

Towards Women's Financial Inclusion: A Gender Data Diagnostic of Nigeria

Prepared for the WFID Partnership
2022

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List of acronyms

BVN	Bank verification number
CBN	Central Bank of Nigeria
CCX	ConsumerCentriX
CFAN	Cooperative Financing Agency of Nigeria
DFI	Development Finance Institution
EFInA	Enhancing Financial Innovation and Access
FCMB	First Community Monument Bank
FMO	Dutch Entrepreneurial Development Bank
FSP	Financial service provider
GEM	Global Entrepreneurship Monitor
IFC	International Finance Corporation
KPI	Key performance indicator
MFB	Microfinance bank
MFI	Microfinance institution
MSME	Micro-, small-, and medium-sized enterprises

NAICOM	National Insurance Commission
NDIC	Nigeria Deposit Insurance Corporation
NFS	Non-financial services
NIBSS	Nigeria Inter-Bank Settlement System
NIRSAL	Nigeria Incentive-Based Risk Sharing System for Agricultural Lending
PENCOM	National Pension Commission
SANEF	Shared Agent Network Expansion Facility
SME	Small- and medium-sized enterprises
SMEDAN	SME Development Agency
UBA	United Bank for Africa
VSLA	Village savings and loan associations
WFI	Women's financial inclusion
WFID	Women's financial inclusion data
WSME	Women-owned and women-led small and medium businesses

ABOUT WOMEN'S FINANCIAL INCLUSION AND THE WFID PARTNERSHIP

Global awareness and political will around women's financial inclusion (WFI) are at an all-time high, yet the gender gap in financial inclusion persists. Women remain both unserved and underserved compared to men in all segments, from bottom-of-the-pyramid to high-net-worth. These gaps continue because of a widespread lack of awareness of the multi-trillion-dollar opportunity to serve the women's market. Gaps in the collection, quality, and usage of gender data pose a major barrier to growing awareness and developing strategies that tap into it.

Gender data is key for financial service providers (FSPs) to understand the nature of the gender financial inclusion gap and the women's market opportunity and to create tailored solutions for women. It is also a critical input for policymakers to design and monitor policy interventions that increase women's financial inclusion.

In 2014, against this backdrop, leading proponents of women's financial inclusion formed a coalition to increase the availability and use of sex-disaggregated financial data. The Women's Financial Inclusion Data (WFID) Partnership includes the Alliance for Financial Inclusion (AFI), Data2X, the European Bank for Reconstruction and Development (EBRD), the Financial Alliance for Women, the Inter-American Development Bank (IDB), IDB Invest, the International Finance Corporation (IFC), the International Monetary Fund (IMF), the World Bank Group (WBG), the Organisation for Economic Cooperation and Development (OECD), and the United Nations Capital Development Fund (UNCDF).

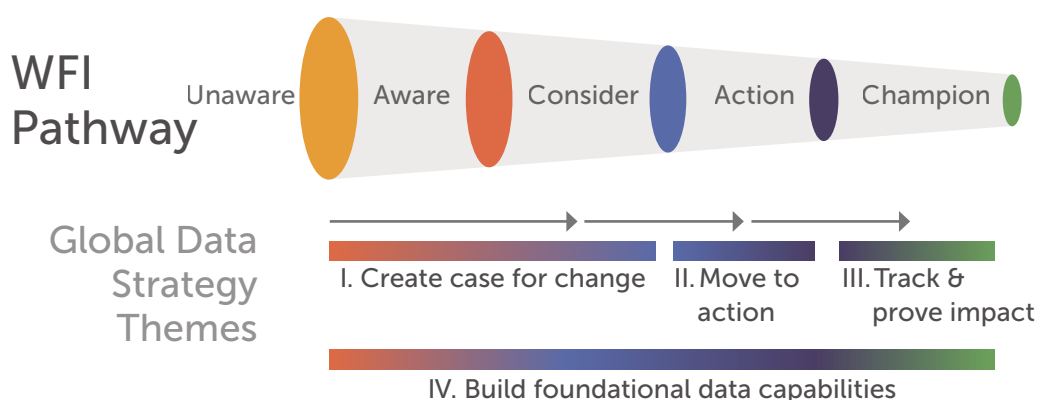
The WFID Partnership is coordinated by Data2X, a United Nations Foundation initiative. The Financial Alliance for Women is its technical lead.

THE WFID PARTNERSHIP'S THEORY OF CHANGE

In 2017, the WFID Partnership developed a global gender data strategy with the support of McKinsey & Company. The strategy included the WFID Partnership's theory of change. This theory of change holds that the production, availability, and use of sex-disaggregated data on the demand for and supply of financial services will enable financial service providers (FSPs) and policymakers to take action toward closing the financial inclusion gender gap.

Data helps actors move through the WFI pathway by increasing awareness, catalyzing action, and ultimately leading to the development of WFI champions—stakeholders who have had an impact on WFI through either policy action or serving the market. These WFI champions are the final stage of the funnel framework shown in Figure 1 on the next page. FSPs and policymakers move through a WFI pathway¹ with five stages: from being simply unaware of the relevance of WFI; to becoming aware of the gaps; to considering action in response to the knowledge they have attained; to taking action, implementing strategies to close gaps; and finally, to demonstrating impact and becoming champions of WFI.

Figure 1. Stakeholder Pathway to Champion Women's Financial Inclusion



The WFID Partnership's theory of change is based on the significant role that data can play in moving actors and organizations along this pathway. **With more and improved sex-disaggregated financial data, policymakers can design and monitor WFI interventions, and FSPs can both see the market opportunity and build a business case for targeting women as clients.**

The strategy also found that many of the global and national-level data gaps are on the supply-side versus the demand-side. In addition, the strategy stressed that the development of gender data is most effective in improving WFI if efforts are at the national level versus international; as the process of creating awareness encourages local players to act and move through the pathway.

In 2020–2022, WFID is working in six countries (Bangladesh, Honduras, Kenya, Nigeria, Pakistan, and Turkey) to test its theory of change and develop gender data supply-side interventions to increase women's financial inclusion in partnership with the public and private sectors.



ABOUT THE GENDER DATA DIAGNOSTIC

Before designing interventions, the WFID partnership undertook diagnostics of each of the six pilot countries to understand the state of gender data at the national level. This diagnostic includes mapping the data value chain, understanding what is being tracked and by whom, identifying gaps and opportunities in gender data collection, and developing recommendations for areas of intervention. This entailed the following activities:

- Reviewing existing literature;
- Conducting an online survey of a majority of FSPs in each nation's financial sector;
- Interviewing public, private, and nongovernmental stakeholders;
- Conducting comprehensive modeling to estimate the women's market opportunity in each country (see Appendix A); and
- Conducting predictive modeling to estimate the WFI gap in the future (see Appendix B).

Although the diagnostics were developed as part of the WFID Partnership's intervention plans, they can also become a blueprint for governments, FSPs, and other stakeholders who are interested in improving their own gender data ecosystems.

EXECUTIVE SUMMARY: NIGERIA

This diagnostic highlights gaps and opportunities in sex-disaggregating financial data in Nigeria and tests the WFID Partnership's theory of change. Demand-side data has played an important role in creating awareness about women's financial inclusion in Nigeria and contributing to significant policy changes. However, the **lack of corresponding supply-side data has limited market-driven approaches that will ultimately drive women's financial inclusion**. Better supply-side data and better use of demand- and supply-side data in tandem would help close large—and growing—gender gaps by revealing additional pathways for bank and regulator interventions.

The research uncovered important market findings. Nigeria's gender gap in financial access grew from 10.2 percent to 12 percent between the years 2012 and 2020.² Modeling conducted as part of our research suggests that the gap will not drop below 10 percent until 2027. **If interventions are not taken at the regulatory and industry levels, the gender gap in Nigeria's financial access will persist—and possibly widen—in the future.**

The research revealed an estimated market opportunity of USD\$760 million (NGN 294 billion) in annual revenues if the women's market was served (see Figure 2). While interviews with FSPs revealed that most banks are increasingly aware of the women's market potential, many have yet to put this awareness into action—placing them in the consider/action phase of the WFI Pathway shown in Figure 1. Only some leading FSPs recognize it as a key strategic opportunity and have put in place programs geared toward women. Just 28 percent of the banks and 14 percent of the microfinance banks (MFBs) that responded to an FSP survey conducted for this diagnostic have launched dedicated products and service offerings for women. And many have yet to scale these programs. Thus, **there is a clear disconnect between Nigerian banks' acknowledgement that increased engagement in the female economy yields business benefits and their lack of strategic focus on scaling up financial products and services for women beyond the pilot stage.**

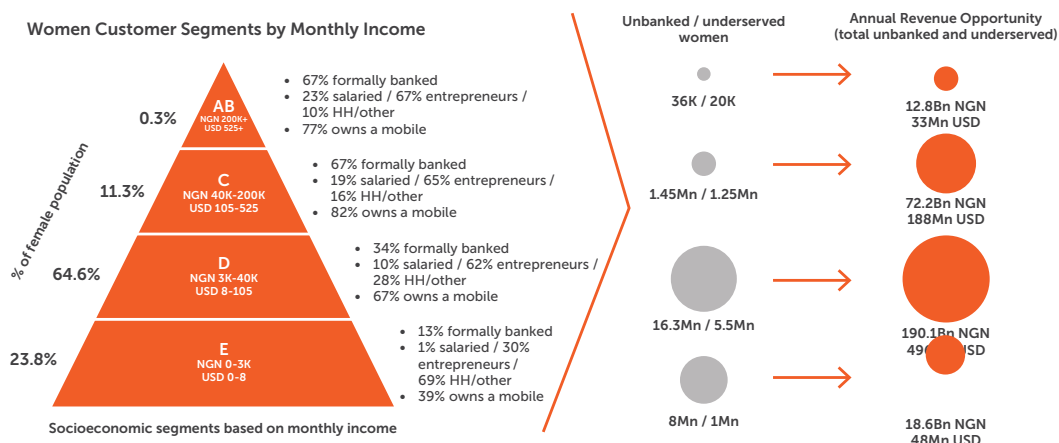
By the numbers: The scope of the untapped opportunity in women's financial services


44%
of the total untapped opportunity in the market comes from unserved and underserved women

More than \$760 M / NGN 294 billion

is the potential annual banking revenue from expanded financial service offerings for women customer segments

Figure 2. Modeling women's market opportunity in Nigeria





The diagnostic revealed that high-quality sex-disaggregated demand-side data on women retail customers is widely available, although there is very limited demand-side data on women-owned and women-led small and medium businesses (WSMEs). **The awareness generated by the availability of demand-side data contributed significantly to the Central Bank of Nigeria's (CBN) 2017 decision to mandate the reporting of sex-disaggregated data by FSPs**, as well as the introduction of the Women's Financial Inclusion Implementation Framework in 2020.

However, the **CBN-mandated supply-side data on women individual account holders is not yet widely available in consistent formats, and data reliability is an issue** due in part to manual reporting processes. In addition, because the gender data collection is driven by CBN's Financial Inclusion Secretariat, it is not mainstreamed into its statutory reporting. As a result, banks do not prioritize thoroughness and quality. For these and other reasons, the data that does exist is not being used to its fullest potential. And the gap in the collection of data on WSMEs remains.

In addition, **many FSPs do not include the gender data they have gathered for CBN in their own reporting to management—nor do they use the data in their own decision-making processes on the types of offerings to provide.**

There is potential to make greater use of the capabilities of data aggregators, or centralized repositories of transactional data, which can be more easily sex-disaggregated. For example, datasets from the Nigeria Inter-Bank Settlement System (NIBBS) are already being used for some initial analysis on the state of women's usage of formal financial services in Nigeria. Sex-disaggregated data is also collected by 10 credit bureaus in the country, although their reporting is limited. But there is more untapped potential: **Optimized use of this data could yield a deeper, real-time understanding of women customer behaviors and the types of products women are accessing.**

Interviews with CBN and these other data-aggregating institutions revealed a strong appetite for strengthening the quality of supply-side data and understanding more about how to generate actionable insights. They expressed interest in using this data to drive women's financial inclusion and underpin policy design.

Those interviewed indicated that if they had a more quantifiable business case—as well as business models to target the market—FSPs without women's programs would enter the market and those with pilots would scale them.



To move more banks to action and CBN to action/champion in the WFI Pathway, priority efforts should focus on:

- Improving the quality and use of supply-side data for stronger and more reliable evidence-based decision-making, including collecting individual customer-level data.
- Expanding demand- and supply-side data collection to include WSMEs, as the dearth of this type of data prevents targeted action.
- Enabling easier access to CBN supply-side data for commercial FSPs so it can be used to its full potential, including for competitor benchmarking.
- Incorporating data into FSP management reports and encouraging data analysis for business development by making this part of regular reporting.
- Bringing FSPs together with other ecosystem actors to design a national-level action plan for women's full financial inclusion. The goal would be to mobilize the entire financial sector, affirming tangible commitments to a culture of inclusion and to advance access to capital for female entrepreneurs, as with the United Kingdom's Investing in Women Code.³ This should be part of a concerted effort to increase banks' financing for small- and medium-sized enterprises (SMEs), regardless of owner's gender.
- Pursuing additional interventions to address issues uncovered in the diagnostic and move FSPs and CBN forward along the WFI pathway. These might include building data analysis capacity for industry players and regulators, providing technical support to upgrade system capabilities, building capacity on scaling value propositions to individual women customers and female business owners.

OVERVIEW: WOMEN'S FINANCIAL INCLUSION IN NIGERIA

Box 1. NIGERIA AT A GLANCE

ECONOMY

- Key regional player
- Africa's largest economy and biggest oil exporter

SOCIOECONOMIC STATUS

- Most populous African nation; among world's largest youth populations
- High degree of income inequality and unemployment
- 52% of residents live on \$1.90/day
- Economic impact of COVID-19 may push 5 million more Nigerians into poverty
- 39% of women with some secondary education
- 8.3% of women enrolled in post-secondary education
- 53% overall literacy rate for women (34% for rural women); 71% for men
- 48.5% women in labor force
- Nigerian women earn 42% less than men
- Overall gender gap: 32nd out of 35 countries in sub-Saharan Africa

WOMEN IN BUSINESS

- Nigerian women's entrepreneurial activity outpaces men's by 4%
- 22% women sole proprietorships as share of total
- 82% of working women work in the informal sector
- Less than 14% of Nigerian firms have female top managers

FINANCIAL INCLUSION

- 61% of men hold formal bank accounts; 31% women
- 3.9% of women have mobile money accounts
- 28% of commercial banks have women-focused products and services

WOMEN'S VOICE & PARTICIPATION

- Nigeria ranks 149th out of 155 countries for women's political empowerment
- 5.8% of Nigerian parliamentarians are women
- 10.3% of government ministers are women

(Sources for statistics: CIA World Factbook 2021, CCX, EFinA 2019, Findex 2017, ILO 2019, SMEDAN 2017, UNESCO, WEF 2021, WB ILO Estimates 2019, GEM 2012)

Nigeria has a significant gender gap in financial account ownership. If measures are not taken, the gender gap in account ownership will persist into the future, predictive modeling developed for this study show.

This gap is larger than other countries in the region. **Only 64 percent of women in Nigeria are included in the formal and informal financial sector.**⁴ By comparison, 68 percent of women in Tanzania, 77 percent of women in Uganda, 89 percent of women in Kenya, and 90 percent of women in South Africa are financially included in the formal and informal sectors.⁵

Nigerian women are 12 percentage points less likely than men to be financially included, and projections prepared for this study show that these gaps will continue, only starting to narrow after 2027 (see Figure 3).⁶ By contrast, women in Kenya are just as included as men, and in South Africa, women are now more likely than men to be financially included.⁷

Women's underrepresentation in formal financial services is the main driver of the country's gender gap in financial inclusion. **Thirty-one percent of Nigerian women have a formal account compared with 61 percent of men.**⁸ Further evidence of the problem is apparent when looking at the data on the borrowing activity of Nigeria's self-employed women: While **31.4 percent borrow in some capacity to finance their business, only 3.7 percent borrow from formal FSPs.**⁹

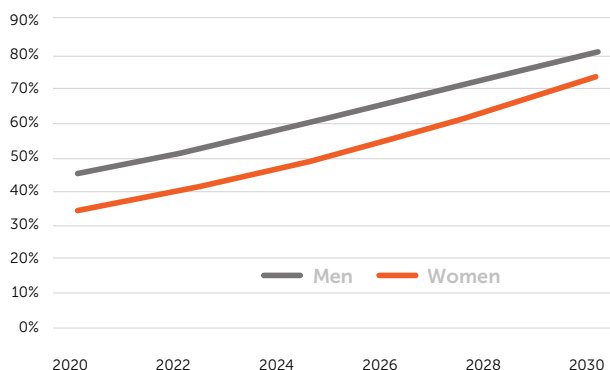
It is important to note, however, that formal small- and medium-sized business lending in general represents just a fraction—less than one-third of one percent—of all private-sector lending in Nigeria as of 2018.¹⁰

Informal financial services play an important role in the financial inclusion of Nigerian women. Thirty-three percent of women have informal accounts only, compared with 15 percent of men.¹¹ Savings collectors/merchants are the most widely used providers, serving an estimated 6.3 million women. **Savings and credit groups serve 4.1 million women, while village savings and loan associations (VSLAs) serve 2.6 million women.**¹²

KEY TAKEAWAYS

- Nigeria has one of the largest gender gaps in financial inclusion in the region.
- Multiple factors contribute to high percentages of unbanked women, including low literacy, restricted mobility, and a gender digital divide.
- Availability of demand-side data has raised regulator awareness, enabled measurement of the scope of market potential, and driven policy changes.
- FSPs acknowledge the importance of serving women, but most don't know how to do it profitably or how to scale up solutions.
- Increased generation and use of supply-side data can propel forward movement on banks' and regulator's WFI journey.
- Local and international institutions play important roles in advancing the WFI agenda and improving the gender data landscape.

Figure 3. Projected access to finance by gender (2020 to 2030)



BARRIERS TO WOMEN'S ACCESS TO FINANCIAL SERVICES

Nigerian women face several barriers to accessing financial services. Some of the major hurdles are briefly described here.

Lack of education and low financial literacy

Lower educational attainment and higher illiteracy represent a significant factor in Nigerian women's limited access to financial services. Women without an education are less likely to have basic financial skills and far more likely to be financially excluded than educated women.¹³ Education rates for Nigerian women lag behind other countries in the region, with a larger gap between boys' and girls' educational attainment. According to the 2018 Nigeria Demographic and Health Survey, only 58 percent of Nigerian girls attend primary school, while close to 70 percent of boys are enrolled. Just eight percent of Nigeria's young women are pursuing higher education in post-secondary programs.¹⁴

Limited social and physical mobility

Lack of social and physical mobility is a major barrier to accessing financial services for Nigerian women.¹⁵ Women in Nigeria are less mobile than men, especially those living in the socially conservative communities of the north, conflict zones, and rural areas—home to half of the nation's population. There is a cultural basis for these limitations in both physical and social mobility—a societal perception of gender-defined roles, with women as the caregivers and managers of household affairs.¹⁶

About 58 percent of Nigerian women do not have a national identification card, in part because they may not be permitted to travel to a registration center. Without an acceptable form of identification, opening a bank account becomes nearly impossible.¹⁷ In addition, for many Nigerian women, the closest bank branch could be hundreds of kilometers away, since most bank locations are concentrated in the urban south.¹⁸ This could pose a nearly insurmountable obstacle for women without means of transportation, living in remote areas, and with a lengthy daily list of household tasks to accomplish.

The digital divide

The gender digital divide is another significant barrier to financial services access in Nigeria. Even though 75 percent of Nigerian women own mobile phones, only 35 percent use mobile Internet-based applications.¹⁹ These persistent divides are due to affordability and lack of Internet access, as well as limited technology skills and literacy.²⁰ Widespread Internet access—through mobile applications and other technologies—could represent a game changer for Nigerian women's financial inclusion.

ENABLING POLICY ENVIRONMENT ON WFI

In recent years, CBN has recognized the importance of financial inclusion, instituting a national financial inclusion strategy in 2012. Initially, however, the strategy did not include specific WFI targets.

Following the 2018 release of the Enhancing Financial Innovation and Access (EFInA) Access to Financial Services Survey Report, CBN realized that a specific strategy was needed to address a growing gender gap in financial inclusion. **The regulator subsequently developed a framework for advancing women's financial inclusion** in collaboration with EFInA and the Technical Committee on Financial Inclusion,²¹ which launched in September 2020. The framework includes a strategic imperative to "mandate the development of systems of gender-disaggregated data collection to meet the needs of financial service providers and government."

As of 2019, CBN requires quarterly reporting of sex-disaggregated personal and business account ownership data from commercial and microfinance banks. This was a change from a 2017 mandate for biannual sex-disaggregated reporting that had been put in place in response to the data in EFInA's 2016 Access to Finance report.

These represent strong examples of the impact of data. With EFInA's 2018 survey indicating that the gender gap was growing, CBN understood that it needed to take more action on several fronts, including collecting more timely data and developing an overarching strategy.

These landmark changes have set the stage for future WFI progress. They demonstrate the importance of gender data for regulators, from raising awareness to driving policy decisions aimed at increasing WFI.

Although CBN did not consult the industry while developing these actions, the approach going forward will be more consultative. Plans include promoting actions by way of multi-stakeholder community of practice groups created to support the implementation of key strategic imperatives in the WFI framework.

NIGERIAN BANKS & WFI

The majority of banks have yet to launch differentiated products and services as part of a full-fledged commercial commitment to serving unbanked and underbanked women.

Interviews revealed an interesting dichotomy: Several leading banks in Nigeria recognize the women's market as a key strategic opportunity and understand the theoretical business case for serving women, yet only a handful have developed a targeted women's market proposition. Most of these remain in the pilot stage.

"Our women's pilot is successful, but let's be honest: Just because you have a successful pilot doesn't mean it can scale. We need to see more hard evidence that the investment pays off before we commit."

– FSP survey respondent

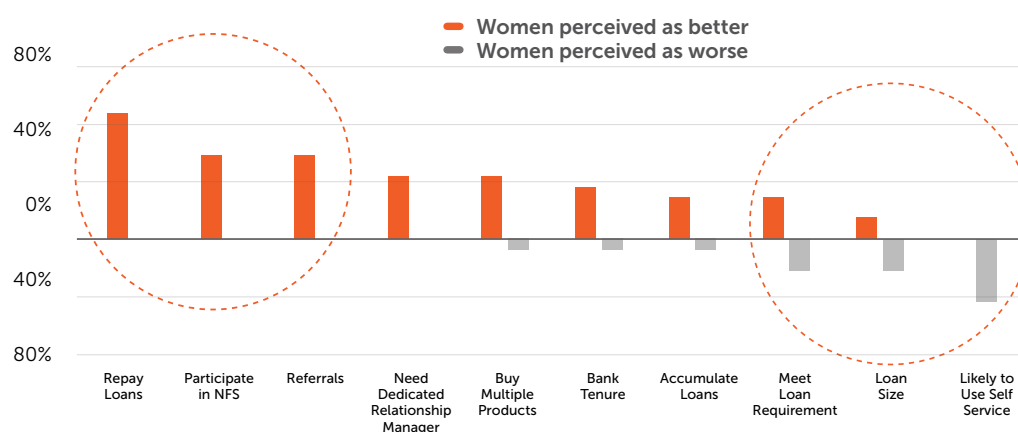
Based on the FSP survey of 15 FSPs consulted as part of this report, respondents cited portfolio growth and profitability as main factors driving their focus on the segment, with 71 percent (5 of 7) commercial banks and 42 percent (3 of 7) MFBs viewing

women as a core element of their strategy—a way to grow their customer base by targeting a new or unserved segment and increase engagement among existing customers.

When questioned on the reasons they have not moved forward in their WFI journey, **respondents said that they needed more evidence of a quantifiable business case. They also said they needed more knowledge on how to build scalable models.** To date, with the exception of Access Bank’s women’s offering, FSPs have yet to scale up a women’s market pilot into a commercially viable suite of solutions that is mainstreamed into the bank’s offerings.

How banks perceive women customers

Figure 4. How Nigerian banks perceive men and women customers




Banks see differences in women customers’ financial behaviors as compared to men in several areas. Eighty-six percent of survey respondents reported that women repay their loans more reliably than men. Fifty-seven percent perceive women as more likely to refer new clients and take advantage of non-financial services while 43 percent think that women are more likely to require a dedicated relationship manager than men. Respondents viewed women customers more positively compared to men in terms of products per customer, loyalty, loan qualifications, loan sizes, and use of digital channels. Women are also perceived as less capable of using digital or self-service channels, making outreach to them more expensive. Banks base this on their sex-disaggregated channel usage data, revealing that women use ATMs less frequently than men. See Figure 4 for more detail.

Availability of women-focused offerings

Only 28 percent of the banks and 14 percent of the MFBs that responded to the survey have launched dedicated service offerings for women—virtually all as pilot programs. These offerings primarily target women micro-, small-, and medium-sized enterprises (MSMEs), although the majority report a focus on unbanked women as well.

Banks that have developed tailored strategies to meet women’s needs have seen strong results. Access Bank leads the Nigerian women’s market with a holistic women’s value proposition that includes financial and non-financial solutions. In the first three years following the launch of its W Initiative, the bank reported a 46 percent increase



in savings accounts, a 58 percent increase in WSME loans, and a 308 percent increase in personal loans. In addition, the bank provided training for 75,000 WSMEs. Two more banks have recently launched women-centered strategies—First City Monument Bank (FCMB) and Union Bank. Other banks reported that they were still exploring commercially viable market models, including top-five United Bank for Africa (UBA) and mid-tier Sterling Bank. Still others offer basic solutions that may appeal to women as reliable savers, but they are not designed as a differentiated suite of offerings, or as part of a comprehensive value proposition.

It also became clear that the **lack of buy-in from top management for a strategic emphasis on women customer segments is a key obstacle to expanding the availability of women-focused offerings**. According to EFInA's 2019 survey, a number of Nigerian bank leaders continue to question the business case behind serving the women's market,²² even though the research for this diagnostic indicated that banks are increasingly aware of the business case. This underscores the difficulty in getting banks to move forward along the WFI pathway. Industry stakeholders also reported a need to understand more about how to use data in making better decisions, what indicators they should be tracking, and how frequently they should be gathering data.

Providing guidance on what to track and how to use data could help to encourage more sex-disaggregated data collection. In turn, increased availability of timely and granular data on the transactional behavior of women customer segments could play an important role in building use cases, helping banks go from pilots to scalable and profitable solutions for the women's market.

ROLE OF RESEARCH INSTITUTES, DONORS, AND DEVELOPMENT FINANCE INSTITUTIONS

A number of local and international organizations have contributed to advancing women's financial inclusion in Nigeria. Their role remains integral to future success. Among the efforts to date:

- **Capacity building for FSPs:** The IFC, through its Banking on Women Program, and the Dutch Entrepreneurial Development Bank (FMO) work with Access Bank. The CDC Group (formerly the Commonwealth Development Corporation) provides gender advisory services to Access Microfinance Bank, while Women's World Banking is guiding Carbon, Sterling Bank, and Wema Bank on their women's market strategies. Access and FCMB are members of the Financial Alliance for Women.
- **Support for regulatory changes:** Women's World Banking contributed to the development of the national women's financial inclusion framework. EFInA led the development of the framework and is in the process of hiring a gender team to support implementation.
- **Research and data generation:** EFInA's efforts, including WFI assessments and its overlay of a gender lens in fintech studies, have raised awareness about the size and scope of demand and current state. GRID3—an open data system supported by Data Science Nigeria, Lagos Business School, NIBSS and CBN—mapped financial inclusion data against geodata and population forecasts at the local and state levels.

Box 2. HOW DEMAND-SIDE DATA IS ADVANCING WFI IN NIGERIA

Nigeria has built an extensive body of demand-side data on financial inclusion over the last 12 years. EFINA is the key source, conducting one-time and recurring studies on a variety of topics. Additional information comes from Kantar / Intermedia's Financial Inclusion Insights, as well as from the World Bank's Global Findex and Enterprise surveys.

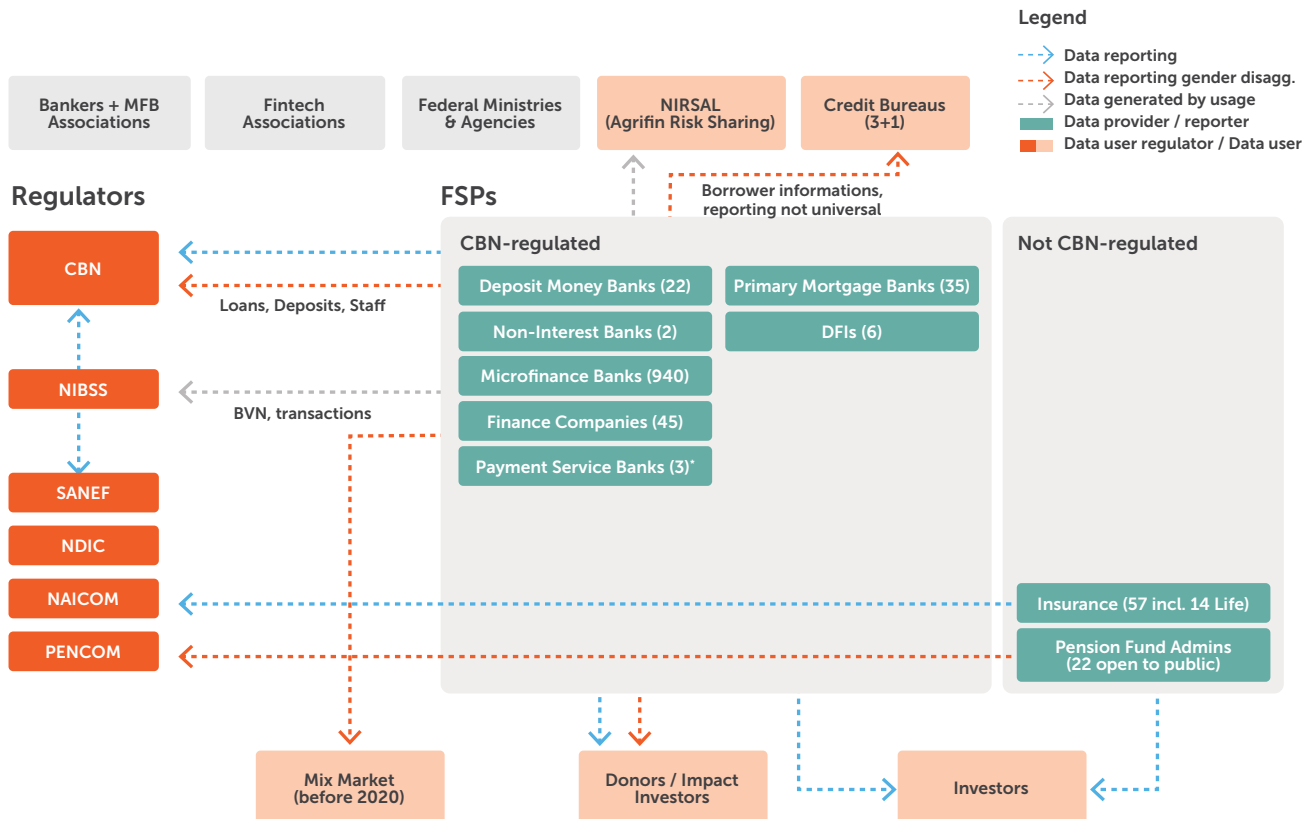
The availability of demand-side data has:

- **Shed light on the significant gender gap in access to formal financial services**, revealing that while both men and women are excluded, women are disproportionately represented among those without access, despite strong demand. However, because studies are limited to women retail customers, sole proprietorships, and informal enterprises, they have not captured the full scope of the gap since they do not assess the demand from all women SMEs—defined as sole proprietors and formally established companies.
- **Advanced the case for producing and gathering supply-side sex-disaggregated data**. CBN's decision to mandate sex-disaggregated reporting from the financial sector as part of an overarching, strategic framework was based in part on the availability of demand-side data, which revealed a strong interest in and need for more women-centered financial offerings.
- **Influenced the policy environment**, as noted above, with CBN's change in policy to require sex-disaggregated reporting.
- **Raised awareness among FSPs** on market size and contributed to the creation of some women's programs. The demand-side data gathered by EFINA fed into decisions to launch pilots, supported by international finance institutions.
- **Deepened understanding about the scope of the revenue opportunity for FSPs**: 75 percent of the women's potential market remains unserved or underserved, representing a **\$766 million market opportunity**, according to the modeling undertaken as part of the diagnostic. As shown in Figure 2, women with a monthly income of \$8–\$105, about 64 percent of Nigeria's female population, constitute the largest revenue opportunity, estimated at about \$496 million.

MAPPING NIGERIA'S SUPPLY-SIDE DATA ECOSYSTEM

The key players in Nigeria's gender data ecosystem are divided into two main components: those that produce, gather, and analyze information on the supply and use of financial services for investment and credit decision-making (primarily FSPs), and those that gather and analyze information for regulatory oversight and policy development (primarily regulators). Figure 5 provides an overview of the data flow between key players in the formal ecosystem. The orange arrows indicate where the data reported is disaggregated by sex.

Figure 5. Nigeria's formal supply-side data ecosystem



Formal financial sector

The primary stakeholders in Nigeria's formal, regulated financial services sector include:

Data producers

- Formal providers of financial services (FSPs)
 - deposit money banks
 - non-interest banks
 - microfinance banks
 - payment service banks
 - primary mortgage banks
 - finance companies
 - development finance institutions (DFIs)

Data users/aggregators

- Regulatory and coordinating institutions
 - CBN
 - NIBSS
 - Shared Agent Network Expansion Facility (SANEF)
 - credit bureaus

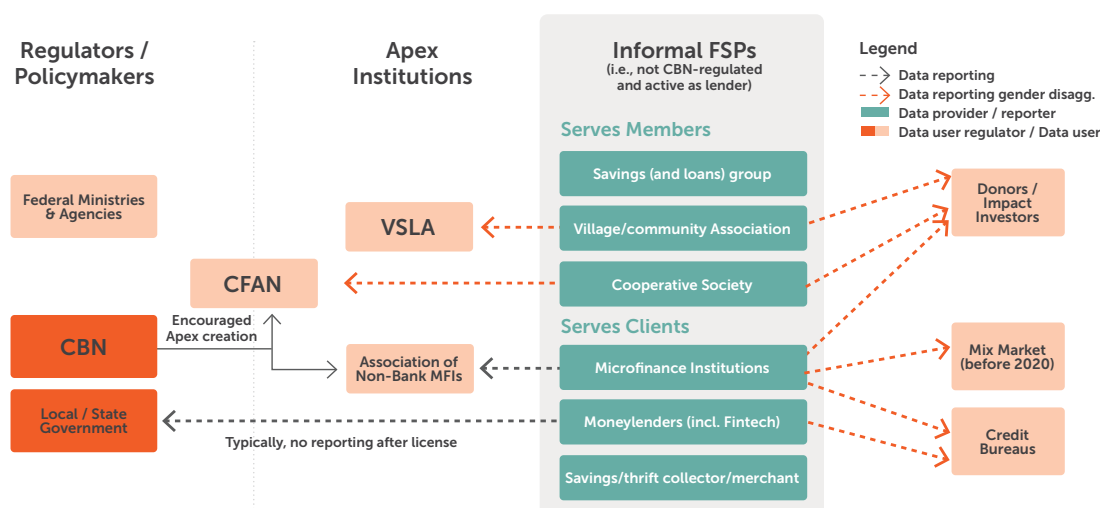
Informal financial sector

Nigeria's informal financial services sector plays an outsized role in meeting the financial needs of women. The main stakeholders include:

- VSLAs
- Women's cooperatives
- Microfinance institutions (MFIs)
- Money lenders
- Coordinating groups/fintechs

While there are other players in the supply side ecosystem, such as insurance companies, pension funds, and their regulators, the research focused specifically on banks. Figure 6 provides an overview of the data flow between key players in the informal ecosystem. The orange arrows indicate where the data reported is disaggregated by sex.

Figure 6. Nigeria's informal supply-side gender data ecosystem



DIGGING DEEPER: GAPS AND OPPORTUNITIES IN SUPPLY-SIDE DATA COLLECTION AND USE

This section examines the state of supply-side data collection and use. It highlights gaps and uncovers opportunities to optimize the potential of the data to provide insights on female customer behavior.

FORMAL BANKING SECTOR

Formal FSPs in Nigeria are generating a significant amount of sex-disaggregated data. However, data quality is inconsistent and usage is limited.

Financial service providers: data producers

The bank survey conducted for this diagnostic determined that the vast **majority of banks in Nigeria gather sex-disaggregated data on retail customers and sole proprietor business customers**. Ninety-three percent of reporting providers track the sex of retail customers. And most (78.5 percent) sex disaggregate for all products.

On business accounts, all survey respondents said they record at least some gender data. However, many only track the sex of the account holder of sole proprietors. Just 14 percent of commercial banks reported tracking sex using a threshold of ownership percentage, while 29 percent track by sex of ownership and management. One challenge that could be preventing more sophisticated tracking of WSMEs is a lack of awareness about why such tracking is important. It also could require a cumbersome change in systems or processes to get at the information needed to identify the sex of owners. In addition, FSPs use various definitions of what an SME is and what a WSME is, making it difficult to benchmark or create a holistic picture of how they are served.

Manual reporting processes

The FSP survey revealed time-consuming and resource-intensive data reporting processes. Forty-three percent of banks and 57 percent of MFBs produce sex-disaggregated data reports automatically; the rest rely on manual generation. This reliance on manual reporting is impacting the quality and reliability of the data produced, given that it is more error-prone than automated methods. **Manual compilation of data also prevents timely analysis, resulting in delayed information on performance of women customer segments and women-focused offerings.**

KEY TAKEAWAYS

- Most banks generate sex-disaggregated data on retail customers and sole proprietors but not on WSMEs.
- Manual processes create a time lag in reporting, making it difficult to track key performance indicators (KPIs) and limiting usefulness in decision making.
- CBN collects banks' account ownership data but does not gather performance metrics such as non-performing loans.
- CBN's gender data reporting to management is not mainstreamed into its regular reporting; use of data being aggregated appears to stop with reporting the information.
- NIBSS tracks real-time data that can be sex-disaggregated, but at present, these capabilities are underutilized.
- Little informal sector data is available, but the rapid rise of fintechs that serve the sector represents an opportunity to ramp up data production and analysis.
- There are significant opportunities to make better use of existing data and expand the scope of data collection to yield actionable insights that enable women's full financial inclusion.

Automating these processes could yield more real-time, evidence-based insights that would contribute to a business case for scaling up.

Limited Usage of Data

Use of sex-disaggregated data in internal reporting varies. More than half of commercial banks that responded to the survey (57 percent) include sex-disaggregated data as part of regular management reporting.

Only 28.5 percent of MFBs routinely include sex-disaggregated data in management reporting; 43 percent occasionally include sex-disaggregated data in reporting while 28.5 percent do not include sex-disaggregated data in management reports at all. In stakeholder interviews, bank representatives explained that **there are limits to the usefulness of the data, because it is not automatically generated in real time**. Since the data is not timely, it cannot be used effectively for decision-making.

"Yes, we disaggregate our data. And yes, we report it to CBN and management. But do we use it to inform decisions? No. It's just not timely enough to be a reliable performance measure."

– Bank representative

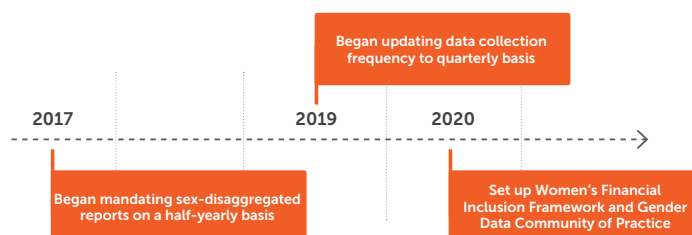
Data aggregators and users

What happens to the data generated by FSPs? Several institutions collect and use the data.

Central Bank of Nigeria (CBN)

As noted earlier, CBN has required reporting of sex-disaggregated personal and business account ownership data from commercial banks and MFBs since 2017. CBN mandates sex-disaggregated reports from banks on a quarterly basis. In 2017, CBN began collecting reports every six months and transitioned to requesting quarterly updates in 2019 (see Figure 7 for timeline of changes). The reports are provided manually outside of regular bank reporting. The reporting requirements have proven to be a driving force behind the degree of gender data documentation currently happening. Banks report on product-level ownership and usage for individual and enterprise accounts—for example, the number of adults who used deposit accounts in the last 3–12 months, usage of these accounts for payment/deposits, and the number of newly registered individual accounts. However, **key metrics such as non-performing loans are not reported, making it difficult to build an evidence-based case that women make good customers and that scaling up women-focused offerings represents a sound investment for banks**.

Figure 7. Timeline of changes in CBN's sex-disaggregated data reporting requirements





The account ownership data is aggregated into quarterly reports to CBN's management and to the Technical Committee on Financial Inclusion, a coordinating government agency. However, these reports, overseen by CBN's Financial Inclusion Secretariat, are not mainstreamed into CBN's statutory reporting. **And, unlike other required reporting—an automated process—the gender template requires manual data entry.**

Thus, the quality of the data is questionable, exacerbated by the banks' own inconsistent reporting practices and approaches. The fact that some banks report information manually while others automate the process creates an inherent discrepancy that could impact the integrity of any data analysis conducted. In addition, **there is a lack of awareness among CBN stakeholders on the strategic rationale behind the data collection:** Little effort has been devoted to educating CBN departments on the importance of WFI and sex-disaggregated data collection. Increasing the level of understanding about the rationale behind gathering gender data could strengthen the commitment to ensuring data accuracy.

Similarly, the fact that the CBN department charged with oversight and use of the gender data falls outside key operations could represent a disincentive to banks. Mainstreaming use of the data could help to reinforce thoroughness and quality.

Use of the data seems to end with the quarterly reports to management. It is not clear whether any of the existing data has fed into new CBN recommendations or guidance.

Nigeria Inter-Bank Settlement System (NIBSS)

The NIBSS represents an important but currently underutilized advantage for the supply-side data ecosystem. Co-owned by a consortium of banks and the CBN, NIBSS runs the infrastructure for interbank payments.²³ It is the obligatory switch for ATM and point-of-sale, and for transactions through banks' licensed community agents.²⁴

Using account information based on bank verification numbers (BVNs), a biometric identification system initiated by CBN to enhance security and reduce fraud, NIBSS has the capability to track virtually all interbank banking transactions, since all formal accounts have BVNs or a SIM registration for Tier 1 accounts.²⁵ This means that NIBSS can collect and perform analysis on real-time sex-disaggregated transaction data. It can drill down into specific types of activity, including credit cards, electronic fund transfers, mobile payments, instant payment, point-of-sale, computerized maintenance management system, and check transactions.²⁶

There are limitations, however. NIBSS only tracks interbank transactions, and it cannot conduct sex-disaggregated analysis of business accounts.

Despite these limitations, the range of existing capabilities has enabled some sex-disaggregated analysis to take place. GRID3—an open data system funded by the Bill & Melinda Gates Foundation and supported by Data Science Nigeria, Lagos Business School, along with NIBSS and CBN—has mapped NIBSS' financial inclusion data against geodata and population forecasts at the local and state levels. Using anonymized BVN and transactional data, the analysis provides a sex-disaggregated picture of financial inclusion by formal FSPs with perspectives on women's use of

various financial products, geography, age, and other aspects. Plans include further development of an integrated data management platform to better inform future financial inclusion policies.²⁷

There is tremendous potential here. Optimal use of this data would allow a national-level institution to trace a large part of the usage of formal financial services as it happens. This real-time perspective would enable a closer approximation of the current situation, instead of relying solely on historic reporting. **With granular real-time transactional data on individual customers, NIBBS' system could take the manual reporting burden off of CBN. It also would enable insights into who is accessing financial services as well as the types of products they are using, by way of new account data.**²⁸

Additional use cases for this data include the aggregation of accounts by unique users across all formal FSPs to determine the average number of accounts per person and transaction patterns (number, value, frequency) per person and account. Data also could be disaggregated by FSP, geographic region, age, and transaction channel.

Others: SANEF and credit bureaus

SANEF is a CBN initiative, supported by NIBSS. Established in 2018, the facility was designed to boost financial inclusion in the country by creating an interoperable, connected network for the licensed agents who provide financial services in local communities on behalf of formal financial institutions. About 500,000 Nigerians do their banking through SANEF-affiliated agents.

"If we had more timely information on specific performance indicators, it would help us to decide on which women customer segments to focus on and the types of products to offer."

– Bank representative

SANEF's data capabilities contribute to the availability of sex-disaggregated data in Nigeria. With oversight from NIBSS, SANEF's reporting portal can conduct real-time analysis on cash-in, cash-out, over-the-counter transfers, data per agent and client, and newly registered clients.²⁹

Credit bureaus play a role in Nigeria's formal gender data ecosystem as well. Ten credit bureaus provide credit reporting for borrowers. They also collect and aggregate sex-disaggregated data from all regulated financial institutions. This is an automated process, using a standard template, to gather nearly 50 credit-related data points on retail customers, which are then analyzed by sex. They offer API connections and batch processing so FSPs can submit large quantities of data. In addition, they are working on a process to verify submitted data through NIBSS. While credit bureaus do collect corporate data, this information is not disaggregated by sex of owner or management of the business.

Opportunities: Why more data—and better understanding of how to use it—could help

In stakeholder interviews, respondents said that the availability of demand-side data made them more aware that there was an appetite for women-focused offerings. This represented a contributing factor in their decision to develop pilots. On the supply side, **while FSPs are complying with the CBN sex-disaggregated reporting mandate, many do not include the information in their own reporting to management, nor do they use the data in their own decision-making processes on the types of offerings to provide.**

Clearly, there is an opportunity to further leverage all of these existing capabilities, using both demand- and supply-side data. Table 1 presents an overview of these opportunities. **Raising awareness by highlighting insights gleaned about the ways in which women use financial products and services will be critical in the effort to fully optimize data use.** Industry stakeholders also could benefit from learning more about how to use existing data in determining product offerings and women's market strategies. Several survey respondents reported that they did not have sufficient data on the women's market, indicating that there is interest in generating more granular information. Others may simply be unaware of what is currently available. Here again, communication and awareness raising will be key. Those few institutions that have implemented women-tailored programs reported using insights gleaned from data to directly influence the types of offerings provided.

Table 1. Opportunities to be leveraged

	OPPORTUNITIES TO BE LEVERAGED
COMMERCIAL BANKS DATA PRODUCERS	<ul style="list-style-type: none"> • Generalized awareness that women make high-quality customers • Widespread availability of data on some women customer segments • Growing number of women's market pilots
MFIS DATA PRODUCERS	<ul style="list-style-type: none"> • Tracking of gender data on sole proprietorships
CBN DATA AGGREGATOR & USER	<ul style="list-style-type: none"> • Awareness of the value of data • Mandated sex-disaggregated data reporting • Development of financial inclusion policies
NIBBS & SANEF AGGREGATORS & USERS	<ul style="list-style-type: none"> • Collection of real-time transactional data linked to BVN and SIM registration to enable disaggregation of data • NIBBS datasets used for some analysis on state of women's usage of formal financial services
CREDIT BUREAUS AGGREGATORS & USERS	<ul style="list-style-type: none"> • Data collection: 10 credit bureaus collect data on women retail customers
INDUSTRY STAKEHOLDERS	<ul style="list-style-type: none"> • Commitment, political will, and convening power: Groups such as EFInA have clout and name recognition to mobilize action
INFORMAL FSPS DATA PRODUCERS	<ul style="list-style-type: none"> • Potential for rapid ramp up of data capabilities through fintechs and digital solutions
DEMAND-SIDE DATA AGGREGATORS	<ul style="list-style-type: none"> • Extensive availability of data on women retail and sole proprietor customers • Data highlights significant market opportunity • Market potential beginning to resonate with industry

INFORMAL FINANCIAL SECTOR

About 18.5 million Nigerian women are currently served only by informal financial service providers—representing 33 percent of the women’s market.³⁰ Women are much more likely than men to access these informal providers as their sole source of financing. However, it is difficult to quantify size and scope of financial activity, since these organizations capture data in limited and inconsistent ways. In addition, very little data analysis is occurring because aggregated information is not readily available. This represents a significant barrier to understanding how women access financial services in Nigeria and how to drive formal inclusion. It also reinforces the opportunity for informal FSPs. Here is a breakdown of the main types of informal financial service providers active in Nigeria and their data status.

Cooperatives

Cooperatives have formal organizational structures. They maintain formal records on their portfolio and clients. The National Cooperative Financing Agency of Nigeria (CFAN) oversees registered cooperatives in Nigeria as a combined regulator, supervisor, and apex institution that also offers education and development services.³¹ State-level cooperative chapters report sex-disaggregated data to CFAN every year, although data reporting is not enforced and many chapters report manually, allowing room for errors. The CFAN dataset lacks some data points, although it does cover the 1.67 million women cooperative members.

Non-deposit MFIs, VSLAs, money lenders, and fintechs with money-lending licenses

Although there are operational differences among these groups, they all have formalized banking methodologies and support from investors and donors. They also maintain records. What happens to the documentation varies by institution type.

Money lenders and licensed fintechs report their data to state and local governments. On the other hand, aggregated MFI data is difficult to locate, in part because the segment lacks a designated regulator. Nigerian VSLAs connected to VSL Associates, a coordinating body, report their data regularly.³² VSL Associates gathers the data, which can be analyzed by sex. Further investigation is required to understand the scope and quality of the sex-disaggregated data reported to VSL Associates. In addition, these VSLAs serve only about 170,000 women—a small portion of the informal financial services market.³³

Savings groups and others

This diverse group includes savings groups, non-money lending fintechs and *ajos* (savings collectors), all of which operate at a small-scale and grassroots level. These types of groups are the most widely-used sources of financial services for Nigerian women. However, they do not keep formal records, there are no known aggregation records, and the institutions themselves are difficult to track. This is particularly so in the *ajo* space, which has many fly-by-night players and is riddled with fraud. The lack of available data from these groups makes it difficult to gauge the full state of women’s financial inclusion in the country.

Opportunities to increase data collection on use of informal financial services

Nigeria's booming fintech industry includes more than 200 firms in operation, well represented by women in leadership positions. Several fintechs are already working to digitize informal financial services data, with capabilities to include disaggregation by sex. For example Riby, which digitizes cooperatives' savings, has more than 790,000 clients, 390,000 of whom are women. The fintech industry offers tremendous potential for helping develop a more comprehensive data set on women's financial behavior.

LESSONS LEARNED FROM NIGERIA'S EXPERIENCE

The information uncovered in the diagnostic has yielded insights that offer lessons for Nigeria, as well as for other countries. The lessons include:

- **The availability of high-quality sex-disaggregated demand-side data plays a critical role in bringing visibility to the women's market and driving policy change.** The data is uncovering important gaps in women's financial inclusion and highlighting the need for tailored policies. As a result, banks have reported that they can size the market opportunity and target women as a key strategic opportunity.
- **Regulatory involvement incentivizes the push for more supply-side gender data.** CBN's mandate to report sex-disaggregated data catalyzed the generation of this data by FSPs.
- **The utility of available data is hampered by inconsistent collection and reporting processes.** Manual, error-prone processes result in delays, making it difficult to track performance or draw evidence-based conclusions that could contribute to decision making.
- **Additional resources to increase gender data may be hiding in plain sight.** Nigeria has untapped resources in institutions such as NIBSS and SANEF that could be leveraged to generate more robust and timely data on women customer behaviors and performance.
- **The lack of quality data on women SMEs impedes a holistic understanding of the female economy.** There is limited demand- or supply-side data on this critical segment, meaning a likely underestimation in the revenue opportunity for banks—and opacity about the types of financial (and non-financial) products and services that would resonate with these customers.
- **Gender data collection and reporting alone are not enough to advance banks' WFI journey.** Stakeholders need guidance on how to use, visualize, communicate, and understand the data in informing their business case for scaling up their women's market propositions.

RECOMMENDATIONS

The recommendations that follow are aimed at increasing the collection, quality, and use of supply-side sex-disaggregated financial data in Nigeria. For a summary connecting the diagnostic's findings to the challenges identified and recommended interventions, see table 2.

Table 2. Connecting the findings from the Nigeria Gender Data Diagnostic to data gaps and interventions

	DATA GAPS			POTENTIAL INTERVENTIONS
	AWARENESS	AVAILABILITY/QUALITY	USAGE	
COMMERCIAL BANKS DATA PRODUCERS	<ul style="list-style-type: none"> • Lack of management buy-in on the importance of serving the women's market • Gaps in understanding on building scalable and commercially viable business models for serving women customer segments • Limited knowledge on the importance of data and the full data value chain 	<ul style="list-style-type: none"> • Lack of WSME data: inability to disaggregate both access and usage data • Lack of granular sex-disaggregated data to make internal bank business case: revenue, net interest margin, customer lifetime value • No standardized WSME definition: prevents competitor benchmarking • Manual reporting and non-standard reporting templates leads to inconsistent quality 	<ul style="list-style-type: none"> • Manual reporting and non-standard reporting templates leads to inconsistent quality • Inadequate internal capacity for data analysis • Difficult to design effective solutions or monitor progress 	<ul style="list-style-type: none"> • Awareness raising on use of data to inform business case for women-centered solutions • Training on global best practice approaches and commercially viable business models for serving the women's market • Data analysis capacity building on how to produce actionable insights • Technical advice on strengthening and automating internal data management systems • Guidance on reporting and KPI tracking • Standardization of WSME definitions across relevant stakeholders
MFIS/ DATA PRODUCERS	<ul style="list-style-type: none"> • Lack of focus on full suite of women's financial needs 	<ul style="list-style-type: none"> • Lack of granular detail: no break down by product or revenue • Lack of information on WSME customers • Manual processes 	<ul style="list-style-type: none"> • No management reporting on gender data • Manual processes 	<ul style="list-style-type: none"> • Technical advice on use of sex-disaggregated data and data analytics • Training on women's market modeling and business case analysis
CBN DATA AGGREGATOR & USER	<ul style="list-style-type: none"> • No gaps identified 	<ul style="list-style-type: none"> • Siloed and marginalized gender data collection: gender unit oversees • Issues with reporting template: requests sex-disaggregated account data rather than BVN-linked unique customer data, causing double counting at the aggregate level; focused on access rather than on use • Manual reporting outside of automated statutory reporting platform: impacts reliability; disincentive for bank and MFB reporting 	<ul style="list-style-type: none"> • Lack of knowledge on how to deploy data to increase women's financial inclusion • Lack of collaboration among stakeholders to leverage and optimize data use: for example, CBN does not take advantage of NIBBS and SANEF datasets; credit bureau data 	<ul style="list-style-type: none"> • Awareness raising/advocacy on mainstreaming gender data into statutory reporting • Knowledge sharing on best practices from other countries' regulators • Identification of gender data champions and development of CBN gender diversity policy to enhance institution's commitment and send signals to industry on importance of diversity and WFI • Technical advice on improving gender data collection template and integrating into automated reporting system • Training on the value of sex-disaggregated data reporting • Access to reg/suptech tools to automatize data collection and analysis via resources such as R2A Accelerator

	DATA GAPS			POTENTIAL INTERVENTIONS
	AWARENESS	AVAILABILITY/QUALITY	USAGE	
NIBBS & SANEF AGGREGATORS & USERS	<ul style="list-style-type: none"> Lack of awareness of the importance of optimizing data collection 	<ul style="list-style-type: none"> No gaps identified 	<ul style="list-style-type: none"> Lack of coordination among stakeholders to leverage and optimize data use 	<ul style="list-style-type: none"> Awareness raising on availability of market-level data to enable more detailed analysis that informs the business case for serving the women's market and designing women-focused products and services Collaboration with external research and data analytics agencies to further enhance data
CREDIT BUREAUS AGGREGATORS & USERS	<ul style="list-style-type: none"> Limited understanding of the importance of segmenting women's market data 	<ul style="list-style-type: none"> Lack of data on women-owned and women-led business customers Lack of uniform WSME definition: results in inconsistent data on companies 	<ul style="list-style-type: none"> Lack of coordination among stakeholders to leverage and optimize existing data for market understanding 	<ul style="list-style-type: none"> Awareness raising on availability of market-level data to enable more detailed analysis to inform the business case for serving the women's market and designing women-focused products and services Support to aggregate relevant data and produce reports to illustrate women's credit behavior
INDUSTRY STAKEHOLDERS	<ul style="list-style-type: none"> No gaps identified 	<ul style="list-style-type: none"> No gaps identified 	<ul style="list-style-type: none"> Lack of internal capacity to analyze data and produce reports to support implementation women's financial inclusion framework 	<ul style="list-style-type: none"> Addition of gender specialist to the team Convening of industry to standardize on the definition of WSMEs Technical advice on gender-intelligent product design Support for increased demand-side WSME data collection
INFORMAL FSPS DATA PRODUCERS	<ul style="list-style-type: none"> Lack of awareness on the importance of data or knowledge about the full data value chain 	<ul style="list-style-type: none"> Limited data: only 12 percent of the informal women's market is covered 	<ul style="list-style-type: none"> Lack of system and internal human resource capacity to collect and analyze data 	<ul style="list-style-type: none"> Collaboration among VSLAs and coops to review IT infrastructure and identify needed MIS and HR upgrades Technical advice on automating data collection and internal data management systems Raise awareness among fintechs on importance of capturing sex-disaggregated data
DEMAND-SIDE DATA AGGREGATORS	<ul style="list-style-type: none"> No gaps identified 	<ul style="list-style-type: none"> Limited data on WSMEs 	<ul style="list-style-type: none"> Limited optimization of the full potential of available data Inability to translate data into quantifiable business case for commercializing women-focused products and services Limited data on WSMEs 	<ul style="list-style-type: none"> Technical advice on use of data for more robust analysis Guidance on developing systems to capture WSME demand data Convening on gender data priorities and action plans to include supply- and demand-side stakeholders

Ecosystem recommendations

As more, timelier, and better quality data becomes available, building on the national-level action plan for full WFI created by the Women's Financial Inclusion Implementation Framework and CBN will be an important next step. Leveraging existing channels—the communities of practice established for the framework's strategic imperatives—to develop tangible objectives and practical solutions is part of this process. Accountability mechanisms should be set up as well. Such efforts will contribute to mobilizing the entire financial sector toward greater financial inclusion.

Industry recommendations

The diagnostic uncovered several key challenges to increased use of data to drive decisions on women-focused financial offerings, including manual processes and lack of real-time data gathering capacity. More robust and comprehensive supply-side data and analytics—coupled with demand-side data—will yield important insights into women's market segments currently being served, product and service usage patterns and preferences, and customer behavior. It also will provide added clarity for regulators as they seek to advance the country's WFI agenda.

Here are **recommendations for FSPs**:

- Raise awareness on the value of data for informing the business case for women-centered solutions.
- Build capacity on how to use, analyze, and interpret sex-disaggregated data and produce actionable insights, including women's market modeling, and business case analysis.
- Provide technical advice on upgrading and automating internal data management systems, reporting, and KPI tracking.
- Share best practice approaches and commercially viable business models for serving the women's market through trainings such as Financial Alliance for Women's All-Stars Academies.
- Work with stakeholders on a standardized WSME definition.
- Leverage information gathered by fintechs to increase collection and use of sex-disaggregated data in Nigeria's informal financial services sector.

NIBBS, SANEF, and the Association of Credit Bureaus have also joined the industry conversation on how to advance the WFI framework's implementation. They recognize the importance of leveraging the data collected in providing timely market-level information that can inform business case analysis and product design. The data from these institutions also can inform the design of high-quality women-focused financial products and services. Recommendations for these institutions include:

- Provide technical advice on how to gather more granular detail on transactions.
- Partner with research and data analytics firms for guidance on how to leverage and optimize data use and analysis to provide market-level detail.
- Provide support on producing regular market updates about women's access and use of financial services.

Regulatory recommendations

CBN has clear political will to enhance the collection and use of disaggregated data by providers and government. This is evident in the development of its women's financial inclusion framework, which includes a strategic pillar on data, and in the requirement for bank reporting of gender data. Potential interventions here can leverage this commitment. Intervention recommendations include:

- Improve data collection templates to capture more relevant data, integrating sex-disaggregated data template into the automated bank reporting system.
- Simplify reporting for banks and make it consistent across institutions.
- Improve integration for automated reporting.
- Build awareness on how sex-disaggregated data reporting contributes to the implementation of the WFI framework.
- Promote knowledge sharing on best-practice regulatory approaches in other countries.
- Raise awareness of the importance of integrating gender data into statutory reporting.
- Identify champions to advocate for gender data collection and use.
- Encourage the creation and implementation of an internal gender diversity policy and share widely, sending a strong industry signal that serving the women's market well includes prioritizing gender and inclusion in the workplace.
- Share technology innovations and access to fintech tools to automate data collection and analysis via resources such as R2A Accelerator.
- Encourage collaboration with other agencies to funnel all available data into a central repository, enabling a fuller picture of women's use of financial products.
- Ensure alignment of incentives within the ecosystem so that targeting the women's market—especially WSMEs—makes business sense.
- Convene national-level dialogue with commercial banks on barriers to scale up women's offerings as well as their needs, with a particular focus on women MSMEs.
- Enable knowledge sharing on best-practice commercial approaches in Nigeria and in other countries to serving the women's market, with a particular focus on women MSMEs.
- Sponsor hackathons for fintechs in support of banks to de-risk this market segment. Establish pathways for these fintechs to work with banks at proof-of-concept phase. This includes integrating accelerator support packages.
- Negotiate support packages with international development finance community, including de-risking finance and technical assistance.

Many of the above recommendations can be accomplished by establishing a national "Investing in Women Code" type model to incentivize action, hold private sector actors accountable for transparent data sharing on financing for WSMEs and encourage adoption of best practices to support them. See Box 3 on the next page.

Box 3. A Promising Model: The UK's Investing in Women Code³⁴

In 2018, the United Kingdom Treasury commissioned Alison Rose, CEO of NatWest and long-standing member of the Financial Alliance for Women, to lead an independent review of women's entrepreneurship in the UK to tap the unrealized economic potential of women entrepreneurs. The objective: to make the UK a global destination for women to start and grow a new business. The approach of the report itself and many of the initiatives proposed could be adapted for application in other countries.

In particular, the first of eight initiatives was to ***promote greater transparency in UK funding allocation through a new Investing in Women Code***, and to report a commonly agreed set of data on all-female-led businesses, mixed-gender-led businesses, and all-male-led businesses.

The Code has already been signed by over 100 institutions, including the UK's major banks, and released its first report in April 2021. Signatories provide their results to relevant industry associations, which review and collate the data and pass it on to UK Treasury, which produces the annual report. This constitutes the first time most of these organizations provided a public accounting of the extent of their financing for women entrepreneurs.

The UK's Investing in Women Code has shown remarkable success in the speed at which signatories were willing to sign on, assign a leadership champion in their own institutions, begin reporting sex-disaggregated data, take action to better meet the needs of women's entrepreneurs, and increase funding allocation.

Recommendations for aggregators of demand-side data

Lastly, although the focus of this report is on supply-side data, it became apparent during the diagnostic that use of demand-side data could be further optimized. As noted, there has been limited quantification of the business case for commercializing women-focused products and services. The lack of information on WSMEs prevents a comprehensive understanding of the needs of women-owned and-led businesses. Some recommendations include:

- Provide technical advice on use of data for more robust analysis.
- Offer guidance on developing systems to capture WSME demand data.
- Include supply-side data as it becomes available, for a more holistic analysis of needs and gaps that incorporates the market perspective.
- Use convening power to gather stakeholders on gender data priorities and action plans.

Through 2022, the WFID Partnership will be working on prioritizing and piloting interventions. **We welcome input from and collaboration with partners from stakeholder groups.** Please feel free to contact us: info@data2x.org.

APPENDIX A. FORECASTING MODEL DESCRIPTION

The logistic regression assumes a linear relationship between a set of explanatory variables and the log-odds of a given event:

$$\ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 x_1 + \dots + \beta_n x_n$$

The probability of the event (e.g., the likelihood of an individual being banked), is therefore given by the non-linear relationship

$$P = \frac{\exp(\beta_0 + \beta_1 x_1 + \dots + \beta_n x_n)}{1 + \exp(\beta_0 + \beta_1 x_1 + \dots + \beta_n x_n)}$$

The mean value of the event for a group within the dataset (for example the average probability of an individual being banked, or the average probability of females being banked) is the average of the individual probabilities for each individual, weighted by the survey probability weights. This sum can differ from the probability assessed at the average value for each of the explanatory variables, assessed at the mean, due to the functional form. Thus, for N households, with average values of explanatory values given by:

$$\frac{1}{N} \sum_{i=1}^N \frac{\exp(\beta_0 + \beta_1 x_{i1} + \dots + \beta_n x_{in})}{1 + \exp(\beta_0 + \beta_1 x_{i1} + \dots + \beta_n x_{in})} \neq \frac{\exp(\beta_0 + \beta_1 \bar{x}_1 + \dots + \beta_n \bar{x}_n)}{1 + \exp(\beta_0 + \beta_1 \bar{x}_1 + \dots + \beta_n \bar{x}_n)}$$

This differs from a linear model, where

$$\frac{1}{N} \sum_{i=1}^N \beta_0 + \beta_1 x_{i1} + \dots + \beta_n x_{in} = \beta_0 + \beta_1 \bar{x}_1 + \dots + \beta_n \bar{x}_n$$

Model projections are made at the mean value for each variable, instead of simulations for every household. Simulations would be challenging and somewhat ad-hoc for variables such as school completion rates or mobile phone ownership, where ownership status would have to change for individual households in order to match the projected growth rate. As a consequence, the non-linear nature of the model implies that the model evaluated at the mean value for each variable will be different from the average of the values for each individual.

Data

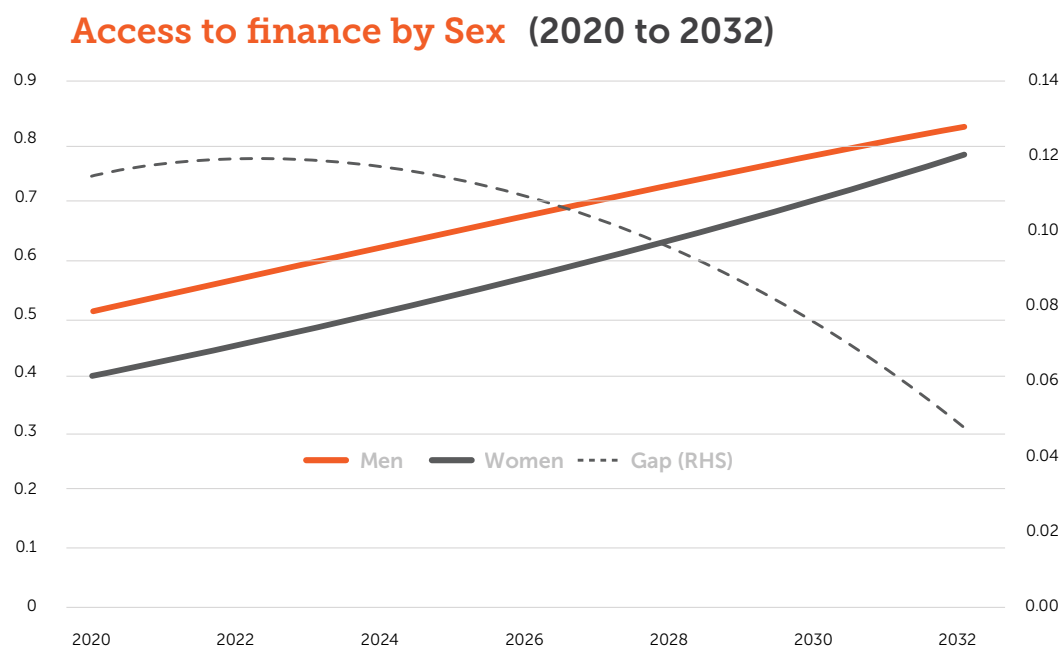
- Baseline data is Finscope 2020 microdata. Finscope surveys are repeated cross sections run by EFInA, every two years (2008 to 2020).
- The 2020 survey is comprised of 29,407 observations, including a booster sample of 1,269 teens. The analysis is restricted to adult individuals aged 18 and above.
- Data collected within the surveys include access and usage of banking services including for payments, savings, credit, and transfers. In addition, data on household and individual characteristics are collected, as well as data on perceptions and attitudes to financial service providers, and product knowledge.
- For the purpose of the analysis, “financially included” is defined as having access to formal, other formal (e.g., mobile money, insurance, pension, etc.), and informal financial services. “Further, banked” is defined as per EFInA, including the usage of products offered by commercial banks and Islamic finance banks

Model estimates by gender

Variables	Male	Female
Asset score	0.1274 ***	0.0965 ***
Completed primary	0.5855 ***	0.5586 ***
Completed secondary	1.3841 ***	1.3535 ***
Completed tertiary	2.8375 ***	2.8824 ***
Age	0.0104 ***	0.0167 ***
Household size	(0.0117)	(0.0328) ***
Urban	0.5702 ***	0.5246 ***
Married	0.2611 ***	(0.0861)
Income from salary or wage	1.3056 ***	1.2575 ***
Income from farming	(0.0550)	0.1162
Income from business	0.2149 **	0.3999 ***
Owns mobile phone	1.3738 ***	1.4052 ***
Mobile money registration	1.2829 ***	2.8598 ***
Close to a bank branch	0.1848	(0.1479)
Close to a banking agent	0.4755 ***	0.5476 ***
Close to an ATM	0.7302 ***	0.7242 ***
Close to a microfinance branch	(0.6501) ***	0.3249
Has financial plan	0.2900 ***	0.0006
Saves money	0.5505 ***	0.7065 ***
Trusts banks	1.2940 ***	1.0712 ***
Contract knowledge	0.5326 ***	0.4581 ***
Product understanding	0.7671 ***	0.7484 ***
Cost knowledge	0.6291 ***	0.6201 ***
Constant	(7.1113) ***	(6.9022) ***
Number of observations	14,421	13,388
Pseudo R-squared	0.4833	0.4690

- Overall estimates show similar patterns between men and women, with the most important determinant of access to finance for both men and women identified as completion of tertiary school education.
- Other important determinants are secondary school completion, income from a salary or wage, ownership of a mobile phone, mobile money registration, and level of trust of banks.
- Estimates show that proximity to a bank branch or microfinance branch does not significantly influence the likelihood of being banked for either gender. However, proximity to an ATM or banking agent do have a significant impact on the likelihood of being banked.
- Estimates also show that financial perceptions and attitudes, as well as levels of product knowledge, do have a significant impact on the likelihood of being banked across both genders.

Access to finance projections



- The baseline case assumes no improvement in mobile money registrations.
- Projections indicate an increase in access to finance of 27.2 percentage points for men, and 31.3 percentage points for women between 2020 and 2030.
- Projections also indicate a persistent access gap between 2020 and 2024, after which the access gap is projected to narrow. The gap is projected at 4.7 percentage points by 2032.
- The projections are made on the basis of a marginal analysis at mean values, due to the non-linear nature of the logit model. The graph is rebased from mean values to actual values in 2020.

APPENDIX B. WOMEN'S MARKET OPPORTUNITY CALCULATIONS

The high-level logic of the model can be described through the following key steps:

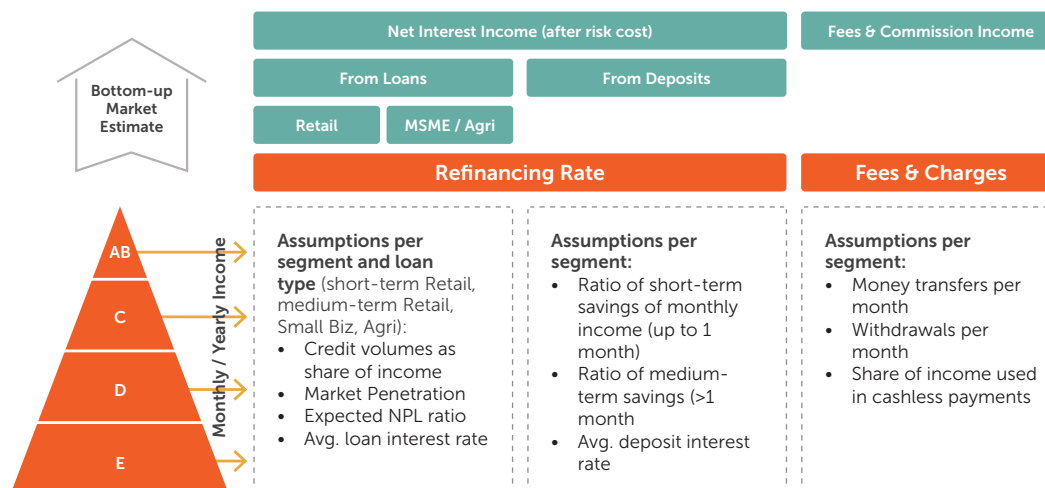
1. **Determining socioeconomic segments** (on the base of monthly income, occupation, and by gender)
2. **Determining % of unbanked**
3. **Determining % of underbanked***
4. **Assumptions on potential revenue per segment** (net interest income and fee & commission income)

The assumptions used for the model were based on the following data sources:

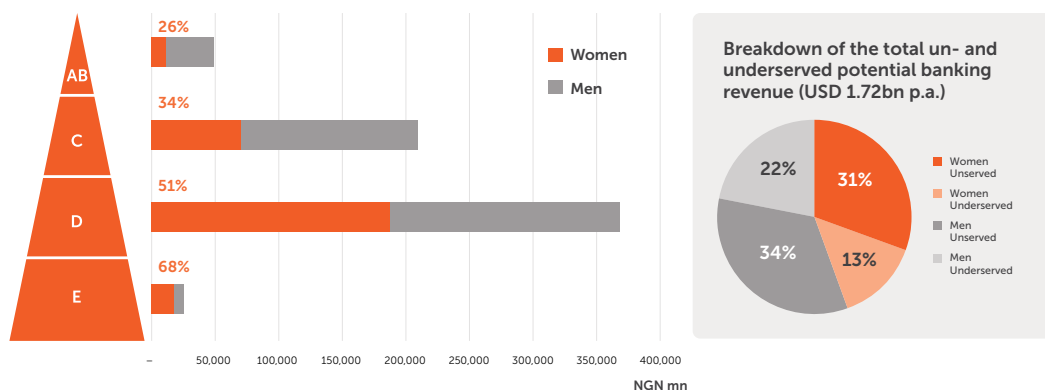
Area	Assumption	Source(s)
Population	Sociodemographic / economic	EFInA Access to Financial Services in Nigeria 2018 Survey
	Economic activity	
	Access to finance / banked	
	Usage/degree of being underserved	CCX assumptions based on past experience
Products	Deposits/savings	Banks' and MFIs' terms and conditions sheets
	Loans	
	Payments	

*Underbanked: Customers who may have access to a basic transaction account offered by a formal financial institution, but still have financial needs that are unmet or not appropriately met.

Revenue source assumptions used for the modelling



The untapped potential banking revenues of women and men in Nigeria (NGN mn and %)



An overview of the assumptions deployed in the model can be found below:


SEGMENTS	E		D		C		AB	
Deposits and Savings	Men	Women	Men	Women	Men	Women	Men	Women
Short term savings (...)	35%	35%	35%	35%	40%	40%	40%	40%
Long term savings (...)	8%	8%	10%	10%	12%	12%	15%	15%
Transactions & Payments								
Money transfers per month	2	2	3	3	5	5	10	10
Withdrawals per month	2	2	5	5	7	7	10	10
Share of income used in cashless payments	30%	30%	40%	40%	40%	40%	30%	30%
Loans Retail. (very) short-term liquidity mgmt (salary advance, instant loans)								
Credit Volume (avg. as share of MONTHLY income)	100%	100%	100%	100%	150%	150%	200%	200%
Credit Penetration (% of clients having a loan outstanding at any time)	35%	35%	30%	30%	25%	25%	20%	20%
Expected ratio of Loan Losses (net of recovery proceeds)	5.0%	3.0%	4.5%	2.5%	4.0%	2.0%	3.5%	1.5%
Loans Retail. medium-term, e.g., consumer or home improvement								
Credit Volume (avg. as share of ANNUAL income)	40%	40%	60%	60%	80%	80%	100%	100%
Credit Penetration (% of clients having a loan outstanding at any time)	10%	10%	15%	15%	20%	20%	30%	30%
Expected ratio of Loan Losses (net of recovery proceeds)	4.0%	2.0%	3.5%	1.5%	3.0%	1.0%	3.0%	1.0%
Loans Small Business. e.g., inventory finance								
Credit Volume (avg. as share of MONTHLY income)	40%	40%	35%	35%	30%	30%	20%	20%
Share of Segment active as small business owners	20%	30%	30%	45%	35%	40%	30%	35%
Credit Penetration (% of clients having a loan outstanding at any time)	90%	90%	80%	80%	70%	70%	50%	50%
Expected ratio of Loan Losses (net of recovery proceeds)	5.0%	3.0%	4.5%	2.5%	4.0%	2.0%	3.5%	1.5%
Loans Agri-Finance								
Credit Volume (avg. as share of ANNUAL income)	40%	40%	40%	40%	30%	30%	20%	20%
Share of Segment active in agriculture	40%	30%	20%	10%	10%	5%	5%	2%
Credit Penetration (% of clients having a loan outstanding at any time)	60%	60%	80%	80%	60%	60%	30%	30%
Expected ratio of Loan Losses (net of recovery proceeds)	5.0%	3.0%	4.5%	2.5%	4.0%	2.0%	3.5%	1.5%
RATES								
Borrowing rate	29.5%	29.5%	24.8%	24.8%	20.8%	20.8%	16.8%	16.8%
Deposit rate	1.2%	1.2%	1.8%	1.8%	2.2%	2.2%	4.1%	4.1%
Refinancing rate	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%	12.5%
Money transfer fee. NGN	50	50	50	50	50	50	50	50
Withdrawal fee. NGN	0	0	0	0	0	0	0	0
Fee for cashless payments (% of value of transactions, banks' share)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%

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21. The CBN-facilitated Technical Committee on Financial Inclusion includes representatives of the key public sector agencies involved in financial inclusion.
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Prepared for the WFID Partnership
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