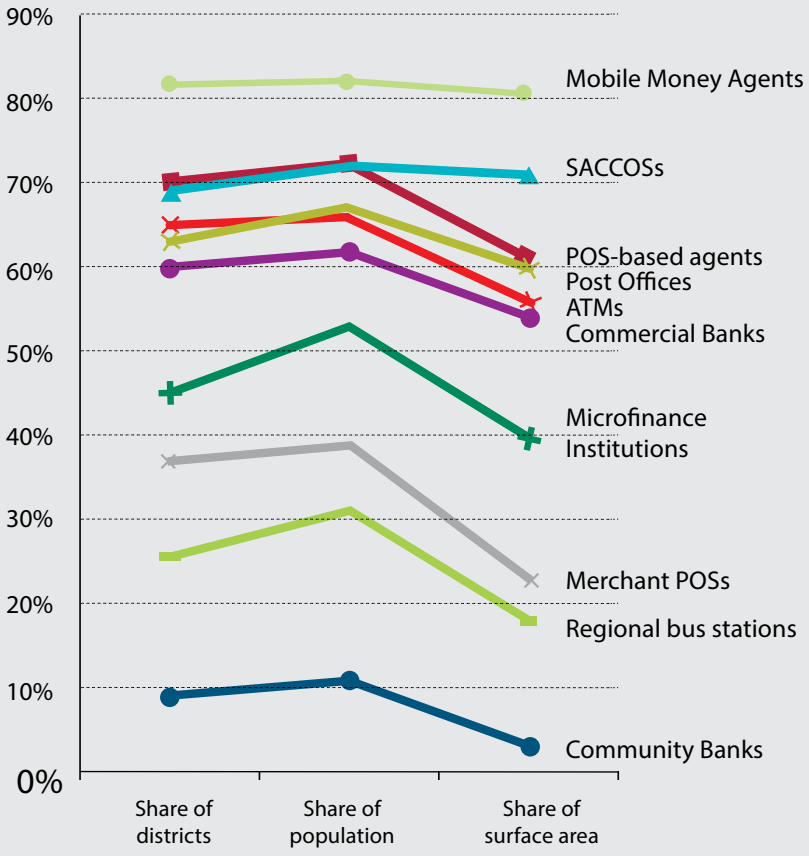

Figure 3: Coverage of each type of cash outlet at the district level

Growth in the number of outlets

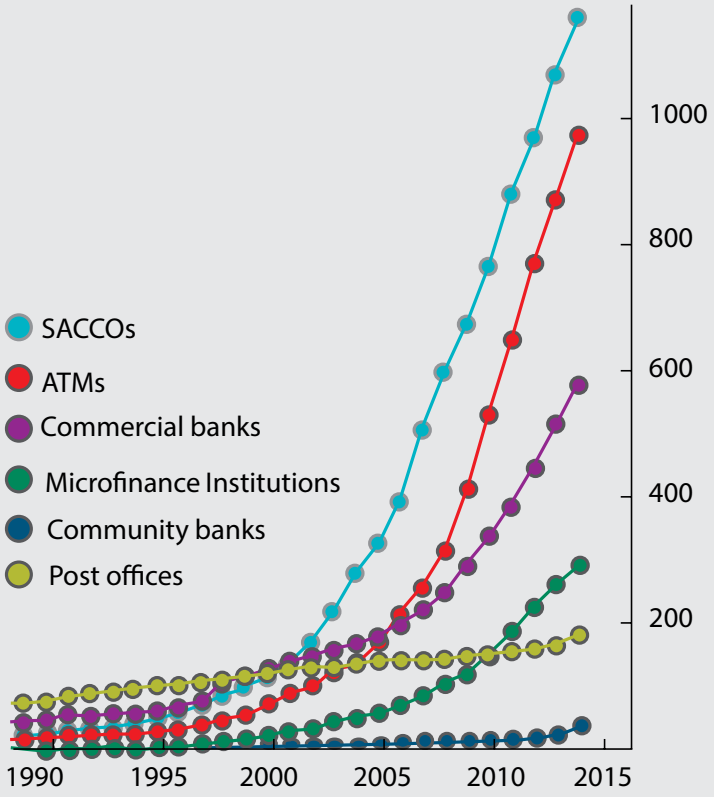

Figure 4: Growth in the number of dedicated financial outlets, 1990-2013

Distance to the nearest outlet

Figure 5 shows the distribution of four different types of cash outlets based on how far they tend to be from different kinds of outlets. Three distance cuts are shown with the vertical dotted lines in each case: at 1km (representing vicinity), 5km (an upper limit of convenient walking distance) and 25km (requiring significant travel). All distances are measured as the crow flies, so the actual distance by road may be significantly larger; also this does not take into account the nature of the roads (paved or not) between two outlets. Note that the charts use a compressed (log) distance scale on the horizontal axis.

The first chart, for mobile money agents, shows that practically all agents have another agent right nearby. Almost two-thirds of agents are within one kilometer of a potential rebalancing point (bank branch, ATM or MFI), and four-fifths of agents are within five kilometers. The second chart, for SACCOs, shows that SACCOs are roughly as distant from banks and MFIs as mobile money agents. The third chart, for commercial banks, shows a very different profile: almost 90% of bank branches are less than a kilometer away from another bank or MFI. The final chart, for post offices, presents much flatter curves because of their broader dispersion: one out of five post offices are more than 5km away from a bank or MFI, and one out of ten are more than 25km away.

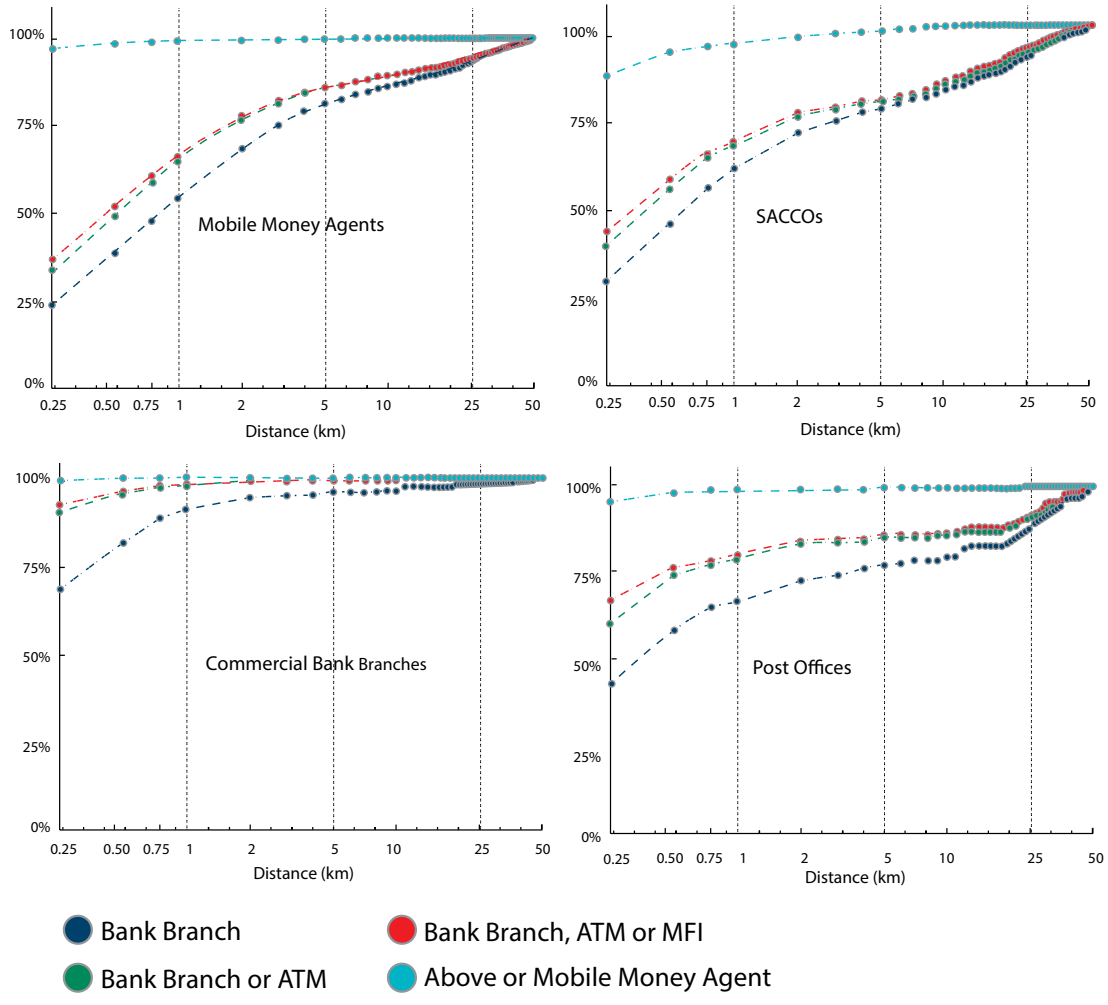

Figure 5: Distance of various type of cash outlets to the nearest agent, bank or MFI

Relationship between number of agents and population density

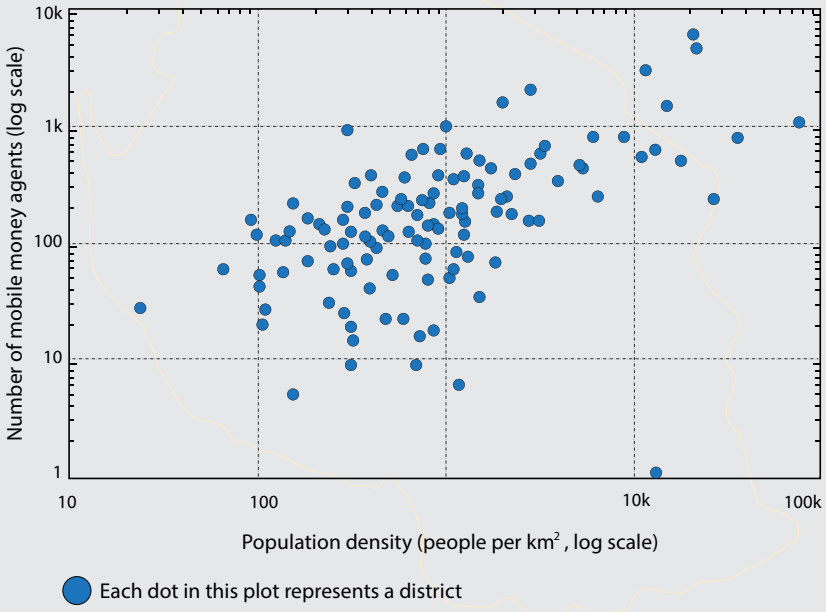

Figure 6: The relationship between number of mobile money agents and population density at the district level

Figure 6 shows the number of mobile money agents in each district in which there is at least one mobile money agent, arranged according to their population density. There is a clear positive relationship between the total number of agents in a district and the population density in that district, as one would expect. (Note that the plot is in a log-log scale, so the relationship is not linear despite the appearance on the chart.) A similar relationship appears to exist across the other types of cash outlets, but because of their much sample sizes the patterns are harder to pick out.

Sharing of agent networks

Figure 7 shows the extent of agent sharing among mobile money providers. Two-thirds of agents have a single provider; only one in ten are shared by more than two providers. M-PESA has the larger agent network, with over 38,000 outlets, or 58% of the total. Tigo Cash and Airtel Money follow, with around 20% each.

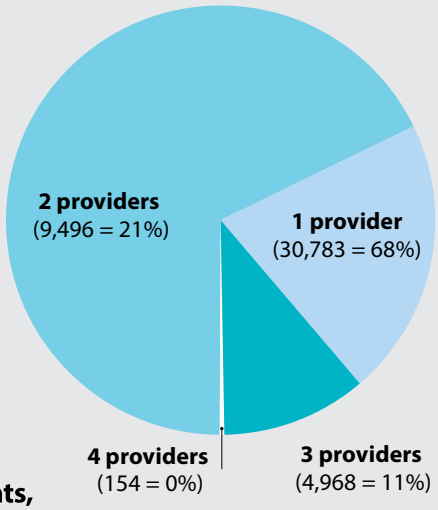

Figure 7: Mobile money agents, by provider and degree of sharing among providers

2/3 of agents have a single provider

Only 1 in 10 are shared by more than 2 providers

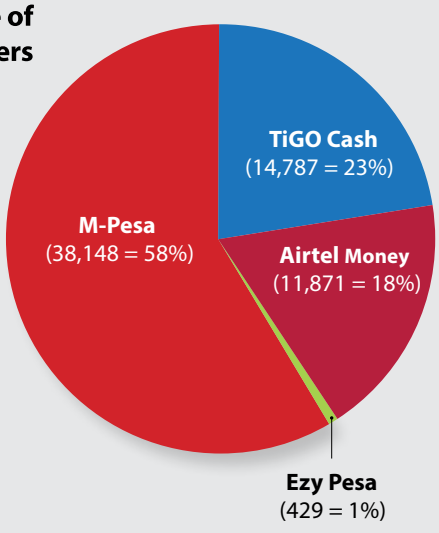

Figure 8 shows the probability that the agents of a given mobile money provider are shared with each of the other providers. The dominance of M-PESA is evident from this figure. Under a third of M-PESA agents are shared with Tigo, and under a quarter are shared with Airtel. On the other hand, over 70% of the agents of both Tigo and Airtel are also M-PESA agents. As the smallest player, Ezy Pesa shares half of their agents with each of the other three mobile money providers.

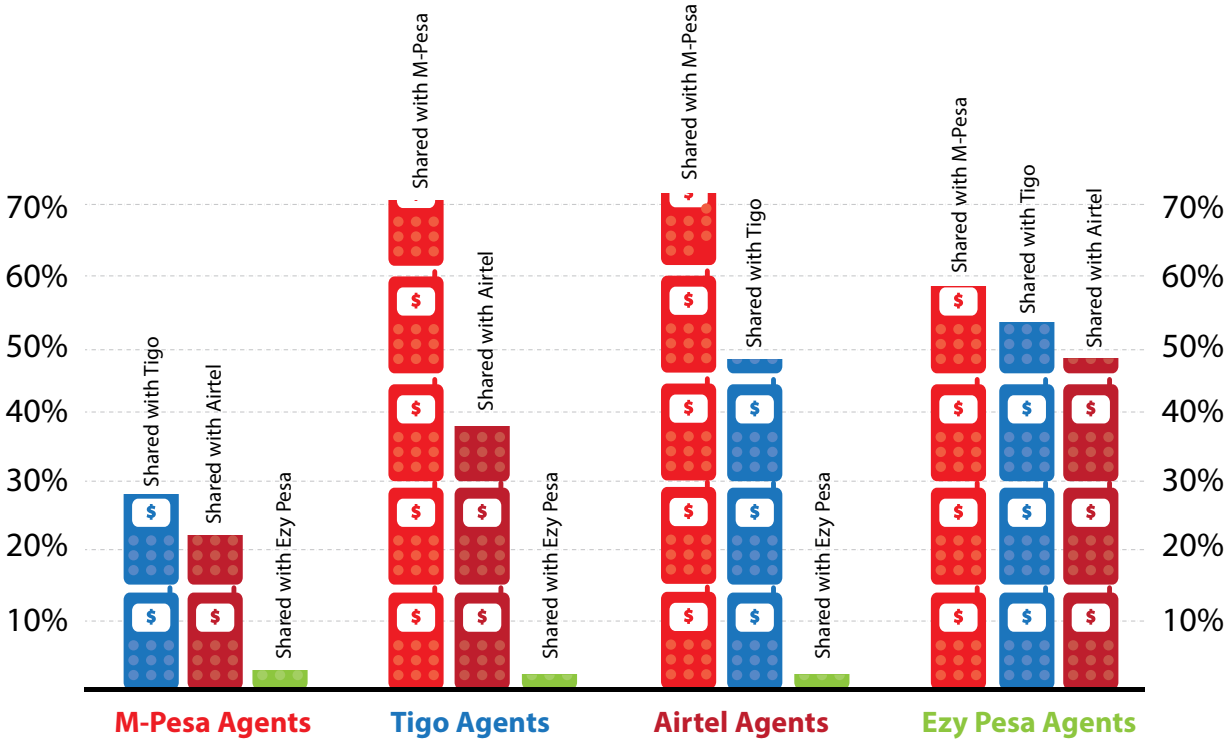

Figure 8: Share of each provider´s mobile money agents that are shared with each of the other providers

Turning now to POS-based agents for third party payment providers, Figure 9 shows that a tiny proportion of agents are shared by different providers. Max Malipo and Selcom are the two biggest providers, together accounting for 87% of all POS-based agents.

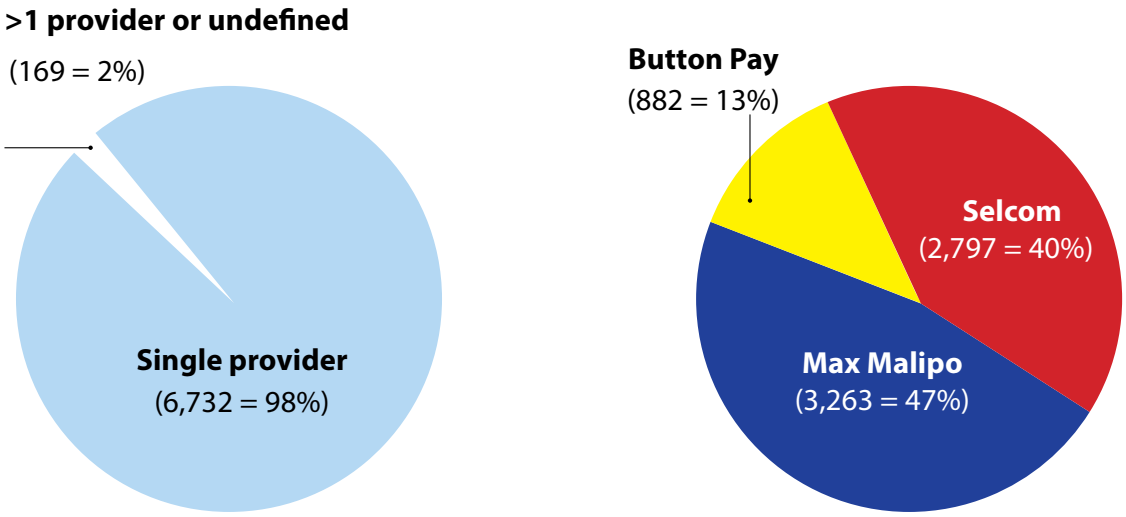

Figure 9: POS-based agents, by provider and degree of sharing among providers

Figure 10 shows how agents are shared with other, non-finance related businesses. Mobile money and POS-based agents show a similar pattern: almost half of all agents are standalone, around a quarter are dukas (small grocery corner shops), and one in ten are stationary shops.

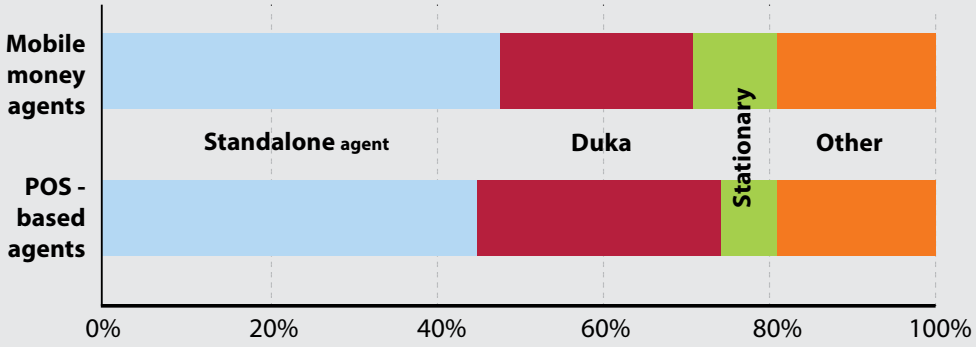

Figure 10: Non-financial businesses conducted by retail agents

Services offered by agents

Mobile money agents only offer basic cash in/cash out services; customers themselves invoke the various mobile money services from their mobile phone, be it for bill payment, money transfer or to move money from a bank account. POS-based agents, on the other hand, perform the underlying service on behalf of their customers, using their POS terminal.

The three most common services used by customers of POS-based agents are utility payment, tax payment and money transfers. Figure 11 shows the breakdown of the universe of the 6,901 POS-based agents, based on what combination of these services they report performing. Around 80% of agents offer utility payments, around 70% offer money transfers, and around 60% offer tax payments. 93% offer utility and/or tax payments. But only 881, or 13% of agents, report offering all three services. On the other hand, 5% either did not offer any of the three services or did not supply data.

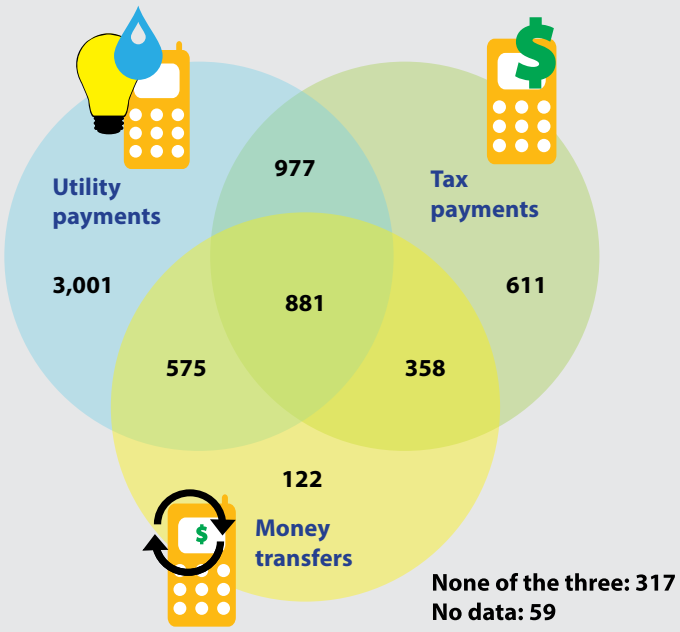

Figure 11: Distribution of POS-based agents according to the services they report offering

1 Ignacio is a Senior Research Fellow at the Saïd Business School at the Unversity of Oxford, and Andrew is a PhD student in the CABDyN Research Group also at the Saïd Business School. This work was commissioned and funded by the Finacial Sector Deepening Trust of Tanzania; the authors are grateful to FSDT, and especially Agathamarie John, for their support.

FSDT
FINANCIAL SECTOR DEEPENING TRUST

Promoting greater access for more people to engage with the financial system in Tanzania

Office: Financial Sector Deepening Trust
2nd Floor "De Ocean Plaza"
Plot 400 Toure Drive Oysterbay
Dar es Salaam, Tanzania

Postal Address: PO Box 4653

Contact: Agathamarie John
agatha@fsdt.or.tz

Tel: +255 (0)22 260 2873
+255 (0)22 260 2875
+255 (0)22 260 2876

Fax: +255 (0)22 260 2880