

## ROUNDTABLE REPORT

# Data Driving Action for Women Dialogue Series

## THE POWER OF GENDER DATA: GENDER-INCLUSIVE DIGITAL FINANCIAL SERVICES



### EXECUTIVE SUMMARY

Are digital financial services (DFS) truly gender neutral? How are biases replicated in the design and delivery of DFS? How can gender data help the industry leap forward to a gender-intelligent and inclusive business model?

Data2X, the Financial Alliance for Women and the team working on Celo hosted the final session of the **Data Driving Action for Women Dialogue Series**, entitled *The Power of Gender Data: Gender Inclusive Digital Financial Services*, at Google Launchpad in San Francisco on December 2019 to help answer some of these questions.

The discussion centered on the imperative of gender data to create digital financial solutions that are gender-intelligent and inclusive. It featured an intimate, catalytic conversation among established and pioneering financial service providers (FSPs), fintechs, researchers and other key stakeholders, with a closed-door roundtable followed by a panel discussion.

The roundtable generated lively discussion and trailblazing examples of the potential and risk of gender data in DFS. Participants shared their insights on the digitization of financial services and its potential for women's financial inclusion; the role of gender data collection and use in DFS; potential challenges of DFS data, including gender bias in artificial intelligence; and the role of "high-touch" relationship-based models and DFS providers' internal gender diversity. This roundtable report outlines key findings and themes from the session.

### BACKGROUND AND OVERVIEW

It is evident that the future of women's financial inclusion will be driven by DFS—including bank, non-bank and fintech digital channels such as mobile phones, agent-handled devices, internet, ATMs and other digital transaction platforms. A [working paper by UN Women](#) stated that the digital revolution represents one of the biggest opportunities and threats for gender equality. DFS offers huge potential to accelerate and expand women's access to and use of financial services, including enabling massive reach to unserved or underserved segments, reducing costs and personalizing female customers' experiences. At the same time, there are significant challenges and risks with this new financial frontier, particularly around women's unequal digital access; the potential lack of, or reduction, of relationship-based models; concerns around data privacy and algorithmic bias in programming.

In recent years, it has become evident that the digital revolution does not benefit women and men equally. Gender gaps in mobile phone ownership, internet access, digital literacy, AI bias and leadership in tech companies all affect how women access and use digital financial services. And yet, early background research indicates that most DFS providers and fintechs assume that their products and services are gender-neutral.

The [paradox of gender-neutral financial services](#) has been documented in the traditional financial services space: assuming that gender differences do not impact how people interact with their bank has led to women being the least satisfied with financial services out of all industries. Successful commercial banks that have targeted women

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have integrated women's specific financial needs, preferences and behaviors into their business models and customer value propositions. There is an opportunity for DFS providers to take a gender-intelligent approach to create DFS that are truly inclusive.

Using gender data to develop tailored market interventions can unearth key business opportunities and enable more inclusive digital financial systems. Sex-disaggregated data (both demand- and supply-side) and data-driven decision-making are critical to DFS providers' ability to serve female customers well. Traditional FSPs face challenges like outdated legacy systems and MIS integration that serve as barriers to their collection and use of sex-disaggregated customer data. However, DFS providers are not necessarily limited by these obstacles and can account for them in the design of their systems. But they may be limited by the lack of publicly available supply-side sex-disaggregated data on their market(s). This lack of data makes it difficult to identify crucial business insights such as women's access to financial services, the quality of the available services, and the usage of these services by women. Consequently, in many markets, DFS providers are potentially overlooking 50 percent of customers.

With the expansion of machine learning and algorithms, particularly used by fintechs, new opportunities and challenges arise at the intersection of inclusive finance and big data (or transactional data). Big data can offer key gender insights on financial behavior and usage, customer profiles, and digital service journeys, as well as provide alternative credit-scoring mechanisms that benefit women (who are less likely, in some countries, to have the traditional collateral or credit history needed for credit or loans).

But companies' dependence on algorithms that are based on biased or flawed datasets will perpetuate bias and lead to solutions that exclude or marginalize women (for example: Apple Card's [controversy on gender differences in credit limits](#)). While the full wealth of digital gender data insights remains underused by DFS providers and fintechs, data privacy concerns and ethics on the collection, analysis and usage of this data are of increasing prominence.

While the industry is still evolving rapidly, now is the time to apply a gender lens at each stage of product development—from developing a business strategy that's inclusive of women to

using data-driven and customer-centric design of service delivery.

To address critical questions of gender data across the financial services industry, Data2X's Women's Financial Inclusion Data (WFID) Partnership, including the Financial Alliance for Women, convened the **Data Driving Action for Women** dialogue series for FSPs in 2019. Under this initiative, select FSPs were invited to participate in roundtables with WFID partners to showcase and discuss how gender data can be used to target and expand the women's market through tailored products and services. The roundtable series disseminated best practices on data and encouraged dialogue and knowledge transfer among FSPs and other ecosystem actors.

The first roundtable was held during the 63<sup>rd</sup> United Nations Commission on the Status of Women and focused on the business opportunity of serving women and the necessity of gender data to leverage it. The roundtable generated insights and examples of how institutions are reaching and expanding their female customer base, from using sex-disaggregated data to compare product usage to designing tailored solutions for female small business owners. For key findings and discussion themes from the session, please see the summary of the roundtable discussion [here](#).

The second roundtable was titled *Solutions to Advance Gender Data* and was held as a parallel session at the Financial Alliance for Women's Annual Summit in Paris. The session dissected the challenges FSPs experience in collecting and using sex-disaggregated customer and portfolio data and identified best practices and solutions to increase the availability and use of supply-side gender data. Identified solutions included advocacy and examples of gender data impact; balancing between data collection and data protection; the importance of peer-learning for gender data; and the complementary roles that a range of women's market and financial inclusion ecosystem players can play to drive the gender data agenda forward. For more details from the discussion, read the roundtable report [here](#).

The third roundtable looked to advance the conversation and unearth the most urgent considerations for gender data and digital finance. In addition to traditional FSPs, participants included innovative fintechs, payment providers, data scientists and researchers, international organizations, and civil society. Below is a summary of key themes and discussion points emerging

from the conversation, which took place under the Chatham House Rule.<sup>1</sup> Data2X, the Financial Alliance for Women and the team working on Celso would like to thank all the roundtable participants for their rich insights and contributions to this discussion.

## THE BUSINESS CASE FOR GENDER-INCLUSIVE DIGITAL FINANCE AND THE ROLE OF DATA

The importance of gender data for financial services is evident: sex-disaggregated data is necessary to size the market opportunity; to reveal where the gender gaps are; and to monitor programs, products, and solutions for inclusive finance. Once FSPs see the data, they understand the opportunity the women's market represents and can act on it.

While the importance of DFS for women's global financial inclusion is evident, its business case is not as well-documented. Participants discussed research that demonstrates the outsized business case for DFS to benefit women and its potential social impact. More gender data could show key underserved segments of the market. For example, in Africa, female entrepreneurs outnumber men, yet DFS in Africa for women has focused mostly on health opportunities rather than market-based ones.

A digital bank from South Africa shared its business case around being gender-responsive by tweaking its existing products rather than creating new ones for female clients. By using data to understand the needs of particular segments, the bank was able to improve its channels and increase access.

The digital bank's goal is to bring banking closer to its clients and make account opening more convenient. In addition to allowing online account opening, the bank set up physical kiosks for account registration in two leading grocery store chains and provided in-person assistance. Of its one million accounts, 80 percent were opened at kiosks, of which 57 percent were opened by women. By building DFS into women's daily life—as part of their food shopping run—this digital bank recognizes that women are often time-poor and created a model that fits into their lifestyle.

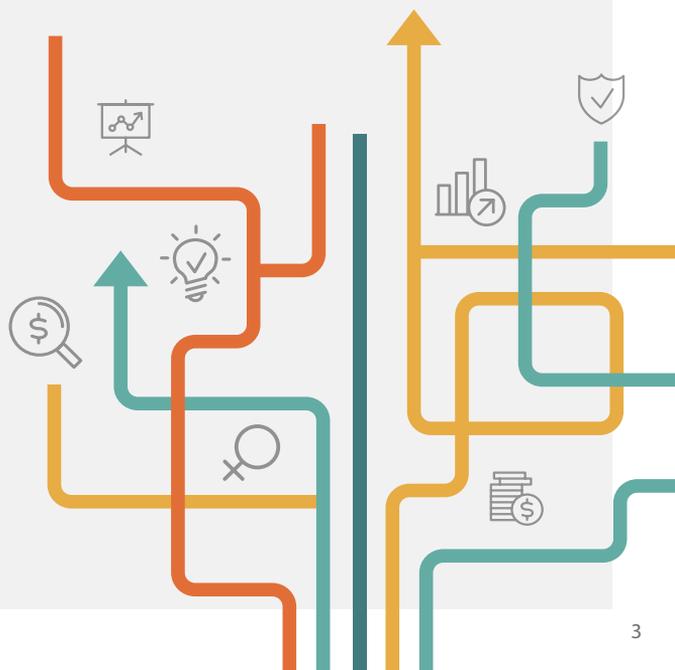
Other participants also shared their business cases

for creating women-centered DFS products. To address concerns that a focus on women in DFS would exclude 50 percent of the market, a Mexican fintech observed that while more than half of Mexican women are unbanked, most commercial banks are competing to serve the same mostly male segments, without a tailored approach to their female clients' needs. (For example, they are "pink-washing" by issuing a pink bank card rather than offering targeted services and programs that truly meet women's needs).

For this fintech, the market opportunity is 14 million potential female customers. By analyzing this market, the company realized it could provide strong value-add through financial education. In addition, while the fintech provides loans to anyone who applies, regardless of their gender, it charges women interest rates that are 10-percent lower than those for men. In Mexico, the default rate for women's loans is 50 percent lower than for men, so there is a business case and rationale for charging women lower interest rates.

However, another fintech participant shared concerns over the relative lack of business cases and warned that an "affirmative action" argument would not work with many investors. In order to convince them, the business return on female clients must be clearly evidenced, especially when it comes to base-of-the-pyramid clients—many whom are actively choosing to stay out of the formal financial system.

A participant from a development finance institution concluded that with more effective use of market intelligence, DFS providers can unearth



<sup>1</sup> The Chatham House Rule: When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed. Retrieved from: <https://www.chatham-house.org/chatham-house-rule>

the business opportunity and create more effective products for women. DFS providers have a wealth of information at their fingertips, including gender data, but are not using it to its full potential.

For example, demand-side data is critical in product and program design stages to understand women and gendered aspects of financial exclusion—like trust and value propositions. Many countries have national demand-side financial inclusion surveys disaggregated by sex, which can provide key insights about market opportunities, but DFS providers may not be aware of these insights. Gender data is also critical for DFS providers to monitor programs and products and help mitigate the risks of DFS, such as loss of trust. DFS providers have an opportunity to lead markets by example, and by better leveraging the use of gender data, they will be able to create a business case for gender-inclusive digital finance.

## THE RISKS AND OPPORTUNITIES OF DIGITAL FINANCIAL SERVICES DATA

While DFS has been around for almost ten years, as one participant noted, the global gender gap in financial inclusion has not shrunk in that time and in some countries, the rise of DFS coincides with an increasing digital gender divide. It is critical for us to examine how these powerful new digital financial tools meant for inclusion—if not carefully designed and rolled out—could actually exacerbate existing gender inequalities.

### ***Gender bias in algorithms and AI***

The financial services sector is leading the way in the adoption of digital solutions to enhance its services, from credit-scoring algorithms to alternative data use to robo-advisors. The risks of gender bias in the adoption of these innovations, however, is a topic that has only recently garnered attention.

AI systems that are considered to be “gender-neutral” are simply not neutral, as they are only as good as the data they are trained on. Gender biases can emerge in AI systems because they are built by people with inherent, and often unconscious, bias. These tools and algorithms are based on past datasets, which may be incomplete, inaccurate, or missing entirely, and they can reproduce, replicate, or amplify existing gender biases. As a result, DFS providers must think carefully about where the data comes from and work to consciously identify and remove bias.

In some cases, risks of inequity can arise because algorithms are based on data that is biased or because gender as a variable is not considered at all. A researcher shared their work in understanding gender gaps in access to credit through traditional and AI models. Among women and men with similar creditworthiness, in traditional credit scoring, women tend to experience lower credit limits, higher interest rates and more rejections. This is because traditional credit-scoring approaches rely on data that could have gender bias, such as income or ownership of assets. But biases are also present in digital credit-scoring models that omit gender or just include it as a single predictor that does not interact with other variables.

The researcher found that incorporating gender across multiple levels of a machine-learning model could increase women’s access to credit. Further, using big data in a gender-differentiated credit model could provide women with no credit history access to credit and reduce biases against women in credit markets. With this gender-differentiated model, 93 percent of women received higher credit scores than when they applied using a gender-neutral credit-scoring model. This research will now be tested through randomized control groups.

For more traditional FSPs, such as commercial banks and card payment platforms, slightly different challenges arise. Some commercial banks are just starting to look at data science modeling. Most card payment platforms can use AI to guess the sex of their users but do not own the actual sex-disaggregated data. The FSP issuing the card itself owns that data. One card payment platform noted that if FSPs shared this underlying sex-disaggregated data with them, they would be able to provide increased data analytics. Another card payment platform noted that it would be helpful to understand what data points or proxies are most helpful for identifying women in a given portfolio beyond standard shopping behavior. This would also allow payment platforms to capture subsets within the women’s portfolio.

To mitigate the AI risks of perpetuating gender bias, participants discussed the importance of developing and applying algorithm audits at all stages of the systems we create. Google and Microsoft are two examples of companies doing this.

The “black box” of proprietary algorithms can make it difficult to see where discriminatory outcomes emerge, and companies are increasingly aware of the PR and legal issues that can emerge from biased algorithms. Legal and regulatory frameworks may also take algorithmic bias into account, such as the European Union’s GDPR and New York City regulations.

A researcher noted that simply excluding gender as a variable is not effective. If companies build in safety checks and audits, they can include gender in a credit-scoring model. Another participant noted the trade-offs between deep-learning models and less sophisticated ones, such as regressions. Do we prefer a model that is more explainable but might be less sophisticated and accurate, or vice versa? Participants also discussed whether the issues of algorithmic bias leading to discrimination should be encoded in legislation or if they should be a company-level responsibility.

One data science firm shared the host of ethical considerations beyond gender that must be considered for audits: Have we tested our data to make sure it is fair and representative across groups? Have we understood possible sources of bias in our data? Have we ensured that the model doesn’t rely on discriminatory proxies?

The firm pointed to an AI recruiting tool built by Amazon. The tool did not include names or gender, but they still found that it was biased against women because the model picked up on certain gendered aspects (i.e., going to a women’s college, being captain of a women’s chess club, and language more typically used by women). This demonstrates how a “gender-neutral” tool can actually be gender-biased and the importance of looking at what other variables might be correlated with gender that could lead to bias. Text models that are based on word association and language often need to be corrected for bias, for example.

To help alleviate some of these challenges, the data science firm built a command line tool that allows users to add an ethics checklist to data science projects. This can be easily embedded into the workflows of both data scientists and non-data scientists.

## ***Diversity and representation in DFS and fintech***

Gender bias discussions are ultimately about power: Who is at the table building these models and solutions? How do we ensure that diverse perspectives and concerns are raised at all levels? This intersects with a broader diversity and inclusion issue in the fintech world, where there are generally fewer women leaders.

For instance, in Latin America and the Caribbean, only 35 percent of fintechs have at least one woman on their founding team, but those that do tend to focus more on financial inclusion. As in other sectors, women in tech tend to have smaller networks due to time scarcity and double household burdens, which impact their work in the field. However, there are more efforts to help overcome some of these challenges. For example, as part of the Bay Area’s rapid adoption of new and evolving technology, trends towards work flexibility and remote work are also benefitting women in the sector.

Finally, participants agreed that increasing efforts toward transparency in diversity and inclusion within the tech industry—as part of broader national movements calling for gender targets—will help create the structural change that is needed to bring more women into decision-making roles.



### ***DFS tailored to women's needs***

Participants discussed the importance of designing digital products and services that add value to women's lives by first understanding their key pain points through data. A participant shared new research that examined barriers to women's access to DFS in Nigeria, Kenya, Tanzania, Pakistan, India and Bangladesh through a human-centered design approach.

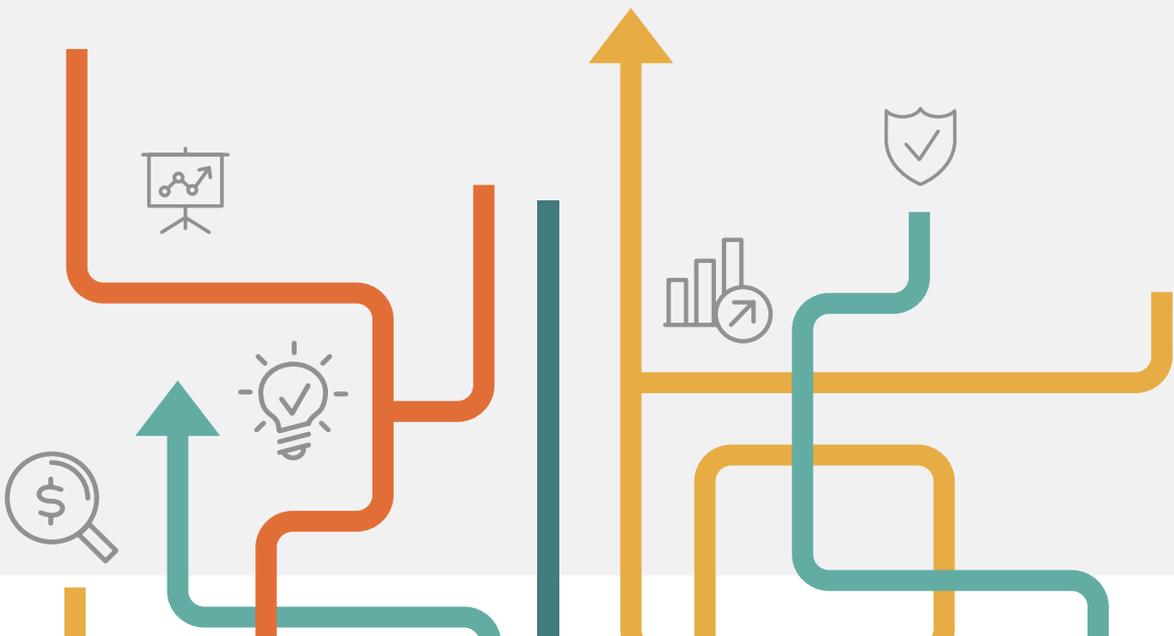
This demand-side data unearthed several key themes. Although money is the domain of men, women predominantly budget and save for the household. However, this does not translate into gains in control over money. When women contribute to household income through their own earnings, the more voice, influence and control they have over the household and their own financial decisions.

By designing DFS that are gender-intentional or gender-transformative based on gender data, we can ensure more inclusive financial systems where women have autonomy over their financial futures. For instance, a participant noted that research had found that women prefer accounts with options for separate savings by lifecycle need (education savings, health savings, etc.) and that DFS in particular could allow for this. A fintech noted that one of its first products used games to build savings, which links to higher interest on savings (up to 10 percent) if clients save a certain amount of time for their goals.

### ***Blockchain's potential for women***

Participants also discussed the potential of blockchain for women's financial inclusion. Blockchain is open and permission-less, with the ability to transact with someone for less than a penny—which helps reduce barriers to financial products. Blockchain also has the ability to program particular requirements for payments or loans. For example, if a requirement for a loan is to visit a doctor, this can be programmed into blockchain.

One significant aspect of blockchain is data sovereignty: Users are in control of their own data and can monetize it. For example, through a new product Oasis, women can choose to receive payments for sharing their medical data with researchers. Participants agreed this was a key emerging field for DFS and that we need more thought leadership and examples of how blockchain can benefit women's financial inclusion.



### ***Ensuring an enabling environment for DFS and gender***

Participants concluded that when it comes to DFS gender data, more dialogue, particularly between the public and private sector, is needed. Given the pace of digital growth and innovation, multi-stakeholder discussions to foster understanding and trust are paramount.

Some policymakers recognize that women's financial inclusion should be a key fintech policy and regulatory objective, but many others are behind the curve. Reports from the International Monetary Fund and the World Bank, for instance, show that regulators see DFS as a way to reduce poverty, but are not necessarily thinking of it as a tool to reduce gender inequality.

Participants agreed on the need to increase awareness among governments of both the opportunities and risks that DFS can bring to women. They also saw the need to highlight the importance of using both demand- and supply-side sex-disaggregated data to design equitable digital financial systems.

## **CONCLUSION: ACCELERATING AND EXPANDING MOMENTUM FOR INCLUSIVE DFS**

The importance of gender data for women's financial inclusion has gained momentum in the past few years, and participants are seeing significant regional shifts in interest on the issue. In this era of digital data, the pace of data collection, analysis and application is increasing exponentially, while risks are increasing concurrently.

Digital data can offer key gender insights on financial behavior and usage, customer profiles and digital service journeys, as well as provide alternative credit-scoring mechanisms that benefit women. But companies' dependence on algorithms that are based on biased or flawed datasets will perpetuate bias and lead to solutions that exclude or marginalize women. If companies assume gender neutrality of data, then they'll only perpetuate gender inequalities.

Data systems are not intentionally sexist. But how we collect and use data is influenced by society around us and the expectations and biases we all carry. We must commit to understanding how half the world's population experiences the world, and we cannot do that without changing the way that we collect and use gender data.

What was continuously underscored in the roundtable discussion was the myth of gender neutrality—in our data systems, in our decision-making, and in how we design and deliver DFS. We must continue having open and frank conversations around the key risks and potential opportunities that our current data systems, as well as the systems of the future, can mean for women's financial inclusion. We must move from a gender-neutral to a gender-intelligent approach to ensure that these new products, services and channels are inclusive. Without a gender-intelligent approach, we risk losing out on the business opportunity of the powerful women's market and the ethical opportunity to close the gender gap to ensure inclusive finance for all.

