

Inclusion and your bottom line

Case studies in a new
mixed-method approach to
characterizing and
measuring inclusiveness for
financial products and
services in an increasingly
digitally-native world



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Executive Summary

Digital financial products and services have rapidly become as prevalent as they are fundamental in serving an increasingly global market at massive scale. Yet tools and methodologies for assessing the inclusiveness of these products and services holistically – taking customer preference into account, and understanding how this impacts profitability – have not kept up with this breakneck pace.

At BFA Global, we've developed a new approach, which combines qualitative and quantitative research, factor analysis, evaluation of usage patterns, and a unit costing analysis, to provide financial services providers with an actionable roadmap that can enable them to better understand how inclusive their products are from a customer perspective, and how the development of more inclusive offerings might impact the profitability of their business - as detailed in a collection of case studies in this report.

The evolution of digital integration

To arrive at this point, mass market financial services have evolved through several paradigms - each with an increasing level of digital integration - over the past decade, as financial institutions work to achieve greater financial inclusion while maintaining profitability. These include:

1

The traditional savings-centric model: this has been primarily espoused by brick & mortar banks, focused on branches and relationship-heavy banking, and is designed to maximize float via personal savings products which can be used to invest into loans^{1,2}

2

The lower-margin, higher-volume **Cash-In Cash-Out ("CICO") and transaction-centric revenue model:** this gained traction with the advent of mobile money and other similar agent network models³

3

The payments platform model: this was enabled by cloud computing and other new technologies⁴, and focuses on the provider just breaking even with transaction fees, then achieving profitability through additional adjacent or embedded products and services⁵

This most recent trend, which already displayed significant traction⁶ in 2019, has been forced to center stage by the effects⁷ of 2020's COVID-19 pandemic. The combined effect is an increase in both volume and depth of digital products and services, designed to better reach mass market populations, which continue to evolve at a rapid and accelerating pace.

1. [Payment Aspects of Financial Inclusion](#). Bank for International Settlements. 2016.

2. [Gateway to Financial Innovations for Savings \(GAFIS\)](#). BFA Global. 2013.

3. [Fighting Poverty, Profitably](#). Bill & Melinda Gates Foundation. 2013.

4. e.g., see the "Three Opens" (platform/APIs, innovation, collaboration) and "ABCD" (AI, Blockchain, Cloud Computing, and [Big] Data) promoted in the content embedded in: [Tencent's WeBank's Runs Accounts for Just 50 Cents a Year](#). Chris Skinner's Blog. 2019.

5. [Payments as a Platform](#). GSMA. 2019.

6. e.g., see "Payments as a Platform" section in: [State of the Industry Report on Mobile Money, 2019](#). GSMA. 2020.

7. [How are inclusive fintech startups responding to COVID-19?](#) Catalyst Fund. 2020.

Introducing a new approach to measuring inclusiveness

As this trend continues, properly designed digital payments products, and transactional accounts specifically, have the potential to accelerate financial inclusion in a profitable manner, as noted in prior literature.^{8,9} This literature indicates that this can be accomplished by bringing down cost to serve relative to incumbent models, reducing physical and temporal barriers to access, and providing embedded features that can be dynamically tailored to the needs of underserved individuals and businesses.

While the literature lays out relatively coarse qualitative demand-side heuristics to be considered when designing such inclusive products, any quantitative treatment is limited to evaluation of top-down, supply-side business models. While this is useful in an informational sense, it does not necessarily offer the combination of supply- and demand-side insights that are necessary to provide a set of practical and directly actionable guidance that can be incorporated and executed on as part of their product design process and roadmap.

Thus, in the following collection of strategic consulting case studies, BFA Global provides a granular, practical, and holistic lens through which financial services providers can measure inclusiveness of the increasingly digital set of financial products in the market today, while evaluating how this can impact product adoption and usage, and the provider's profitability.

Throughout the case studies, we introduce results specifically around the design of mass market transaction accounts provided by formal financial institutions in three African markets. However, it should be noted that the metrics and practices laid out below do not necessarily need to be constrained to finance nor the digital medium, and could potentially be extended and adapted to evaluate non-digital as well as non-financial products.

8. [Payment Aspects of Financial Inclusion in the Fintech Era](#). Bank for International Settlements. 2020.

9. [Mobile Money for the Unbanked](#). GSMA. 2014.

Introduction

How can one define and measure inclusion without drawing resources and attention away from the existing product roadmap?

Should an assessment of inclusiveness be approached from primarily a supply-side (e.g. financial projections driven by corporate strategy) or demand-side (e.g. market research and customer interviews) perspective, or is it possible to incorporate key components of each?

And perhaps most prominently, how can one bring inclusiveness into the design and implementation of a product while maintaining a profitable business model?

We begin to address these questions above, first by introducing an overview of inclusion and laying out key characteristics of inclusiveness. We then discuss several key activities that BFA Global typically executes in order to provide diagnoses and recommendations on the topic of inclusiveness for products developed by our private sector clients and partners. These include both demand and supply analyses as well as a synthesis of the two perspectives. Finally, we summarize what results can be expected when executing these activities and taking their results holistically, and where future extensions to this work may be necessary to formalize a framework around these methodologies.



What makes a product inclusive?

Simply stated, an inclusive product is one that balances compelling product attributes from the customer's perspective with those that contribute to the provider's profit model, and does so within a given market context (i.e. with given competition and given regulation¹⁰).

More than anything, a provider needs to design a product that balances supply- and demand-side requirements holistically. A product that satisfies all customers but is killed off after a month because of a bad business model is no better than a product with a very profitable model that nobody uses.

We capture this tradeoff within the context of a financial transaction product, in five high-level factors (each composed of a number of sub-characteristics), derived from a literature review, expert interviews, and a series of surveys¹¹. Those factors include :



01 Reliability

Reliability. The product should be *robust* in that features and services are available when needed and operate as expected. Transactions should be *timely* and eliminate unnecessary delays in settlement. Funds and data should be secure in transit and at rest. Customers should be *protected* from fraud and other misbehavior, and should be provided with recourse to resolve complaints and disputes.



02 Value

The product should be *useful* to the customer in meeting their specific use cases, including non-transactional features like planning and reporting. The customer should be *supported* by well-documented and easy-to-understand customer service channels. The provider should be perceived as *trustworthy* by the customer in terms of competency, transparency, benevolence, etc. Terms and conditions, and other processes and policies should be communicated in a *transparent* manner to the customer. The product should be designed to maximize coverage, both in terms of integration (i.e. openness) and value to the payee (i.e. acceptability and network effects).

10. Although it's possible to creatively push the boundaries on these factors, often competition and regulation are factors that are ultimately beyond a provider's control.

11. Each of these activities was conducted by BFA Global, as commissioned by Bill & Melinda Gates Foundation in 2019 and 2020.

**03**

Accessibility

Physical access points (e.g. for cash-in, cash-out services) should be geographically *near* and accessible in a timely manner. The product and touchpoints should be *obstacle-free* in that they are convenient and easy to register for, activate, and use (minimizing or eliminating friction caused by documentation requirements and considering needs related to language, gender, religion, etc). In particular, obstacles relating to mobile access requirements (e.g. need for a data plan, hardware and operating system requirements, smartphone application size, USSD session timeouts) should be considered and minimized. The onboarding process and interfaces should be *simple* for the customer to learn and use.

**04**

Affordability

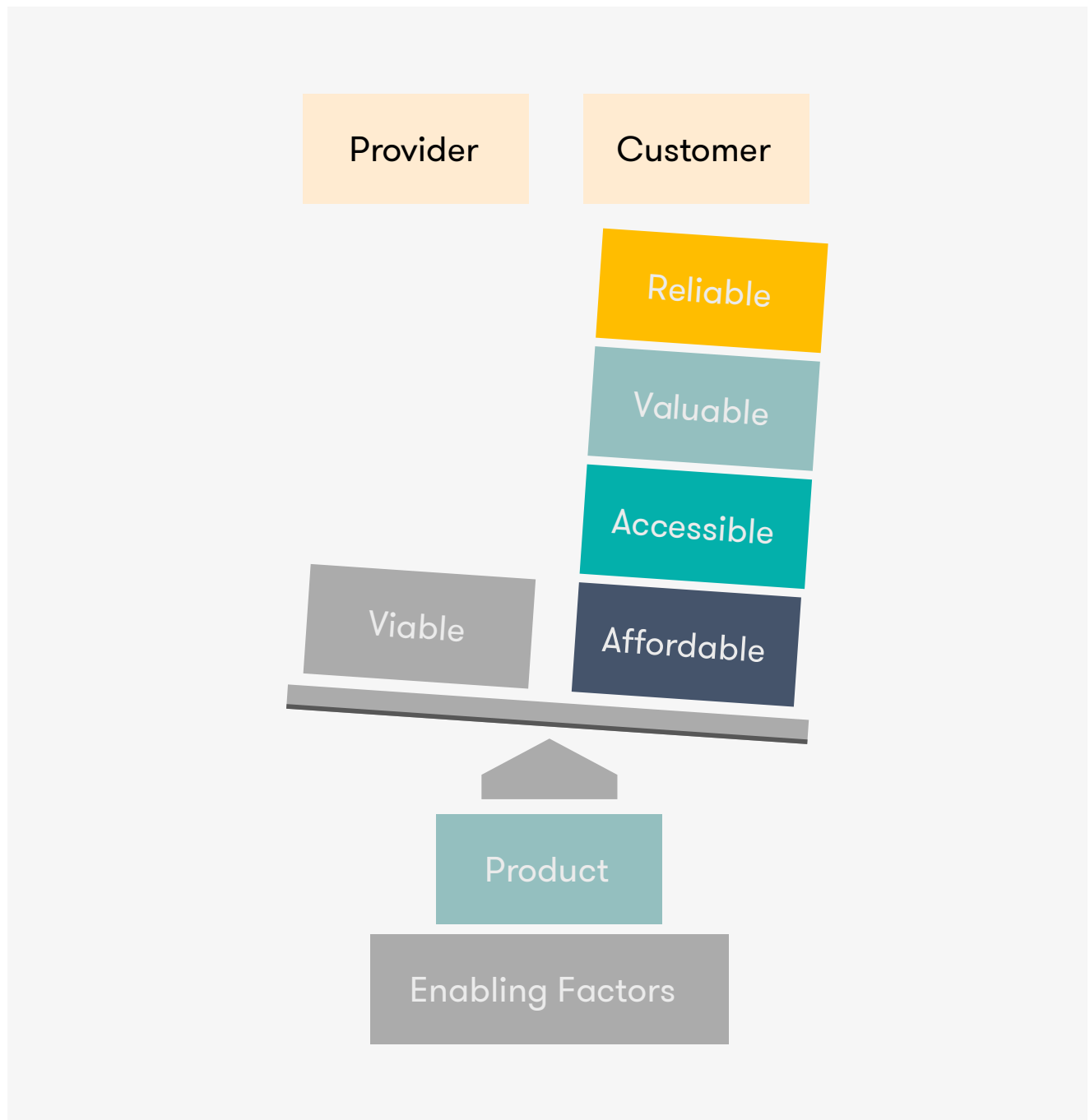
The customer must have the *ability to pay*, which can be accommodated by holding costs of registration and transactions close to zero. The customer must also demonstrate the *willingness to pay* (e.g. as measured by how much they would hypothetically pay per month to avoid disruption in service).

**05**

Viability

The product must ultimately be sustainable and profitable for the provider, as measured by unit costs for various behaviors, usage.

These are detailed more extensively in the following collection of case studies. The illustration below highlights the relationship between these factors, and the extent to which a product can be considered inclusive (i.e. whether it effectively maximizes the above factors to increase customer adoption, optimize usage, and realize network effects).



How inclusive is a product, and why should anyone care?

Beyond well-documented best practices that directly inform product design¹² and implementation¹³, there are additional motivations and potential benefits to building inclusive products that serve users within the market's access frontier¹⁴.

For example, systematically measuring inclusiveness allows for *benchmarking*¹⁵ against your competition within the sector you are operating in, and taking informed action based on your market position and product maturity.

As well, with the advent and mass adoption of programs like the UN's Sustainable Development Goals¹⁶, *funders* are increasingly paying attention to social impact effects and corresponding metrics. From philanthropic donors¹⁷ to traditional venture capital investors¹⁸, and all types of funders in between, a sound strategy paired with a reliable methodology on this front can also aid in securing funding necessary for rapid growth.



12. e.g., see ["Impact: a Design Perspective"](#) from IDEO.org

13. e.g., see ["UX for the Next Billion Users"](#) from Google Design

14. Defined as "those who are within reach of the market now and in the foreseeable future." See: Porteous, David & Sander, Cerstin & Leach, Jeremy & Arora, Sukwinder & Ellis, Karen & Matul, Michal. (2005). [The access frontier as an approach and tool in making markets work for the poor](#).

15. For examples relevant to mobile money providers in the financial sector, see studies by [GSMA](#), [McKinsey](#)

16. See ["The 17 Goals"](#) from the United Nations Department of Economic and Social Affairs.

17. See ["Fighting poverty, profitably"](#) from the Bill & Melinda Gates Foundation

18. See [Catalyst Fund's "Triple A" Framework](#), developed by BFA Global

How should one measure inclusiveness?

Embedded into virtually all our work at BFA Global are modular activities which we have designed and regularly execute in order to assess and monitor each of the factors stated above. We've compiled these steps into several key questions, which collectively contribute to what we believe is the first step toward a framework for the measurement of inclusiveness.

Paired with each question below is a set of practical tools and methodologies, each laid out in more detail in the case studies, that can be readily leveraged to by a provider when striving to create more profitable, inclusive products

How can I identify and quantitatively validate the principal components of inclusiveness and determine which matter most within a given market?

While the five inclusiveness factors identified above form a foundation based on literature, expert interviews, and past surveys, they are susceptible to both dynamic factors (e.g. new technologies introduced over time), as well as market-specific nuances (e.g. competition, regulation, infrastructure, and culture).

By conducting a factor analysis on responses to customer opinion surveys in each given market of interest, we test the proposed relationships between correlated variables that make up each of the high-level factors, and assess those factors that were identified through customer research as those most critical to inclusiveness from a customer perspective.

What do customers really care about when adopting and using a product?

Building on these validated factors, and integrating them into the design of quantitative and qualitative and choice modeling surveys, we surface and prioritize the perspective of the customer in determining which characteristics drive initial adoption of new transaction products, and which contribute significantly to higher usage for existing accounts. This aids in identifying both product- and market-specific successes and failures, and these insights can then be incorporated into a refined and more optimally inclusive product strategy and roadmap.

What are unexpected barriers and experiences customers might face?

While literature, experts, and surveys can give us insights into customer expectations and perceptions, it is equally important to step into a customer's shoes to directly experience the product itself. By employing mystery shopping across a typical and relatively comprehensive set of use cases, we evaluate the published rates, features, access points, and adjacent services for a basket of transaction products, and contrast these against the reality on the ground as captured by our team of mystery shoppers.

How does inclusiveness translate to usage of the product?

Each of the modules above – market-specific inclusiveness factors, along with customer expectations and practical experience – combine to influence customer usage of the product. By extracting anonymized, transaction-level data from a provider's product databases and running specialized machine learning algorithms against them, we identify unique usage patterns (i.e. "motifs") that best characterize the customer base.

These patterns form the concrete supply-side reflection of customer perspectives, captured by demand-side activities, and thus can be used to model how product roadmap decisions could drive usage patterns (e.g. how adding a billpay feature might encourage holding a balance).

How does inclusiveness impact profitability for providers?

In addition to characterizing customer usage, the aforementioned motifs each exhibit a unique net cost or revenue, based on the product's business model. In this final step, we conduct a unit costing analysis, in which we allocate supply-side costs and revenues of a product to each type of customer activity involving the product (e.g., registration, usage over various channels, customer service requests). We then multiply these unit costs by the patterns of usage in the motif profiles to calculate the net profitability of each motif. Finally, we multiply these profitabilities by the distribution of the motifs to calculate portfolio profitability. We combine these figures with the aforementioned scenario modeling to project future profitability as well.

How does this all add up?



For a provider of digital products, and in particular those in financial services, the insights generated by BFA Global and our partners have served to optimize profitability while also allowing for (and encouraging realization of) the most inclusive product possible. For incumbent providers, this can mean pivoting to a more efficient business model and working to improve brand reputation; for earlier stage providers, these insights could even serve as a differentiating factor between life and death of a product.

While each of these activities generates a set of rich insights on its own, when completed in harmony with each other they also add together to form a bigger picture of opportunities, successes, and challenges in the context of a given product, market, and/or sector.

CASE STUDY 1

How can I identify and quantitatively validate principal components of inclusiveness and determine which matter most within a given market?

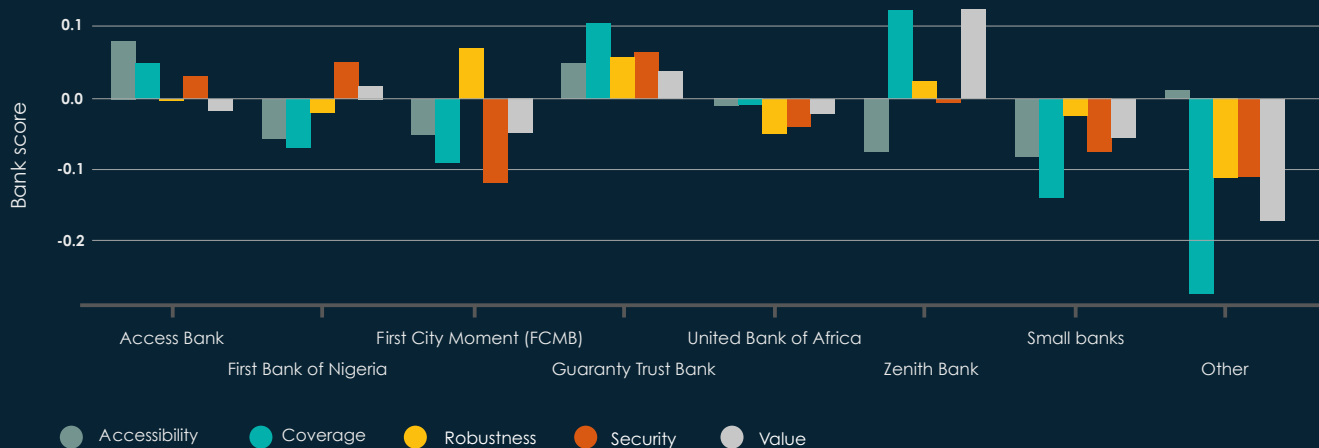
Five high-level traits of transaction accounts can unlock strategic insights, and they can be measured using nothing more than customer opinion surveys. Our research has revealed the dimensions of banks' offerings in emerging markets that matter most to customers: **accessibility, coverage, robustness, security, and value.**

As noted in our methodology below, it bears mention that the above traits are only what falls out of survey data; so in [other related case studies](#), coverage is subsumed into *accessibility*, and *robustness* and *security* are combined into a larger trait, *reliability*. Those changes do not reflect the statistical finding from this survey, but rather a composite that emerged from blended research methods after the fact.

The rest of this chapter will explain what the above concepts are, how to measure them, and why it matters.

Nigerian Banks

Five traits from the case studies



Scores calculated from a survey of 526 consumers in Nigeria, describing their own bank accounts. Bank traits identified using latent factor analysis of survey data and averaged over each banks' customers.

Banks compete for customers on many criteria at the same time. They must make tradeoffs between offering more access points, better customer service, and competitively priced offerings, in order to remain competitive. A coherent strategy requires situational awareness of the bank's competitive position in these domains.

Through recent surveys the BFA Global team conducted in three African markets, we saw that a single, standardized survey of customer opinions can produce insights into the competitive position of transaction accounts offered by banks and nonbank financial institutions. *Here, we present findings from a customer survey in Nigeria, which identified five*

traits that matter to customers: accessibility, robustness, security, coverage, and customer service. These traits not only describe how customers evaluate particular transaction accounts, but can also structure financial institutions' thinking about their service offerings. From the customer survey data we gathered, we produced a set of scores for each bank based directly on the opinions of customers. Armed with effective metrics, banks can optimize their strategy for marketing, product design, and operations.



Crafting the ideal customer survey

The survey that we used strikes a balance between brevity and specificity. The [lean data movement](#) cautions us against gathering too much data without a clear plan for actionable learning. In other words, if we don't know what we should do with the data we gather, then the effort of collecting it is wasted. Taken to a logical extreme, this movement results in single-question surveys such as the Net Promoter Score, which gather information on only a single topic: how costly will it be to acquire the next customer? We can do better than this for retail financial services. The intent of our survey was to understand whether our expert analysis of the key traits of financial products matches those identified from the [consumer's perspective](#).

Our survey on the key traits of transaction accounts is 29 questions in length, all of which are phrased in plain language. Most of the questions request opinions on a five-point scale, from "Strongly agree" to "Strongly disagree."

We aggregated these 29 questions into traits using a class of models common in psychometrics, known as "factor analysis." These models are estimated in a two-phase process, first to identify the traits that matter to consumers from the correlation of responses in the survey data, and second to estimate the contribution of each survey question to those high-level traits. The first phase is called *exploratory factor analysis*, and the second phase is called *confirmatory factor analysis*. At a conceptual level, these models assume that responses to individual questions are driven to some extent by a hidden variable, and then measure the correlation of observed responses with the unobserved traits.

At the outset of the project, beginning with desk research, we organized our questionnaire into subsets of questions that were designed to measure the high-level traits using a hypothetical typology of bank traits. Through factor analysis, we were able to identify five common traits that customers use to describe their transaction accounts.

It bears mentioning that the five traits we landed on are not absolute and immutable. The traits identified in Kenya and South Africa differed slightly from what is presented here. These differences are partially due to nuances of survey design, and partially due to intrinsic differences in transactional accounts in these markets.

Seeing the 5 key traits from the customer's perspective

The five traits that arose from the Nigeria factor analysis were (in no particular order) **accessibility**, **coverage**, **robustness**, **security**, and **value**. *Exploratory factor analysis* confirmed that the optimal number of traits needed to explain Nigerian customers' views of their banks was five, and confirmed how the questions should be organized into groups to produce the most coherent preferences among customers' survey data. *Confirmatory factor analysis* estimated the weight of each question related to a trait in determining the bank's score for that trait. Then, using original survey data, each bank was given a score in each of these dimensions, estimated from those derived weights and survey responses given by that bank's customers.

Accessibility

Accessibility refers to the ease of registering for and using the product. For the most savvy customers, accessibility will likely not be the most important trait of a financial product. Yet respondents view "ease of use" as generally correlated in several contexts. Banks that score well on one of these questions are likely to score well on the others. These three questions define accessibility:

Payments require few steps to complete

Registration requires little documentation

Learning to use the account requires little time

The correlation of these three questions into a single dimension was close to what we expected at the outset of the project, with one exception. Catering to low-literacy customers seldom correlated with the ease of registering for an account and learning to use it. This finding, that ease of use for low-literacy customers was uncorrelated with accessibility, may have resulted from our sampling, which required that respondents had completed at least one digital transaction in the past three months. In other words, with a broader sample we could have found that perceptions about accessibility also encompassed literacy-related concerns.

Coverage

Customers in Nigeria saw three distinct components where our experts had hypothesized one, tentatively termed reliability. The survey results illustrate aspects of the concept of reliability as the customer understood them. The first of these, **coverage**, relates to the availability of funds across time and place. A bank product has good coverage if it can be used anywhere, anytime, and crucially, if it is accepted by most counterparties. This type of network effect has been pivotal to the success of mobile money systems and payment cards. In other words, an account is reliable only if the money can be used when and where it is needed.

Robustness

The second component of reliability emerged as **robustness**. Customers in Nigeria differentiated banks on the success with which transactions were executed. Some banks performed better than others on three criteria: downtime, clearing time, and failure rates of individual transactions. This dimension relates to the success of the network in processing transactions promptly and successfully. But there is another dimension to reliability, which is oftentimes more important to low-income customers.

Security

The third component of reliability emerged as **security**. This aspect encompasses all sorts of risks to customers' balances entrusted to the bank. Customers tend to see the risk of loss as correlated regardless of the cause. Banks that are most vulnerable to fraud are considered untrustworthy. Yet those who charge hidden fees to customers are tarred with the same brush. A bank with poor transparency creates the same customer experience of unexpected loss as a fraudulent access to the account. In other words, the customer views unexpected fees as a security risk, not functionally different from a hacker or a thief.

Value

The fifth component of the factor analysis was value. This component addresses customer service. The main determinants of this factor are the bank's commitment to resolve concerns easily, promptly, and to the customer's satisfaction. Yet it also includes questions about value for money and what the customer would be willing to pay for comparable services. The customer's trust in the bank appears in this dimension as well. From this, we understand that trust in a bank is something

more than just the security concern above.

Customers want a bank that has their interests at heart, and which will guide them in selecting the financial products that will best suit their needs.

Finally, the customer's assessment of whether the product promotes financial health — through budgeting, saving, and managing shocks — is also a driver of value. Financial health is a core research interest for BFA Global. It is a touchstone for our thinking about consumer and microenterprise [experiences of the Covid-19 pandemic](#); a purpose for our work on [stress testing of financial cooperatives](#); a focus of our [survey of shopkeepers in Mexico](#); and a driver of the economic prospects for [recovery from Covid-19 in Kenya](#) and elsewhere.

We are keenly interested to learn how consumers understand the role of financial health in choosing financial products and user experience. Through this research, we have been able to show that from the customer's point of view, a product that enhances financial health is a driver of value for money, just the same as a commitment to exceptional customer service or affordable pricing.



Conclusions and insights

For reasons that are somewhat technical in nature, comparisons within a country are more informative than comparisons across countries. This has partly to do with the iterative learning process of the research team in fielding survey research. It may also have to do with systematic differences in the populations recruited to take the survey or the details of survey implementation across countries. Nonetheless, we have also fitted confirmatory factor analysis across countries, in order to focus on the experience of women and the differences between urban and rural settings.

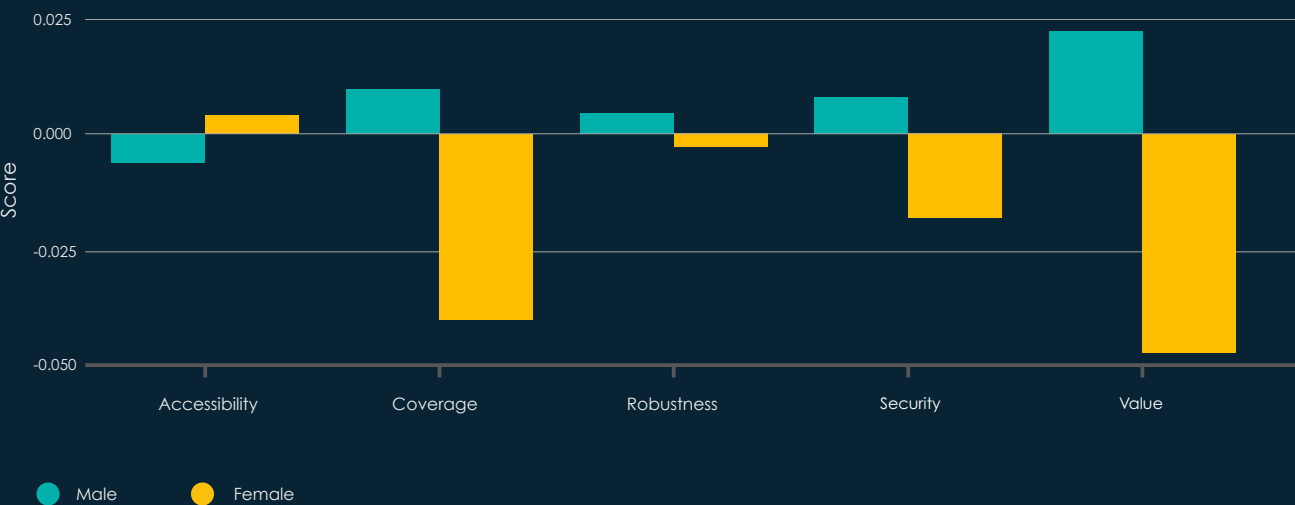
Gender differences in perceived value

Our research revealed that transaction accounts in Nigeria are having more difficulty meeting women's expectations than men's, particularly regarding the value trait. The **value** trait encompasses whether customers believe that

the bank will address their concerns. It speaks to whether the bank's services are effective in helping customers to manage income and expenses. And crucially, it has to do with the customer's trust in the bank. Women in our Nigerian study consistently rated their banks worse in this dimension than did men. Women also rated their banks lower for coverage — meaning that they could use their accounts where and when they needed them — and security, but the differences were not statistically significant. The five traits identified in our research clarify how banks are failing to meet women's expectations, and what they can do about it.

Gender gap in perceptions of value in Nigeria

Five traits from the case studies



Scores calculated from a survey of 526 consumers in Nigeria, describing their own bank accounts. Bank traits identified using latent factor analysis of survey data and averaged over each banks' customers.

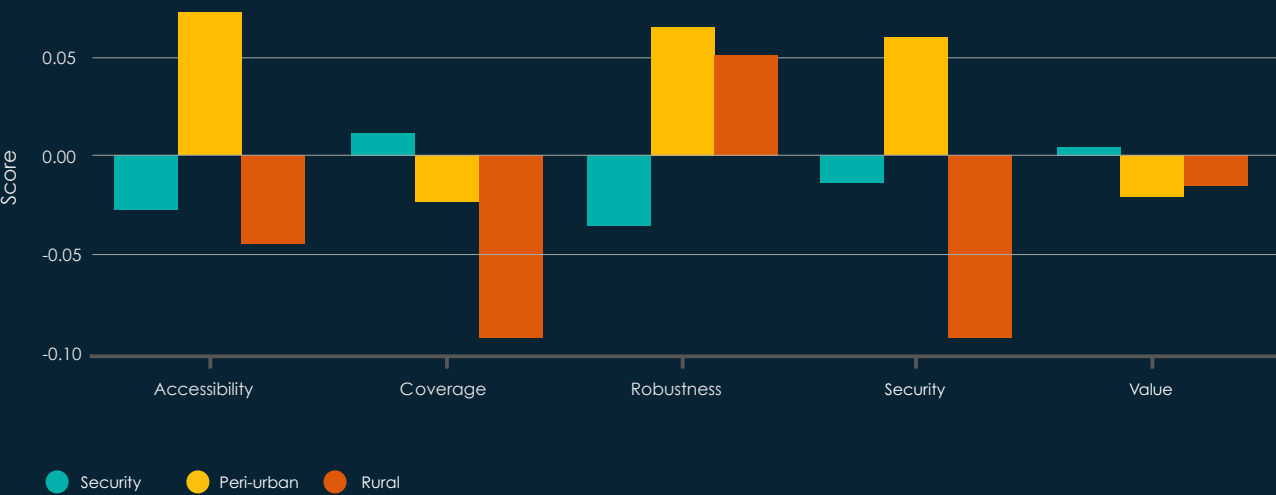
Differences in perceptions for urban vs rural customers

Our study also points to some of the drivers of difference between urban and rural areas of Nigeria, but it was not designed to optimize statistical inference for the rural sector. Because the study is underpowered for urban-rural comparisons, the clear patterns of difference apparent in the plots below should be interpreted with caution, pending further research. The statistically significant result in the plot below is actually that peri-urban populations are more likely to be content with the robustness of their accounts. They are more confident that networks and transactions will succeed, as compared to urban and rural populations.

Yet, intuitively, it is concerning to see such low opinions about coverage and security among rural respondents. Rural populations are, potentially, less likely to report that they can use their accounts when needed. They are also less likely to have confidence that their accounts are safe from fraud and hidden fees. Because the respondents in this sample are currently using digital financial services, we believe these perceptions are grounded in direct experience of a product. We are searching for opportunities to study the drivers of these differences in Nigeria and elsewhere.

Rural discontent with security in Nigeria

Five traits from the case studies



Scores calculated from a survey of 526 consumers in Nigeria, describing their own bank accounts. Bank traits identified using latent factor analysis of survey data and averaged over each banks' customers.

What do transaction product customers really care about when adopting and using a product?

Undoubtedly, there has been tremendous progress when it comes to improving access to financial services, with 515 million more adults globally reporting account ownership at a financial institution or a mobile money provider in 2017 than in 2014, for a total of 69% of the world population¹⁹. However, to improve the overall financial well-being of customers, appropriate and consistent usage of financial accounts is a prerequisite²⁰. To date, not all people with an account actively use it. In fact, one fifth of those with an account at a financial institution in lower income and lower-middle income countries reported not having deposited or withdrawn in the past 12 months²¹. In order to spur commercially viable financial inclusion by achieving increased and sustained account usage, the design and delivery of financial services must be optimized to meet the needs of consumers²².

Using quantitative and qualitative surveys and choice modeling, we evaluated from the perspective of the customer what currently contributes to low account activity in emerging markets, what can drive adoption of new transaction products, and what can contribute to increased and sustained account usage.

We have identified certain high-level factors/features that customers commonly demand of their transaction products. These product-

specific factors - identified as reliability, value, accessibility and affordability - often make up the ingredients for an inclusive product from the customer's perspective. Within these factors are a wider pool of sub-factors such as user-friendliness, security, convenience, wide acceptance and availability etc, which are often defined in financial inclusion literature as being integral to the inclusiveness of financial products, particularly payment products. How, then, can these traits be measured to assess the degree to which a product is considered inclusive?

To answer this question, the BFA team piloted a customer research exercise designed to: (i) methodically measure these factors/ (also referred to as attributes or traits), (ii) determine how they rank against each other in the mind of a customer when they are selecting one transaction product over another at the onset or for sustained usage, and (iii) validate the high-level factor sub-components across different markets. The approach and outcomes from objectives (i) and (ii) are addressed in this case study, while those related to the later objective are addressed [here](#).

19. https://globalfindex.worldbank.org/sites/globalfindex/files/2018-04/2017%20Findex%20full%20report_0.pdf

20. http://www3.weforum.org/docs/WEF_White_Paper_Advancing_Financial_Inclusion_Metrics.pdf

21. 2017 Findex data: <https://globalfindex.worldbank.org/>

22. https://newsroom.mastercard.com/wp-content/uploads/2019/02/The-Next-Frontier-in-Financial-Inclusion_Access-to-Usage-Final.pdf

Methodology

The customer research exercise combined both quantitative and qualitative research methods as described [here](#). In particular, the quantitative portion was made up of two complementary exercises: choice experiment and likert scale measures.

The first exercise was a choice experiment (choice modeling, thereafter), designed to (1) estimate the marginal effect of each attribute on a respondent's likelihood of switching to a new account, (2) estimate the value of each attribute to respondents (willingness to pay), (3) estimate market share for the new account under different specifications of attributes, (4) and identify groups that are amenable to the new accounts (market segmentation).

In the choice modeling exercise, respondents were asked to choose from three accounts: the respondent's most frequently used account ("existing account," hereafter) and two hypothetical new accounts with differing permutations of desirable features. The exercise created different scenarios where various attributes that we aimed to measure changed across products two and three, which were essentially being compared to the existing account. We used multinomial logistic regression to model the respondents' choices and identify drivers of their choices.

The second exercise was a likert scale exercise that measured negative or positive responses to statements describing the mentioned high-level attributes as they pertained to respondents' experiences with different transaction products. In this exercise, we assumed that transaction products considered to be more inclusive (i.e. those exhibiting the factors noted above) would be reported as the most-used accounts; hence they would score more strongly according to the most important attributes demanded by customers, compared to the alternative transaction products respondents had but did not use as much.

We deployed the two measurement exercises with a hypothesis that they would generate similar results (i.e they would confirm that the same or similar attributes rank in the same order when customers are selecting a transaction product). However, we found that choices made along the customer journey in fact hinge on different attributes. In other words, customers consider different attributes to be most important during acquisition and usage/retention phases.

What makes customers choose one transaction product over another?

In the hypothetical market scenario (choice modeling) involving just over 1,000 active²³ digital transactors in Kenya and South Africa, we found that transaction product customers indeed favor some product attributes over others, but their choices are also influenced by demographic factors, financial histories and market contexts.

In both markets, we compared the impact of the following attributes on a customer's decision to choose a particular account:

- Availability of a broad range of services, in addition to sending and receiving money (e.g. sending money only versus adding on bill payment, financial planning, savings, and credit capabilities)
- Quality of customer service
- Speed of resolving complaints
- Time to account physical access points (e.g. ATMs, branches, agent, retailer)
- Ability to make transfers across different providers at various levels of cost (notwithstanding other frictions)
- The affordability of deposits and withdrawals
- Cost of running the account

Of all the attributes incorporated in the scenario design, the promise of free transactions (which implies increased affordability) and fast recourse (i.e. when problems are resolved quickly) had the highest impact in swaying customers to choose an alternative account in both countries. The swing effect was even stronger in Kenya for all three attributes, implying that the Kenyan market was in need of these attributes more than South Africa.

Factors such as a reduction in the time it takes to get to physical access points, improvements in quality of customer service, the ability to avail transfers across different providers at a cost, and additional services for the transaction product beyond just sending and receiving funds did not have a significant impact in swaying respondents' decisions. This is one of the reasons it is important to consider the context when evaluating the results. Both Kenya and South Africa offer considerably progressive financial services which already address the latter attributes. For instance, according to FinAccess data (2019) formal financial access points in Kenya are within a 30-minute walk for about 85% of the population. Consequently, only disruptive improvements in the said attributes would result in a significant shift.

The impact of demographic and historical attributes on a customer's likelihood to switch accounts

Additionally, it was evident that certain segments of the population are more likely than others to jump ship when presented with what they consider to be a better proposition than their existing transaction product, as shown in the diagram below. For instance, in Kenya males and younger transactors (< 30) were more likely to be swayed whereas in South Africa it was both genders, aged 30-50.

23. Had used a bank or mobile money account in the last 6 months, usually makes at least 3 transactions (deposit, withdraw, send, receive or pay a bill) in a month, and had used at least one digital form of payment (card, mobile phone app/ USSD, internet banking).

	Demographics and financial history of Kenyans that are more likely to switch between products	Demographics and financial history of South Africans that are more likely to switch between products
Gender	Male	No statistical significance
Literacy	Swahili speakers vs English speakers	No statistical significance
Location	Those living outside Nairobi/ Kisumu counties	No statistical significance
Age	Those under 30	Those between 30 and 50
Income level	Those earning between KShs 10,001 – 25,000 (USD 100 - 250) per month	Wage-earners & particularly those earning >= R3,000 per month (USD164.53)
Account age	Newer account holders	No statistical significance
Financial proficiency	No statistical significance	Those with no confusion about fees and charges
Frequency of Usage	Daily transactors	Daily/ weekly transactors
Negative transacting experience/ perception	Those that had a fear of losing money during a transaction	Those that had experienced system down

Based on the above, assuming that Thabo - a South African aged 35 - had a bad experience with the account he most frequently uses, he is likely to be persuaded to switch to a new account that promises to be more affordable and solve any complaints within 24 hours.

However, opening an account is just the first step. We also set out to determine whether customers like Thabo will sustain active usage on his new transaction product moving forward, if he does indeed make that switch.

What makes customers more actively use one transaction product over another?

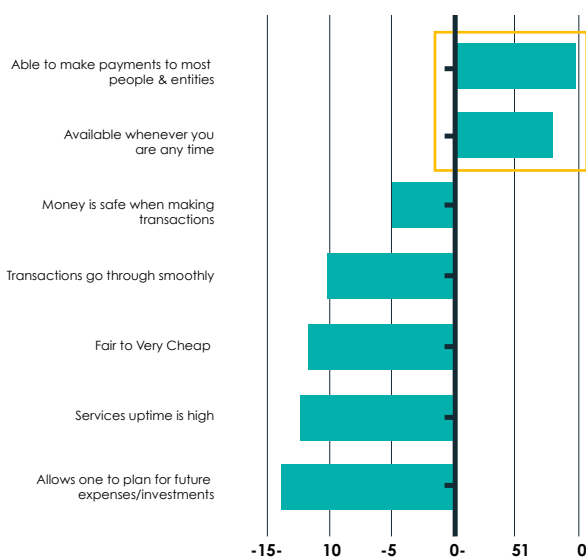
In both Kenya and South Africa, whereas elimination of fees and faster resolution of complaints majorly influence a customer's choice in taking up one product over another, the analysis yielded different results when it comes to sustained usage.

In Kenya, **coverage** (i.e. wide acceptance and convenient access, meaning that an account can be used anywhere, anytime, and crucially, is accepted by most counterparties) is the biggest determining factor of which account Kenyans use the most to transact when comparing between alternatives. Accounts with a higher coverage score trump any alternative option that is: significantly more reliable in terms of the system uptime and rate of successful transactions, more affordable, and offers the ability to plan for future expenses and investments. However, most of these latter factors are generally poorly provided by the

entire industry, as shown in Figure 2 below. We determined that a score of less than 70% signalled poor provision.

In South Africa, **fast recourse** is the attribute that still holds most water when customers select which transaction product to use more. In fact, factors pertaining to strong customer support and accessibility - including ease of use and coverage (just like in Kenya) - emerged as the strongest factors that drive sustained usage. Once again, although the alternative account options might be more affordable, easier to register, easier to learn to use, less susceptible to downtimes/ failed transactions, and considered more secure; these attributes did not emerge as strong drivers of usage despite how pivotal they are for a sound and accessible payment system. They were also poorly provided for by the entire industry.

Kenya



South Africa



Figure 1. Significant difference in percentage points scored between the most frequently used transaction product and the alternative in Kenya and South Africa

It was also possible to assess how different institutions scored against each other and the industry, for those institutions that had sufficient customers represented in our sample. What was interesting to note is that the transaction product market leader in both markets scored above the industry average in almost all the same attributes that emerged as strong drivers of sustainable usage, which further validated the approach. See Figure 2 and Figure 3 which compare market leaders in Kenya and South Africa respectively. The leading scores are highlighted in green, the second position is highlighted in yellow while the third/ trailing scores are highlighted in red.

Moreover, industry concerns/ market failures also became evident. As previously mentioned, these failures are signaled by scores of less than 70% and are indicated in red text in Figure 2 below.

Indicator	Attribute	Sub-Attribute	Difference (Most used - Lesser used)	Ranking	Industry	FSP Z	Market Leader
You are able to make payments to most people, businesses & institutions using this account	Value	Coverage	10	1	90	84	91
You can use your account whenever you need it throughout the day	Value	Coverage	8	2	92	83	96
You DO NOT worry that money in your account is not safe.	Reliable	Secure	3	3	77	72	77
Anyone can easily use this account irrespective of their ability to read and write.	Accessible	Obstacle-Free	3	4	60	57	61
It DID NOT take you a long time to learn how to use this account	Accessible	Simple	2	5	86	87	87
You know what to do if you have a question or difficulty around this account.	Value	Supported	1	6	90	89	91
Hypothetically, if the services provided through this account were available for free, you would use the account much more	Affordability	Ability to Pay	1	7	96	96	96
When you use your account, you DO NOT worry that unauthorized parties can obtain access to your personal data (such as your name and phone number).	Reliable	Secure	1	8	61	61	60
You trust your account provider, i.e. you expect them to do the right thing and not misuse your funds or information.	Value	Trustworthy	1	9	91	89	91
You DID NOT have challenges around registering for this service because of the documentation requirements	Accessible	Obstacle-Free	0	10	83	85	84
The level of service from the provider of this account is satisfactory for your needs around	Value	Supported	0	11	92	91	92
Funds in your account are available whenever you need them.	Value	Coverage	-1	12	91	97	90
You do not have any confusion around fees, charges and other terms and conditions or how to use this account.	Value	Transparent	-2	13	83	85	83
This account allows you to plan for unexpected shocks like death or sickness	Value	Useful	-2	14	65	70	62
The steps to follow to make a payment on this account are NOT many and complicated	Accessible	Simple	-2	15	79	79	79
Whenever you have had an issue with this account, the provider resolved it swiftly and to your satisfaction.	Value	Supported	-3	16	90	88	88
This account enables you to manage your incomes and expenses	Value	Useful	-3	17	89	93	87
When you use your account, you DO NOT worry that you will lose your money when making a transaction.	Reliable	Secure	-5	18	72	70	69
When you transact, ALL transactions go through.	Reliable	Robust	-10	19	53	59	47
On a scale of 1 to 5, how would you rate the affordability of your account? Fair to Very Cheap	Affordability	Willingness to pay	-12	20	50	55	43
Over the past one month sometimes the service has NOT been down when you have needed to use it?	Reliable	Robust	-13	21	52	52	47
This account allows you to plan for future expenses/investments	Value	Useful	-14	22	80	90	72

Figure 2. Comparison across FSPs and the industry in Kenya shows the market leader leads in all but one of the attributes that drive usage, as shown by the highest scores depicted by the green cells for the attributes above the red line. However, the challenger (FSP Z) and the industry score higher in attributes considered important for adoption but are not drivers of why customers choose to use one product (most used) over another (lesser used alternative) once adopted. In other words, the industry and challenger took position one and two as depicted by green and orange for attributes under the red horizontal line.

Indicator	Attribute	Sub-Attribute	Difference (Most used - Lesser used)	Rank	Industry	Market Leader
Anyone can easily use this account even if they cannot read and write.	Accessible	Obstacle-Free	11	1	53	56
If you have a problem with this account, you know they will sort it out quickly	Value	Supported	10	2	87	86
You do not have any confusion around fees, charges and other terms and conditions on how to use this account.	Value	Transparent	10	3	75	75
You can use your account wherever you are	Value	Coverage	9	4	88	91
You know what to do if you have a question or difficulty with this account.	Value	Supported	9	5	85	88
You can use your account whenever you need it any time of the day	Value	Coverage	9	6	89	91
In most cases, how long do you usually have to wait for a deposit that someone made to show in your account? - instant to a few minutes but not more than that	Reliable	Timely	8	7	69	76
Money in your account is always available whenever you need it	Value	Coverage	7	8	83	86
You are able to make payments to most people, businesses & institutions using this account	Value	Coverage	5	9	87	92
This account enables you to manage your incomes and expenses	Value	Useful	4	10	89	90
If you have a problem with this account, they will sort it all out until you are satisfied	Value	Supported	4	11	89	89
Suppose services provided through this account were free, how would this change how much you use this account? - Use it more	Affordability	Ability to pay	3	12	86	88
You trust your account provider, i.e. you expect them to do the right thing and not misuse your funds or information.	Value	Trustworthy	1	13	82	79
You are satisfied with the customer service	Value	Supported	1	14	90	90
You are satisfied with what the account offers and how it works	Value	Useful	0	15	84	81
How affordable is this account for you? - Fair to very cheap	Affordability	Willingness to pay	-6	16	68	68
You DID NOT have challenges opening the account / registering for this service because of the documentation they wanted	Accessible	Obstacle-Free	-12	17	61	58
It DID NOT take you a long time to learn how to use this account	Accessible	Simple	-13	18	70	70
All transactions go through smoothly	Reliable	Robust	-13	19	64	59
You DO NOT worry that money in your account is not safe.	Reliable	Secure	-17	20	56	58
When you use your account, you DO NOT worry that unauthorized parties or crooks can obtain access to your personal information	Reliable	Secure	-19	21	41	41
Last month, the system was NOT down when you needed to transact	Reliable	Robust	-20	22	52	50
The steps to follow to make a payment on this account are NOT many and complicated	Accessible	Simple	-23	23	71	71
When you use your account, you DO NOT worry that you will lose your money when making a transaction.	Reliable	Secure	-25	24	53	55

Figure 3. Comparison across FSPs and the industry in South Africa shows the market leader leads in all but one of the attributes that drive usage, as shown by the highest scores depicted by the green cells for the attributes above the red line. However, the industry scores higher in most of the attributes considered important for adoption but are not drivers of why customers choose to use one product (most used) over another (lesser used alternative) once adopted. In other words, the industry took position one (green) as depicted by green for attributes under the red horizontal line.

CASE STUDY 2

Conclusion

There are certain factors/ attributes related to a product's inclusiveness from a customer perspective that drive uptake of transaction products but do not necessarily drive sustained usage. Factors related to affordability and the promise of faster recourse are likely to convince customers to switch products or open a new account, but this may not translate to consistent usage of that account in the long run, once customers realise that, for instance, the account cannot be used anywhere, anytime and to pay most counterparts; and the support is poor. Customers will go dormant and then drop off, impacting the bottom line.

The approach we developed to measure inclusiveness is complementary to past work that aims to identify and begin to measure drivers of uptake and usage in transaction products, such as [Report on Payment Aspects of Financial Inclusion, The access frontier as an approach and tool in making markets work for the poor](#), and [Making good use: A measurement framework for financial service usage](#). However our framework goes beyond these studies to provide a practical approach to measuring specific factors from a customer's perspective.

Our approach is also valuable for **providers**, as it offers them the ability to assess their scores according to the different attributes and benchmark against their peers and the industry as a whole, highlighting which factors they need to bolster to increase usage of their products, thus making them more viable and competitive.

Payment regulators could utilize the proposed approach to measure progress towards the targets set out in the national payment strategies, which often align with the product-specific factors described at high-level or granularly. Moreover, the lower industry-wide scores signal to **policy makers** where interventions might be required and how interventions could be more targeted by identifying the institutions that score below their peers and the industry average.

Although there may be room to calibrate the tools and methodology applied, the results generated validate the defined approach as being effective for undertaking practical measurement of transaction product attributes across various markets. The approach could be applied more widely as a standalone survey or adopted as a module in global or national financial inclusion surveys.

Methodology of data collection for the demand side

We applied various research methodology as described below:

Quantitative research

We undertook survey research, where we used a three-part structured questionnaire. The first part of the questionnaire collected demographic and transaction product usage details through multiple-choice questions; the second part compared the attributes of the transaction products used by respondents, as reported in part one, through likert scales; while the third part of the questionnaire incorporated choice experiment design - a well-established marketing and policy evaluation tool - to develop a hypothetical transaction product scenario.

We deployed the survey through face-to-face interviews in Kenya and South Africa, while in Nigeria, we had to rely on phone interviews due to COVID-19 restrictions.

Some of the advantages of using this research method were:

- **More structure:** We had designed the questionnaires to collect numerical data.
- **Larger sample sizes:** We used a large sample size representing the population to ensure statistically significant results.
- **Replicable:** The same study was replicated across three markets.
- **Useful for decision-making:** Data from quantitative research—such as market size, demographics, and user preferences—provides essential information for the financial services provider partners that we worked with.
- **Arranged in simple analytical methods:** Data was received in the form of numbers and statistics, often arranged in tables, charts, figures, or other non-textual forms.
- **Relatable:** the research aimed to make predictions, establish facts, and test hypotheses
- **Consistent:** The data we collected was precise, reliable and consistent
- **Fast:** Data collection was relatively quick (e.g., telephone interviews)

Qualitative research

We also undertook qualitative research after we had deployed the quantitative survey research. It offered an opportunity to delve deeper into issues of interest that we already established and add a human voice to some of the results that we had started seeing from the quantitative analysis.

We conducted in-depth telephonic interviews in Kenya and conducted focus group discussions in South Africa. We did not deploy qualitative research in Nigeria due to logistical complications brought about by COVID-19.

Some of the advantages for using this research method were:

- Quotes from open-ended questions in qualitative research put a human voice to the numbers and trends we saw via the quantitative surveys.
- Enabling customers to describe their experience when using bank products honestly and in their own words, helps point out blind spots.
- It provided a better understanding of why an attribute may shift customers' behavior, offering a definitive explanation, which would allow providers to adapt to the perspective shift.
- The methodology allowed for relationship-building which is important for customer retention. Customers that we spoke to expressed that the engagement left them feeling valued by the FSPs we presented.
- This methodology also eliminated bias inherent in data, as respondents attempt to answer questions in a way that pleases the researcher. During qualitative interviews we used various techniques to encourage the respondents to be themselves, which produces more honest insights.
- Qualitative interviews allowed for flexibility, and unlike in the quantitative method, focuses on data subtlety. We obtained as many details as possible, whether those details fit into a specific framework or not. It is within those details that we discovered surprising insights that we had not planned to uncover.

Both qualitative and quantitative research methods have their flaws, but when used in combination, the desired end result can be extremely powerful.

Transaction product mystery shopping in Kenya, Nigeria and South Africa: What are the unexpected barriers and experiences customers might face?

Through quantitative and qualitative customer research conducted with over 1,500 active²⁴ digital transactors in Kenya, South Africa, and Nigeria, we sought to **determine** what makes transaction products truly inclusive in the eyes of the customers. We validated factors that drive initial adoption of new transaction products, and those that contribute significantly to higher usage for existing accounts. Specifically, we then questioned the feasibility of affordability as a preferred product characteristic and arrived at three key conclusions:

1 The perception of affordability is a vital factor in contributing to a customer's decision to open an account.

2 However, customers have a poor understanding of the exact charges they incur for various transactions. In addition, we found that customers make use of heuristics (mental shortcuts) to determine whether they consider an offering affordable or not. For instance, they:

- reference known charges from other players in the market that they might have used before as a benchmark;
- use their own yardstick of affordability (e.g. a particular figure under which a customer would consider fees to be affordable);
- reference a specific charge (say of their most-used transaction) to determine whether a product was indeed affordable across the board - in other words they adapt their expectations based on past experiences rather than on the merits of the case at hand

Based on the above strategies, once customers conclude that a product is affordable based on a few transactions (e.g. their most frequent transactions), they conclude that other services must be affordable as well.

3 *Transparency* around charges is a much stronger driver of consistent usage. In other words, after the sign-up stage, the perception of transparency around charges is considered to be more important than the actual charges imposed when it comes to driving active and sustained usage.

Ultimately, affordability, when complemented by transparency around fees, plays a critical role in driving both the adoption and sustained usage of transaction products. This serves as a gateway to adoption of other financial services, hence, contributing to financial inclusion.

In order to understand what affordability and transparency around transaction product charges at major financial institutions really means in practice, we carried out a Mystery Shopping exercise in Kenya, South Africa, and Nigeria.

24. Had used a bank or mobile money account in the last 6 months, usually makes at least 3 transactions (deposit, withdraw, send, receive or pay a bill) in a month, and had used at least one digital form of payment (card, mobile phone app/ USSD, internet banking).

Methodology: Leveraging Mystery Shoppers to evaluate charges associated with transaction products

In this exercise, individuals were recruited to portray actual customers to gauge their experience²⁵. We evaluated two financial institutions per country - the market leader, and a challenger. The former is considered a larger, established transaction product provider with one of the highest customer bases, while the latter an innovative player gaining quick traction. For each, we compared fee information published by these institutions (published rates), vs what we found to be true when actually using the product (actual rates). We also compared user experiences for each country, and took note of any surprising elements that were uncovered while engaging with the various services offered.

We gathered published rates in Jan-Feb 2020, and carried out the mystery shopping in May 2020. In some instances, the COVID-19 interventions resulted in skewed results for the mystery shopping exercise, as Kenyan and South African governments imposed several fee waivers and other reductions in transaction charges after Jan-Feb 2020 to help customers cope with the socio-economic consequences of the crisis.

In these exercises, each account started with a US \$50 equivalent transferred from a US bank account. All transactions netted to 0 (i.e. all withdrawals were matched with a deposit), so any decrease in value is attributed exclusively to fees. Figure 1 illustrates published fee rates, while Figure 2 illustrates actual rates we found during mystery shopping. Each line represents one institution, and names are redacted to honor our confidentiality agreement with partners. Not all transactions were consistent across the six institutions due to regulatory requirements, or the tech-oriented nature of the market challenger. In Figure two, we clubbed all the common transactions to the right of the blue dotted line for comparison, and transactions to the left, or starting from "balance inquiry - ATM" comprised the inconsistent transactions. In case of a transaction not offered, we kept the transaction charge to zero.

25. <https://www.managementstudyguide.com/mystery-shopping.htm>

We found that:

The path to obtain and understand information on fees charged by financial service providers was murky

We were able to locate financial service providers' transaction fees online most quickly in South Africa and Kenya but they were not always intuitively presented. For example, the Kenyan challenger offered an all-exhaustive downloadable PDF tariff guide that was last updated four years back. It was not easy to distinguish which fees related to some of the transactions we were interested in, probably because retail account fees were bundled with commercial account fees, and because of the inclusion of unique and rare charges that could have rather been placed in unique categories. Moreover, the charges did not include the additional 20% excise duty charges levied for most transactions although there was a disclaimer at the end indicating that all fees were exclusive of taxes, which placed the onus

of determining and calculating the tax amount on the customer. Kenya's market leader had published all fees inclusive of the taxes. However, on transacting, both provided SMS notifications that included the fees incurred.

On the other hand, Nigerian institutions do not publish any information on transaction fees online, as they follow the Central Bank of Nigeria's guidelines to charge for transactions. The guidelines document is long, and fees for most basic financial transactions are not listed explicitly. Instead, they're listed as "negotiable" by the institution.

Financial Transaction Fees: Desk Research

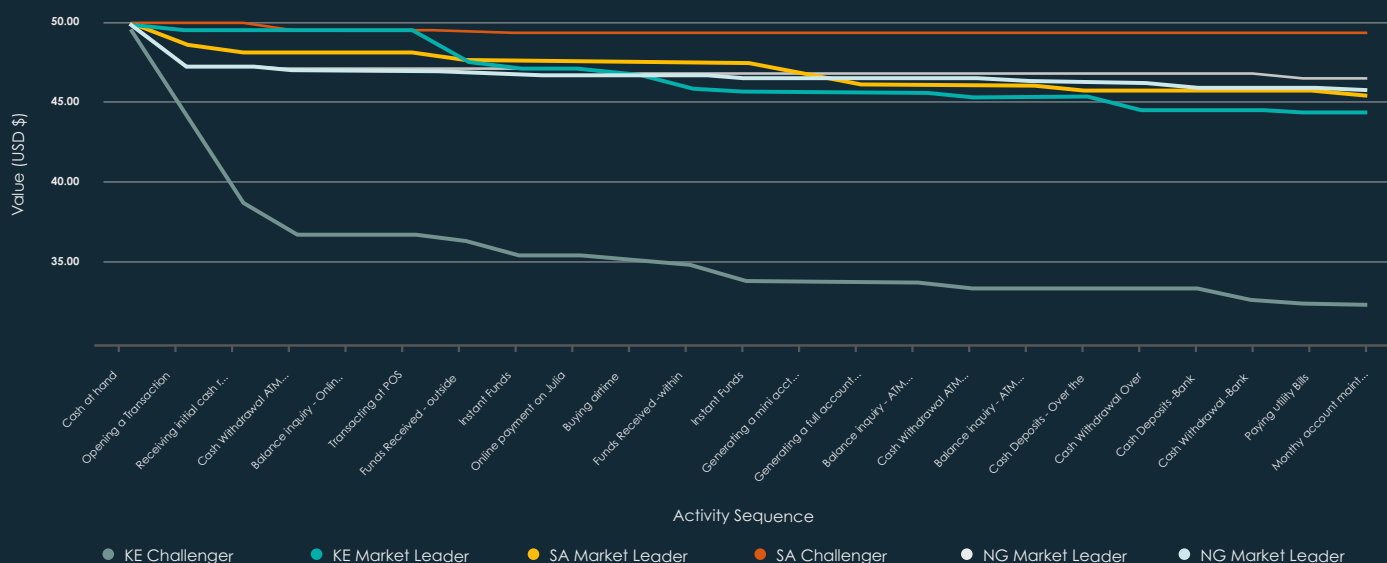


Figure 1: Results from published rates

On-boarding costs and cash withdrawals were the most significant costs

The largest cost jumps were account opening costs in Kenya and Nigeria and these related to card issuance or account activation. Cash withdrawal especially at ATMs of another provider in Kenya and South Africa, and withdrawals at agents in Nigeria were the second highest cost jumps.

Effects of pricing competition were most evident in South Africa

The Kenyan financial institutions proved to be the most expensive before the COVID-19 relief measures - zero-rating of fees to promote digital transactions as a way of curbing the spread of the virus - were instituted (desk research fees). Moreover in Kenya, the fees charged by the institution we considered the challenger were significantly higher than the market leader e.g. for transactions related to account opening and making withdrawals from other FSP ATMs, unlike the case of South Africa where the challenger offered competitive pricing, actually the most competitive pricing across the three countries. The fees charged by the Nigerian financial institutions were almost identical.

Financial Transaction Fees: Mystery Shopping

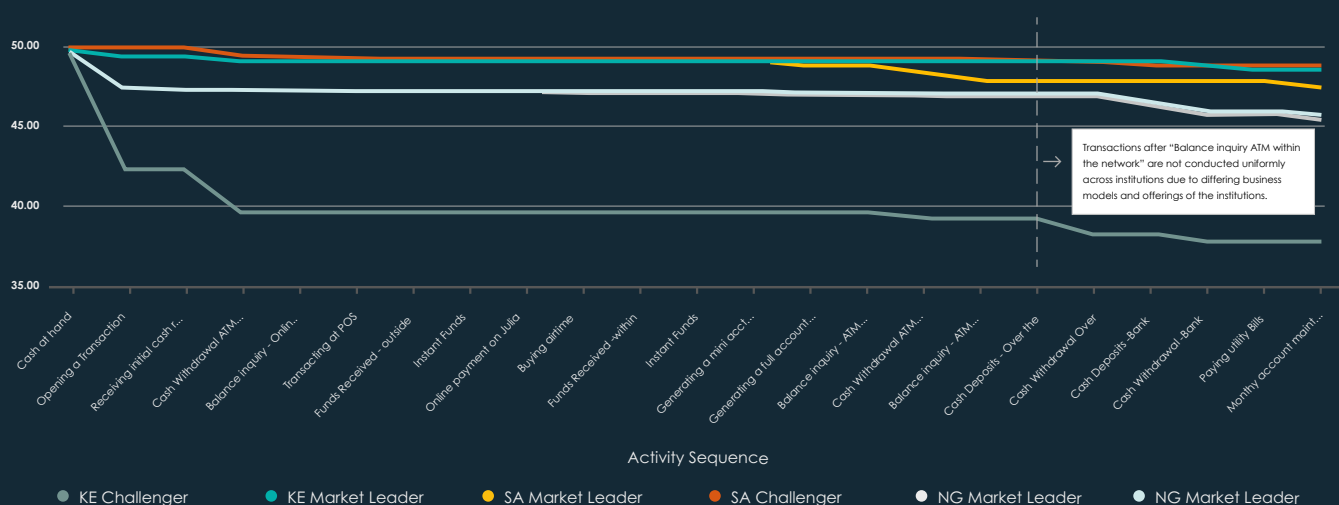


Figure 2: Results from mystery shopping

Although we experienced lower fees than advertised due to COVID relief measure in Kenya and South Africa, we also experienced a few instances of being charged above what was advertised

The chart below plots the delta between published rates and actual rates. A positive value in this chart indicates the published rates were in fact higher than the actual rates, which results in unexpected savings for the customer. The unexpected savings in Kenya and South Africa were an implication of COVID-19 economic relief. The negative delta - indicating that actual rates were higher than published rates - is critical to evaluate as this indicates unexpected charges, charges, which goes transparency, a key factor identified as a stronger driver of consistent usage than affordability, and that lack thereof led to erosion of trust on the part of the customers.

Absolute Delta

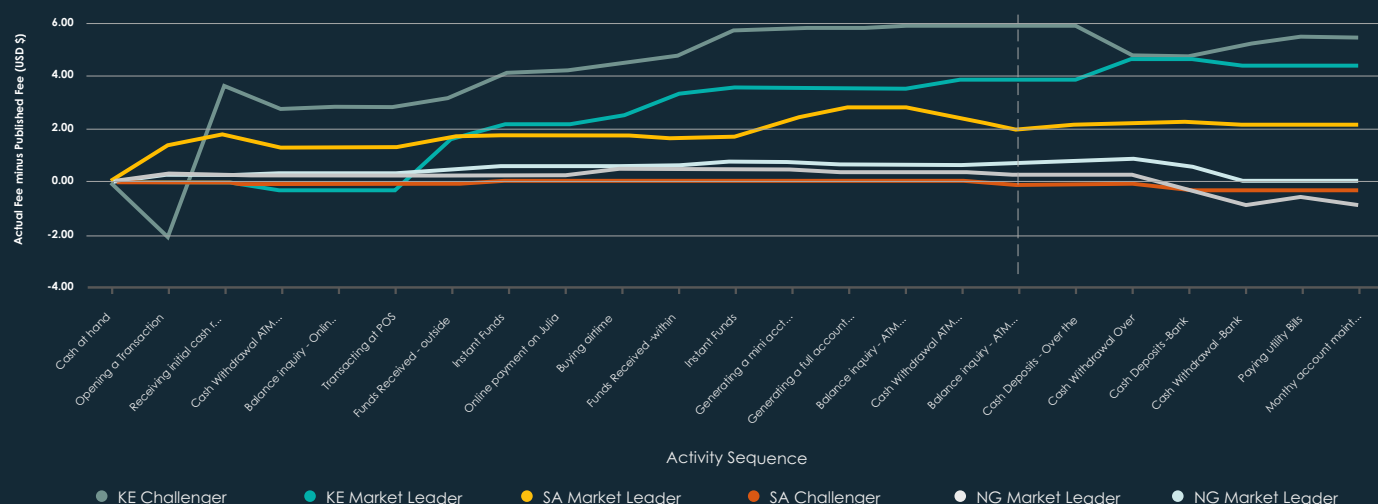


Figure 3: Delta between actual and published rates

Evaluating inclusiveness in online banking: looking beyond affordability and transparency

In measuring the inclusiveness of transaction accounts, the experiences of each mystery shopper - from opening fresh bank accounts to carrying out all offered transactions - enabled us to look at other attributes that further complement affordability and transparency of charges in contributing to inclusiveness of transaction products. For instance, accessibility and reliability of the banks' services and infrastructure are also critical considerations. Below, we have highlighted some of the key customer experiences that helped us derive the additional inclusivity attributes:

How easy is it to open a bank account digitally, and what are the barriers?

Our mystery shoppers in all three countries encountered obstacles that prevented them from opening their bank accounts entirely digitally. In Kenya, the challenger allowed for online account opening. While the process was

intuitive and straightforward, it required a 24-hour processing time, and once opened, it was not a fully operational account. For example, online accounts allowed only one transaction per day, and checking one's account balance qualifies as that one transaction. Our mystery shopper learned this through a tedious route of calling the helpline after many failed transactions in a day; the bank did not disclose this information on their website or other collaterals. To remove transaction limits, unlock other features, and obtain a debit card, customers are required to visit the bank to present physical copies of all the necessary paperwork. Our mystery shopper in Kenya made four trips to the provider to fully activate the account and obtain a card, due to technical difficulties at the bank's end.

In South Africa, the market leader does not offer the option of opening a bank account online. A visit is also required to activate its online banking app. However, the challenger bank provides the opportunity to open an account online, but still needs the customers to visit the branch physically to collect their debit card.

The banks in Nigeria offer the option to open a bank account online, although the process is rife with complications. For the market challenger, our mystery shopper did not receive any SMS or email confirmation on account opening. They followed up with the bank for three working days, inclusive of reaching out to customer representatives over the phone and two visits to the bank with long wait times.

How easy is it to use the account for common transactions?

The Central Bank of Nigeria (CBN) mandates that customers use a Forex account to receive funds from abroad. A regular transaction product cannot receive foreign funds. Furthermore, the CBN requires users to pay a one-time Nigerian Stamp fee when they open an account with any institution. Other charges include an SMS notification fee and a monthly card maintenance fee.

When leveraging agent networks to conduct a transaction, accessibility of agents and transparency of fees vary throughout each market. Agent network distribution in Nigeria, for instance, is not ubiquitous for all areas alike. Most agents are present in peri-urban, or less-affluent areas of the city, and charge higher fees to travel to another part of the town as per the experience by our mystery shopper. Although a rule is listed explicitly in the CBN guide for fees - cash deposit charges are ₦100 or negotiable, and there is meant to be no charge for cash withdrawal - the agent fee is subject to negotiation in reality. For example, our mystery shopper was quoted ₦200 for a cash deposit and ₦200 for a cash withdrawal as well. To undertake both transactions, the agent offered a 'discounted rate' of ₦300.

How accurate and easy-to-understand are bank statements?

The challenger bank in South Africa deserves a callout for creating a bank statement that is more than a balance sheet. It offers customers a holistic understanding of their bank charges and spending, with the help of data visualizations. The statement also includes money management tips, and a section on monthly goals performance, if the customer chooses to avail a goal-based savings feature.

In contrast, the mystery shopper in Nigeria found some hidden charges in their final statements that came as a surprise - for example, SMS notification charges and Nigerian Stamp fees. In Kenya, the bank charges did not correspond to the ones listed on the tariffs guide for almost every financial transaction in the exercise. The mystery shopper in Kenya also discovered a hidden fee charged by the switch during cash withdrawals, not previously listed in the tariffs guide.



Conclusions and recommendations

We evaluated published information for each bank before COVID-19, but we carried out the mystery shopping exercise in May, when all the three countries were struggling with a surge in virus cases and experiencing lockdowns. Hence, we relied almost wholly on online alternatives to carry out financial transactions. The difficulties faced by mystery shoppers in opening up a bank account virtually signal that banks still have a long way to go to accommodate the new digital age.

As much as there were difficulties, the push to go digital also came with some pleasant surprises. The mystery shoppers in Kenya and South Africa, who are also long-time users of financial services in these respective countries, learned of new online banking features that they were not previously aware of. Additionally, in our demand-side research, we also learned that customers often resort to visiting a bank branch for services that can also be done online simply because they lack the knowledge. Hence, our recommendation to FSPs would be to include a module on digital banking services during customer onboarding or dedicated customer service agents for digital services that can be a useful way to educate customers. It should never be assumed that customers can navigate through the digital platforms offered by the FSP.

The central banks of Kenya and South Africa also introduced fee waivers and reduced transaction fees for several financial transaction charges during COVID-19 lockdowns. As a result, the deltas between published charges and actual charges were more significant than they otherwise might have been. When evaluating affordability, it's clear that banks in Kenya and Nigeria charge much higher

fees than those in South Africa overall. It is a common understanding in the financial inclusion community that high cost of banking services hinder financial inclusion. According to the latest FINDEX data, South Africa ranks highest, at 69.2% among the three countries in the penetration of financial institution accounts among adults above 15 years of age. Kenya ranks at 55.7%, while Nigeria at 39.4%. Correlation is not always causation; however, our mystery shopping experience does invite further research to recommend financial-inclusion oriented providers with viable solutions to make customer experience affordable, transparent, reliable, and accessible.

There can also be value in banks improving their customer experience by making simple tweaks to their products to accommodate users from low-income households, such as a compelling bank statement as offered by the South African challenger bank. Providers can also opt for presenting published rates in a simpler and intuitive format. As mentioned, there were instances we arrived at the incorrect charges based on the desk research because of how information was presented. This could be a reason customers may avoid some transactions or providers - if they appear not to be transparent or more expensive they actually are in practice. Excellent customer service, both online and offline, can go a long way toward improving customer relations and loyalty.

26. "World Bank. 2018. The Little Data Book on Financial Inclusion 2018. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/29654> License: CC BY 3.0 IGO."

CASE STUDY 4

How does inclusiveness translate to usage of the product? Comparing apples to oranges

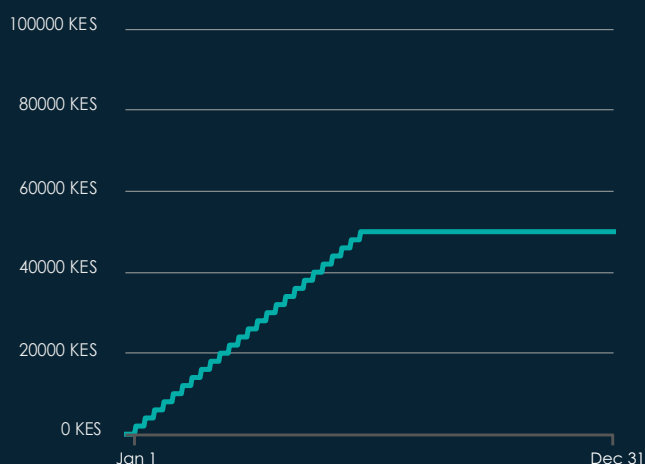
In the past, financial behavior - or customer usage of transaction accounts - has been based on relatively simplistic metrics such as: the frequency with which one makes withdrawals or deposits, the amount of those transactions, the length of time that one holds a balance (or approximate balance) in their account, etc. But savers, dormant account users, and those that only use their account for withdrawing paychecks come in all shapes and sizes. One can both withdraw and deposit irregularly and in small quantities, yet still be saving towards a goal. Conversely, just because a customer occasionally deposits large sums of money does not necessarily mean that they are accretively saving towards some sort of goal.

One of the aims of a recent project – along with many that BFA Global engages in – was to

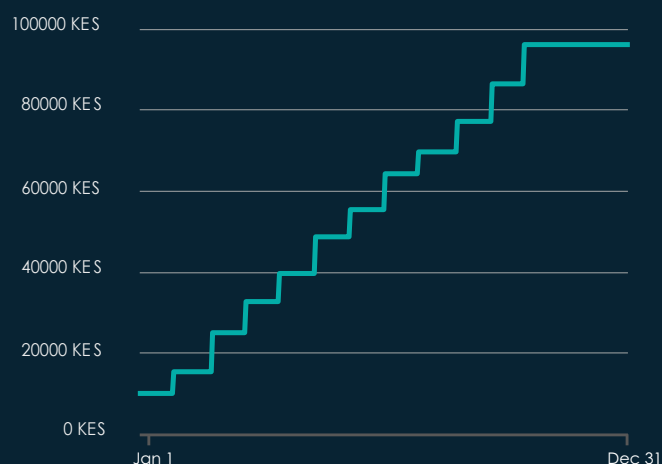
quantitatively define some notion of intent when it comes to a customer's financial behavior over time. Are they typically saving towards a goal, or maintaining a relatively steady balance in case of emergencies, or rapidly withdrawing their funds as soon as they receive a paycheck?

Consider a simple example. Suppose Akinyi saves exactly 2,000 KES every other week for six months, while Bishara saves somewhere between 1,000 KES and 10,000 KES at some point during the month for a year. We would consider these behaviors similar because they indicate the intent to accumulate funds in order to reach a goal of some kind; yet the specifics of the balance growth differ. See the plots below, which illustrate these two behaviors.

Akinyi's Savings



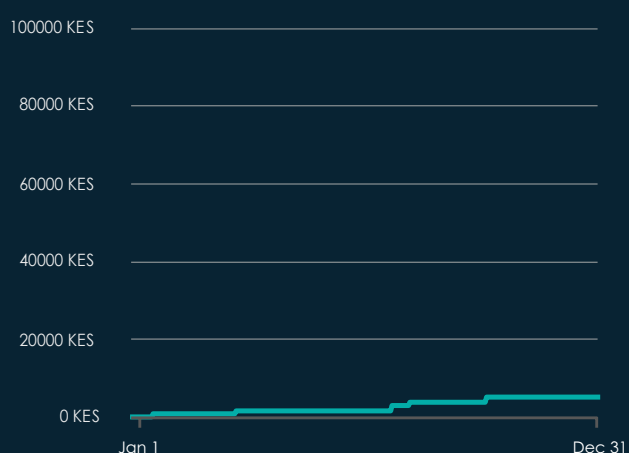
Bishara's Savings



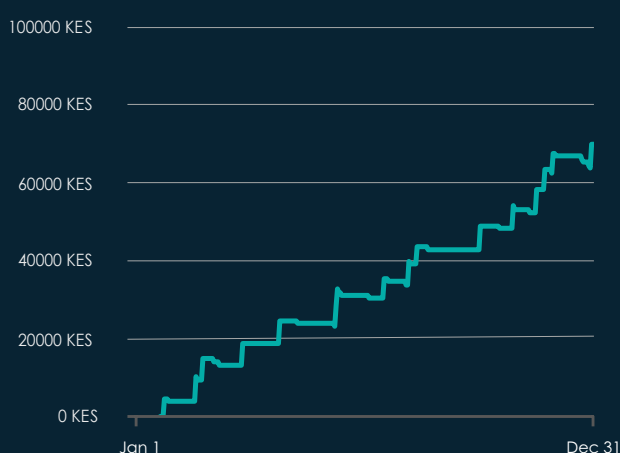
While they differ in the specifics, one can see how the shapes of these plots are broadly the same and can be characterized as such.

Now consider two different savers with seemingly very different behavior. Carmen saves irregularly, but quite often and with large sums of money. Furthermore, she withdraws small amounts of money every once in a while from her account. Declan – on the other hand – only saves very small amounts, relatively infrequently.

Declan's Savings



Carmen's Savings



While both individuals exhibit characteristics of someone who is accretively saving funds, there is not a straightforward rules-based method for determining that. For example, while Carmen is clearly saving money, she withdraws every once in a while. Similarly, Declan's balance barely increases over the course of the year, yet he is indeed saving.

BFA has historically used unsupervised learning – a type of machine learning – to group together similar types of financial behavior, such as these. The general observation is that there are about 5-6 savings behaviors that all customers can display at various points in their

financial lives. Broadly speaking, they can be categorized as: savers, balance sustainers, fast drawdowns (those who quickly deplete savings), slow drawdowns (those who gradually deplete savings), and dump-and-pulls (referring to those who simply use the account for withdrawing their paycheck). These are behavior types that are not easily defined by amounts of frequency of deposits/ withdrawals alone. In order to characterize these types of financial behavior amongst thousands or even millions of clients, we needed to form a further basis of comparison across different **periods of times holding a certain balance, frequency of deposits/withdrawals** and **quantity of funds**.

The first step the team at BFA Global took was to **normalize** the customer balance histories across a financial institution such that they were time²⁷, deposit/withdrawal frequency, and quantity agnostic. That is, we ran calculations on all of the balances at the institution to “smooth out” small differences between balance histories. We then **clustered** those normalized balance histories together into the five different clusters mentioned earlier to see which ones had similar, high-level characteristics. Through this process, we are able to deduce which customers have similar financial behaviors, regardless of how often they get paid or how much their paycheck may be worth and the age of their accounts.

This is important on many levels. First and foremost, both financial institutions and donors are interested in affecting *customer behavior*, and it’s quite difficult to do that without knowing what that behavior is. Secondly – for the institutions in particular – the user behavior can be directly connected to the business model to determine which types of behavior are contributing to or detracting from **profitability and efficiency**.

Finally, it helps to identify which low-income customers are saving for a goal or maintaining a balance for emergencies, even though they may not be able to save as much. This is an important data point, for instance, for thin-file customers who require evidence to show that they are creditworthy.



27. "time agnostic" here means that if a user is accumulating savings over a period of 12 months, it's basically equivalent to a user that has been saving for 6 months, or 24 months

People-centric profitability: how does inclusiveness impact profitability for providers?

The prior several case studies in this “Inclusion and Your Bottom Line” collection have focused on the demand-side elements of the inclusiveness equation, evaluating the following characteristics: reliability, value, accessibility, and affordability. In doing so, they have also conveniently provided us with all the ingredient insights we need to deeply understand the current and projected effects on the bottom line of the supply side (i.e. viability). In other words, the goal here is to create a holistic assessment of the product by translating the demand-side driven definitions of “optimally inclusive” into maximum supply-side profitability.

Methodology

To illustrate this process, we have selected case studies conducted against dissimilar business models for transaction products of two financial providers. These particular products were selected for illustration as they: are designed to serve the mass market, have been running for one year or longer, are at least digitally-enabled (if not digital from the ground up), and exhibit room for improvement based on the demand-side studies.

Financial Services Provider 1 (FSP1):

This digitally native²⁸ FSP is defined as one whose: (a) customer base is not yet at scale, although the unit costing is designed for scale, and (b) unit costs are configured for **transaction-like** behaviors (with embedded savings products designed to help the customer intentionally save), and customer behavior largely reflects this design. Thus, for FSP1 we focused on presenting modeling around the **next 5 years'** rollup projections toward scale, and highlighting the effects of unit cost design decisions.

Financial Services Provider 2 (FSP2):

This digitally transformed FSP²⁹ is defined as one whose: (a) customer base is already at scale, although a portion is dormant, and (b) unit costs are configured for **savings-like** behaviors (with adjacent products cross-subsidizing losses on payments-like behaviors), and customer behavior largely reflects this design. Thus, for FSP2 we focused on presenting modeling on the **past 3 years** of data around reduction in dormancy, and highlighting the effects of unit cost design decisions.

28. We use “digitally native” here to indicate a provider which launched around a model that primarily serves customers through digital channels (e.g. mobile devices), with minimal physical presence (e.g. using third party merchant locations as agents, leveraging interoperability to provide access through a broad set of ATM or kiosk networks, and generally having a branchless model)

29. We use “digitally transformed” here to indicate a provider that initially launched with a brick-and-mortar branch model, but has subsequently added on and shifted strategy toward digital channels and products, with the intention of approaching those launched by digitally native providers while typically maintaining some minimal physical presence for high-touch, relationship-focused clients and products.

Unit costing overview

We combined operational and financial information, and an activity-based costing proxy, to allocate costs and revenues to various components of the product (e.g. account, cash in/out, transactions, adjacencies, staff), resulting in a comprehensive unit economics model that followed the ACTA framework³⁰.

The allocation process focused on four main dimensions (cost drivers) to be used as the denominators in the unit cost equation:

- new accounts (which relates to the first key activity, or account origination)
- active accounts
- processing a cash-value transaction
- processing a non-cash-value transaction

We then determined the marginal contribution for the following activities to get a sense of the way each contributes to the product's profitability:

- | | |
|----------|--|
| A | opening and processing an account |
| C | processing cash-in and cash-out transactions |
| T | processing non-cash transactions |
| A | adjacent activities tied to a complementary portfolio (e.g. credit or premium savings products that generate offsetting revenue) |

A stylized version of these resulting unit costs was then projected and plotted over time for each of the participating FSPs. As the methodology behind this particular step of the process is well-documented and similar across products and institutions, we have selected only one of the two to highlight as a unit costing case study below.

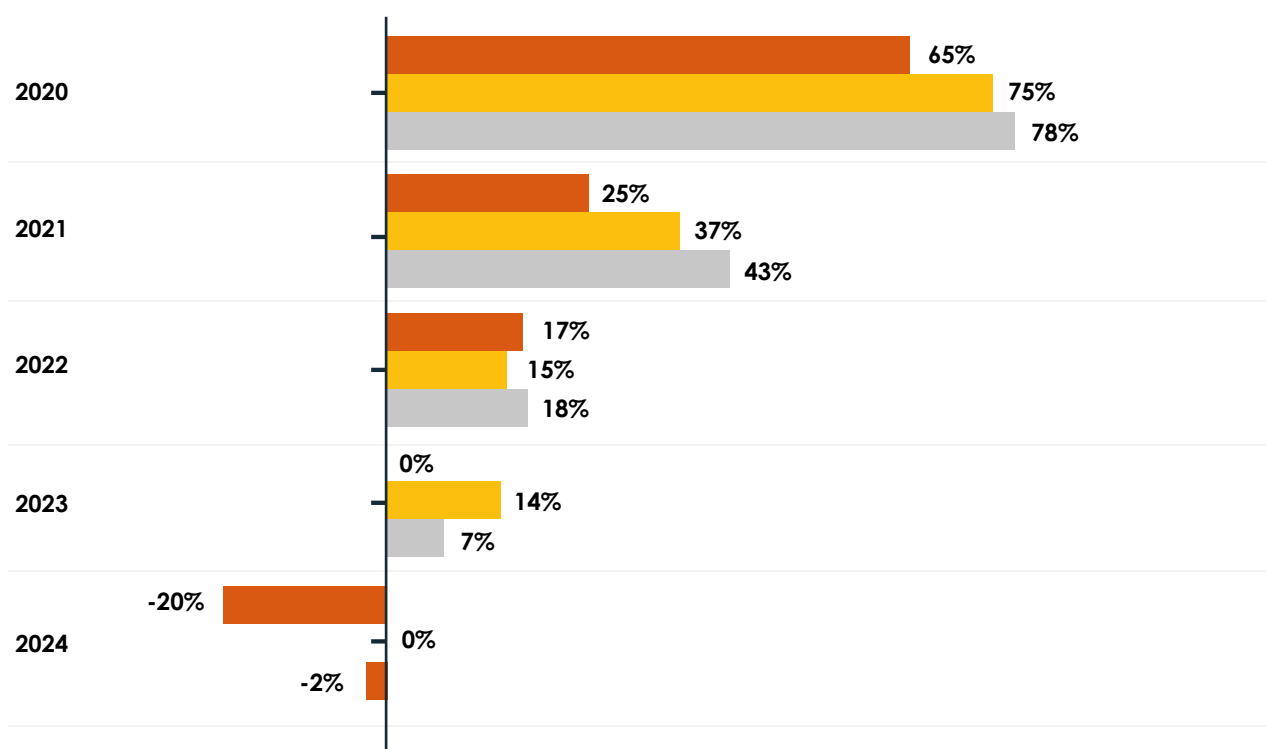
Unit costing case study: FSP1's high-volume, low-cost transactions

FSP1 is clearly focused on a business model that requires high-volume, low-fee transactions in order to be profitable. It can thus be seen as a payments processor with embedded banking features. This conclusion is in line with the growth stage this FSP is currently in, so aligning the real product with business model projections and expectations of customers is critical to achieving long-term viability.

FSP1's business case revolves around the ability to achieve efficient operational performance at scale. According to our observations, the overall unit cost decreases substantially in the first years.

30. ACTA, which breaks costs and revenues into Account, Cash-In Cash-Out (CICO), Transactions, and Adjacencies components, is initially defined in "[Fighting Poverty Profitably](#)" published by the Bill & Melinda Gates Foundation in 2013. This model served as a basis which we extended for this exercise.

Decrease / increase(-) in unit costs over the years



● Account original costs

● Account maintenance

● Transactions costs per account per year

Account origination costs decreased 65% in the second year, 25% in the third year, and subtly stabilized in the long term.

Account maintenance costs consistently decreased rapidly in the first three years to finally show a steady behavior after the fifth year

Transaction costs also showed a significant reduction over the years

Leveraging customers' usage-based segmentation in projecting viability

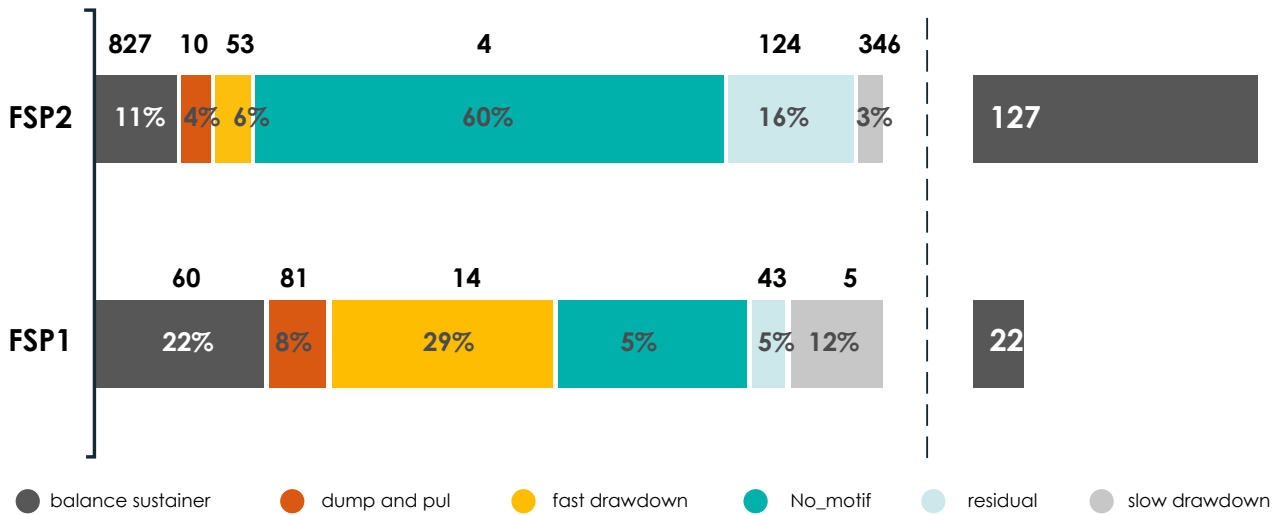
Based on product usage segmentation, the BFA Global team determined how current customers' usage of financial products might fall into several typologies. For both FSP1 and FSP2, we determined the proportion of each behavior that was observed within the product's user base to then project the evolution of account costs when information was available.

As seen in the chart below, 60% of FSP1's customer base would be classified as Balance Sustainers³¹

31. Normally there is a distinction between Motifs a) Balance Sustainers and b) Accretive Savers. Given how the data was structured for FSP1, it was needed to merge these two into one which was called Balance Sustainer. When presenting information about the two FSPs simultaneously we need to 'manually' combine these two motifs clearly differentiated in the analysis for the second FSP.

Portfolio distribution and avg balances

Average balances (USD)

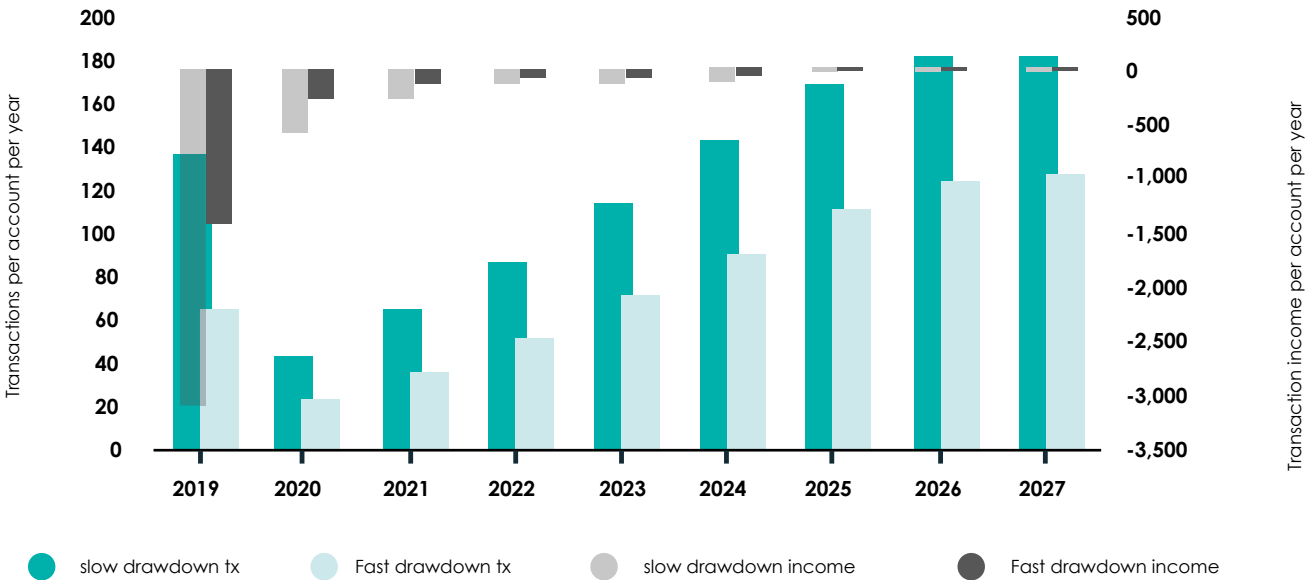


What is the impact on profitability for these different usage patterns? We answer this question by multiplying through the distribution of typical activities for each motif by the respective unit costs, which leaves us with a representative account-level profitability figure for that motif. We subsequently multiply these account-level motif figures by the distribution of these motifs within the portfolio, to analyze effects on profitability at the portfolio level.

Account-level analysis

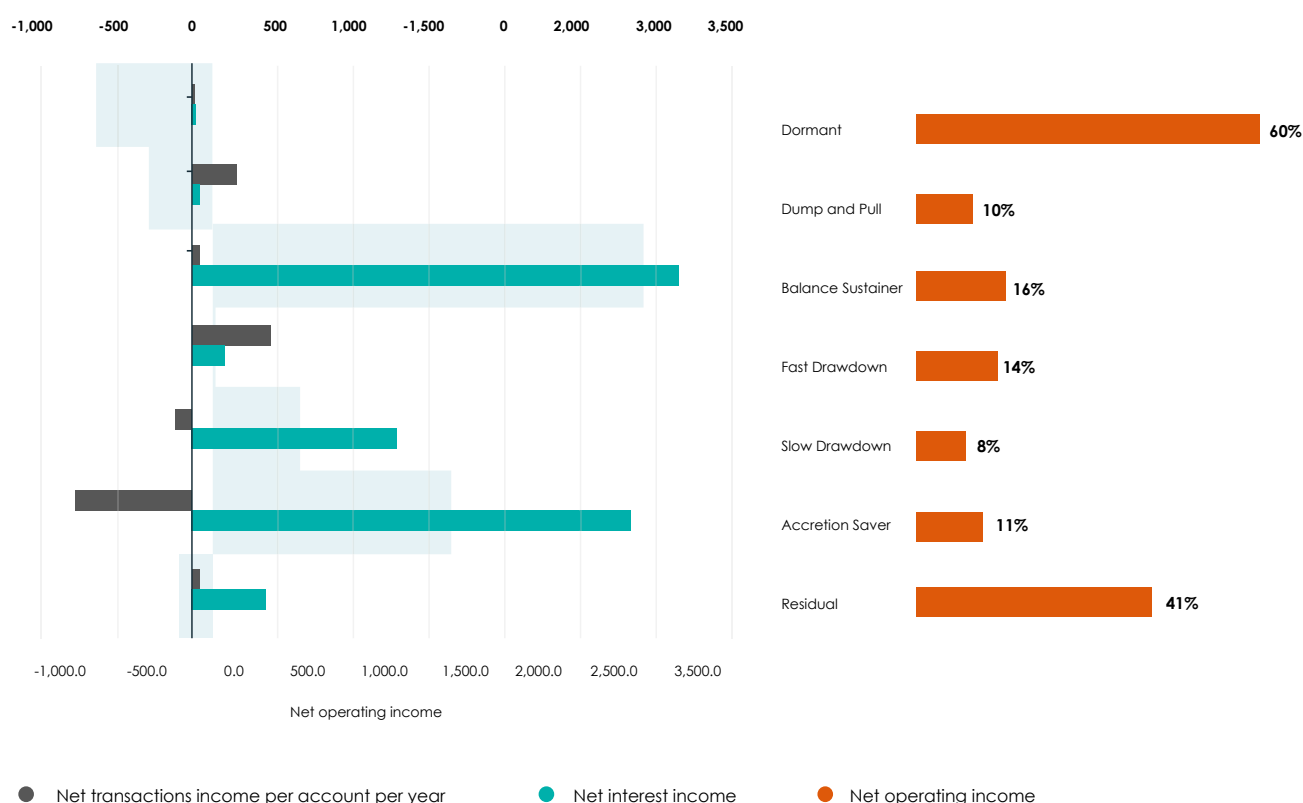
At the account level, for a digitally native provider such as FSP1, in which the customer base is not yet at scale, three of the ACTA framework's elements (CTA) hold greater potential for impacting account profitability when looking at different usage patterns. For FSP1, getting to break-even earlier will mean that a high-volume transaction account will have a greater negative impact on account profitability.

To illustrate how cash-in cash-out (CICO) and transactional components of unit costs affect profitability, we take two motifs with different transactional behaviors and relatively similar average balance levels. The transactional volume hurts profitability significantly due to the high contribution margin seen in the first four years. After breaking even in year four, net transactional income holds steady despite the volume increase for both motifs.



Comparatively, looking at FSP2 in its business model maturity and the effect on the profitability of the different usage patterns, the 'account' element here has a crucial impact on product performance. For dormant accounts, representing almost two-thirds of its customer base, the little revenue this type of behavior brings (immaterial account average balances and intrinsic account transactional inactivity) is far from offsetting the fixed costs required to service these accounts.

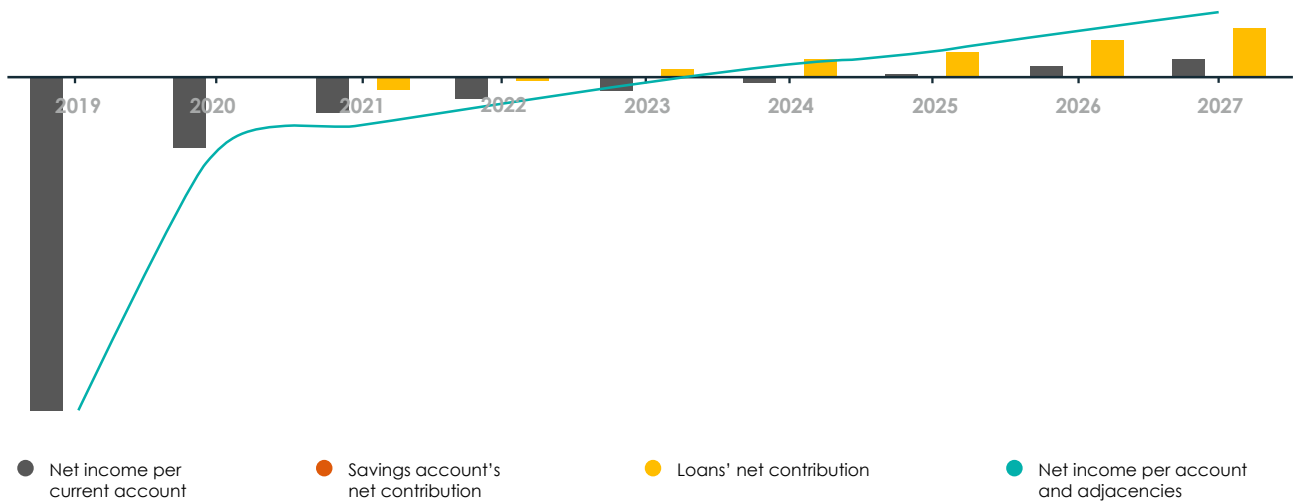
On the opposite side, the two most desirable behaviors - comparably high average balances that translate into a solid interest income - offset by far the fixed costs required to serve or maintain these accounts and the amortized costs of having originated them in the first place.



Portfolio-level analysis

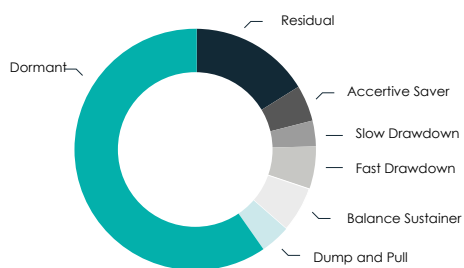
Another fundamental element for product profitability comes from additional income streams. In the case of FSP1, this comes from the adjacent savings and lending products. We considered penetration rates (per current account), balance growth, interest paid out, and blended interest earned by the institution's investments to estimate the relevance of this particular element to the institution's overall performance. We can view the overall portfolio dynamics in terms of net profitability.

In the chart below we see that savings is designed to break even (since the contribution is negligible, the orange bars are not visible in the plot) as an anchor product to attract users to an amplified portfolio, which in turn contributes to a profitable portfolio at a customer-level. Current accounts and adjacent products as loans accelerate the return a few years after both products become profitable.

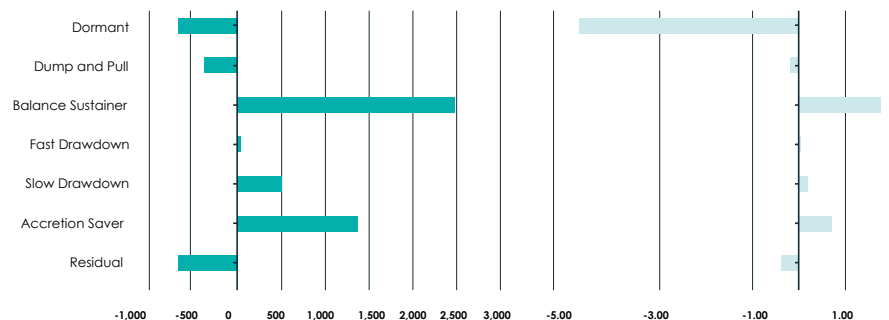


When we looked across FSP2's rollups across the entire product suite, we saw that they were profitable at the balance sheet level. However, by leveraging the motif distribution and unit costing analyses for the transaction account as listed above, we were able to examine that product's costs in isolation. As mentioned earlier in the document, we noted a high level of dormancy, which is a significant cost with low to no returns, and also a reflection of customer challenges we noted in the survey results.

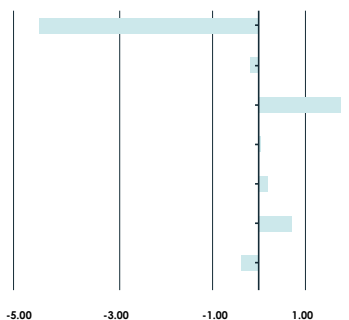
Savings: Accounts by Motif



Savings: Net Income by Motif
(per acct, per year)

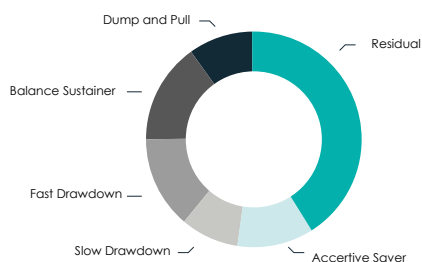


Savings: Portfolio Contribution by Motif
(per year), million KES

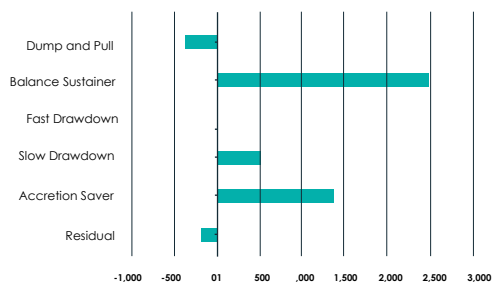


In further isolating the portion of FSP2's portfolio that represented non-dormant accounts, we drew a secondary area for potential improvement. Despite the product being a mass-market transactional account, the unit costing reflects that of a savings product. While around half of of the customer base was indeed using this for savings behavior (i.e. Balance Sustainer, Accretive Saver), the portion using it for transactional use cases are driving significant net costs for the product. Relabeling the product in marketing, or (preferably, for the sake of inclusiveness) refining the business model to match behavior could improve the profitability of the product, and reduce reliance on revenues from adjacent products.

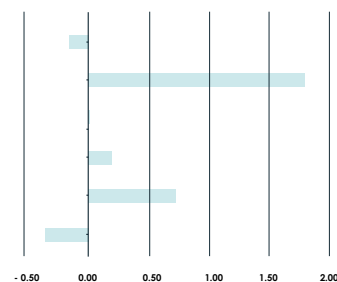
Savings: Accounts by Motif
(Non-Dormant)



Savings: Portfolio Net Income by Motif
(per acct, per year, non-dormant)



Savings: Portfolio Contribution by Motif
(per year, non-dormant), million KES



In the cases of both FSP1 and FSP2, the executive, financial, product strategy, and marketing teams saw the utility exhibited by this holistic approach that tied customers perspectives to product usage and their own bottom line. In both cases, they also expressed an eagerness to incorporate the findings into their respective roadmaps, which continues even to the time of writing.



CASE STUDY 5

Final thoughts & extending the approach

While we have typically leveraged this approach while working with one given financial service provider at a time, a formal treatment of this approach across a set of institutions has the potential to lead to extraction of valuable higher-level trends and insights as well. For instance, running these analyses across institutions varying in type (e.g. brick-and-mortar vs digital bank) or geography can be useful in comparing, contrasting, and benchmarking. Or, running across institutions in a given market could highlight competitive advantages between institutions, systemic gaps across institutions, and network effects specific to that market.

Overall, in the meantime we have consistently found this analysis can be useful in conjunction with the demand-side research to understand what competitive advantages and barriers to account adoption and usage are, and what steps the partner should take to ensure the most optimal path to viability.



Conclusions

We recognize that the digitization of financial products and services has seen organic growth over the past decade, and accelerated growth during the COVID-19 pandemic beginning in 2020. As a result, there is increased attention from both industry and enablers (i.e. funders and regulators) on the trend toward these lower-cost, more inclusive models.

Historically, the voice of the individual customer is often not considered as directly driving the bottom line of the product. In contrast, the process laid out in the case studies above directly incorporates quantitative and qualitative demand-side insights, allowing providers to understand how customer perspectives and consumer-driven product design can impact financials, with transactional motifs as the “translation layer.”

For providers, this collection of activities can be used to inform product roadmaps, new product launches, marketing materials, and even opportunities for the emergence of new entrants. But beyond the private sector, with further development this set of tools should even prove useful to regulators focused on evidence-based, data-driven financial inclusion policy. Additionally, donors and investors who are keen to deepen engagement with the private sector through more granular insights may derive value from this approach.

As we continue to gather data points in its application, we ultimately envision a refinement of this approach into a fully formalized framework, components of which could perhaps even be integrated into existing national surveys and strategies. In furtherance of this goal, we have collaborated with the Bill & Melinda Gates Foundation to explore how the findings from such an approach could be incorporated into a “Target Product Profile” that defines the minimal and optimal characteristics of an inclusive transaction product, analogous to the product profiles that exist, to drive responsible innovation in the pharmaceutical space.

With the release of this report, we are eager to continue engaging in mindful conversations about how to best balance the needs of customers against the financial viability of a provider to grow toward an optimally inclusive ecosystem for customers. To this end, providers, regulators, researchers, funders, and passionate impact-focused individuals are encouraged to reach out to the authors directly.

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About BFA

BFA Global is a research, advisory, data analytics and product innovation firm focused on the intersection of finance, data and technology. We work with the world's leading innovators, development organizations, policymakers, financial institutions and more to help them build solutions that can contribute to more sustainable and inclusive economies.

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