Towards Women’s Financial Inclusion: A Gender Data Diagnostic of Turkey

Prepared by the WFID Partnership
April 2022
ACKNOWLEDGEMENTS

This publication was prepared by the Women’s Financial Inclusion Data (WFID) Partnership. The Partnership thanks the following individuals for their work on this report: Anna Gincherman, István Szepesy, Benedikt Wahler, and Dóra Ayumi Solymos of the Consumer Centrix (CCX) Inclusive Business Team who conducted the research and provided sectorial insights, and the WFID team who worked on this study: Mayra Buvinic, María Dolores Vallenilla, and Neeraja Penumetcha of Data2X, and Inez Murray, Rebecca Ruf, and Tessa Ruben from the Financial Alliance for Women. We also acknowledge Ann Moline and Ernie Agtarap for their role in the production of this report.

We thank Oksana Pak and Cagatay Bircan of the European Bank for Reconstruction and Development (EBRD) for their valuable insights during the development of this diagnostic. This diagnostic was made possible thanks to the generous financial support and cooperation from the Bill & Melinda Gates Foundation.
# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>2</td>
</tr>
<tr>
<td>ABOUT WOMEN’S FINANCIAL INCLUSION AND THE WFID PARTNERSHIP</td>
<td>6</td>
</tr>
<tr>
<td>ABOUT THE GENDER DATA DIAGNOSTIC</td>
<td>8</td>
</tr>
<tr>
<td>EXECUTIVE SUMMARY: TURKEY</td>
<td>9</td>
</tr>
<tr>
<td>OVERVIEW: WOMEN’S FINANCIAL INCLUSION IN TURKEY</td>
<td>12</td>
</tr>
<tr>
<td>BARRIERS TO WOMEN’S ACCESS TO FINANCIAL SERVICES</td>
<td>15</td>
</tr>
<tr>
<td>THE ROLE OF DIGITIZATION</td>
<td>16</td>
</tr>
<tr>
<td>ENABLING POLICY ENVIRONMENT ON WFI</td>
<td>16</td>
</tr>
<tr>
<td>SIZE OF THE MARKET OPPORTUNITY</td>
<td>17</td>
</tr>
<tr>
<td>TURKEY’S FINANCIAL SERVICE PROVIDERS AND WFI</td>
<td>18</td>
</tr>
<tr>
<td>ROLE OF RESEARCH INSTITUTES, DONORS, AND DEVELOPMENT FINANCE INSTITUTIONS</td>
<td>20</td>
</tr>
<tr>
<td>MAPPING TURKEY’S SUPPLY-SIDE DATA ECOSYSTEM</td>
<td>21</td>
</tr>
<tr>
<td>DIGGING DEEPER: GAPS AND OPPORTUNITIES IN SUPPLY-SIDE DATA COLLECTION AND USE</td>
<td>23</td>
</tr>
<tr>
<td>DATA PRODUCERS</td>
<td>23</td>
</tr>
<tr>
<td>POTENTIAL DATA AGGREGATOR: BANKING REGULATION AND SUPERVISION AGENCY</td>
<td>25</td>
</tr>
<tr>
<td>OPPORTUNITIES: FOCUS ON DEEP DATA DIVES FOR MARKET INSIGHTS</td>
<td>26</td>
</tr>
<tr>
<td>LESSONS LEARNED FROM TURKEY’S EXPERIENCE</td>
<td>27</td>
</tr>
<tr>
<td>RECOMMENDATIONS</td>
<td>27</td>
</tr>
<tr>
<td>APPENDIX A. FORECASTING MODEL DESCRIPTION</td>
<td>30</td>
</tr>
<tr>
<td>APPENDIX B. WOMEN’S MARKET OPPORTUNITY CALCULATIONS</td>
<td>33</td>
</tr>
<tr>
<td>REFERENCES</td>
<td>36</td>
</tr>
<tr>
<td>ENDNOTES</td>
<td>37</td>
</tr>
</tbody>
</table>
List of boxes

Box 1. TURKEY AT A GLANCE
Box 2. COVID-19 AND THE IMPACT ON WFI IN TURKEY
Box 3. MARKET-LEADING WSME PROPOSITIONS IN TURKEY

List of figures

Figure 1. Stakeholder pathway to champion women’s financial inclusion
Figure 2. The untapped opportunity for Bangladesh’s FSPs in the women’s market
Figure 3. WFI progress in Turkey, 2011–2017
Figure 4. Predictive modelling shows continued improvement in Turkish women’s access to finance
Figure 5. How Turkey’s FSPs perceive the women’s market opportunity
Figure 6. Turkey’s formal supply-side data ecosystem
Figure 7. Types of gender data collected by Turkish FSPs
Figure 8. BRSA will begin sex-disaggregating data in 2022, collecting raw data from banks and internally disaggregating it using census data from TurkStat

List of tables

Table 1. Opportunities to be leveraged
Table 2. Connecting the findings from the Turkey Gender Data Diagnostic to data gaps and interventions
## List of acronyms

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>BRSA</td>
<td>Banking Regulation and Supervision Agency</td>
</tr>
<tr>
<td>CCX</td>
<td>ConsumerCentriX</td>
</tr>
<tr>
<td>DFI</td>
<td>Development finance institution</td>
</tr>
<tr>
<td>EBRD</td>
<td>European Bank for Reconstruction and Development</td>
</tr>
<tr>
<td>FAFW</td>
<td>Financial Alliance for Women</td>
</tr>
<tr>
<td>FSP</td>
<td>Financial service provider</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross domestic product</td>
</tr>
<tr>
<td>GDPR</td>
<td>General Data Protection Regulation</td>
</tr>
<tr>
<td>IDB</td>
<td>Inter-American Development Bank</td>
</tr>
<tr>
<td>IFC</td>
<td>International Finance Corporation</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund</td>
</tr>
<tr>
<td>MFI</td>
<td>Microfinance institution / Non-bank microfinance company</td>
</tr>
<tr>
<td>MSME</td>
<td>Micro-, small-, or medium-sized enterprise</td>
</tr>
<tr>
<td>NBFI</td>
<td>Non-bank financial institution</td>
</tr>
<tr>
<td>NPL</td>
<td>Non-performing loan</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Cooperation and Development</td>
</tr>
<tr>
<td>UNCDF</td>
<td>United Nations Capital Development Fund</td>
</tr>
<tr>
<td>WFI</td>
<td>Women’s financial inclusion</td>
</tr>
<tr>
<td>WFID</td>
<td>Women’s financial inclusion data</td>
</tr>
<tr>
<td>WSME</td>
<td>Women-owned/women-led small or medium enterprise</td>
</tr>
</tbody>
</table>
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 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 below. FSPs and policymakers move through a WFI pathway 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 implementing strategies to close gaps; and finally, to demonstrating impact and becoming champions of WFI.

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 the international level, as the process of creating awareness encourages local players to act and move through the pathway.

From 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: TURKEY

Turkey’s WFI story is one of great progress, made even more remarkable by the gains made within a relatively short period of time. In less than a decade, the nation has succeeded in reducing its gender gap by nearly half in access to formal financial services. Fifty-four percent of Turkish women had access to formal financial services as of 2017, up from 33 percent in 2011, with the gender gap shrinking from 49 percent to 29 percent during that time. CCX’s analytical modeling conducted for this diagnostic suggests that the nation will continue on this trajectory, and that the gender gap in WFI will continue to shrink over the coming decade, dropping to about 22 percent by 2030.

This progress is the incremental result of changes in multiple arenas—including societal shifts that have empowered women and encouraged greater women’s economic participation, and technological advancements that enabled the digitization of wage and salary payments, requiring account ownership. The success to date is also due to the prolonged involvement of donors and development finance institutions such as the European Bank for Reconstruction and Development (EBRD), which have delivered consistent messaging on and support for efforts to increase access to financial services for women’s businesses. The government and the financial services industry itself have followed this lead, introducing a number of concessionary programs aimed at boosting lending to women-owned/led small and medium enterprises (WSMEs). The roll out of a new national financial inclusion strategy in 2022 is expected to further advance WFI through an emphasis on financial literacy and access to digital financial services.

By the numbers: The untapped opportunity in women’s financial services in Turkey

68%
Of Turkish women remain unbanked or underserved by financial services

US$1.16 B / TRY 6,890 B*
Potential annual banking revenue from expanding financial services offerings for unbanked and underserved women customers across segments

Figure 2 - The untapped women’s market opportunity for Turkey’s financial services providers

Source: CCX calculations based on TUIK 2019 & Global Findex 2017 data

*Turkey’s currency values continue to experience significant fluctuation. The women’s market opportunity was calculated based on the December 31 2019 exchange rate by TCMB.
These efforts have all contributed to increased awareness about the importance of the WSME market across Turkey’s financial services ecosystem. Although they represent less than 10 percent of all small and medium businesses, WSMEs offer strong potential to drive growth, which is critical for a country experiencing economic and financial volatility following several decades of impressive gains. However, the vast majority face severe financing constraints that prevent them from realizing their promise.3

About half of Turkey’s commercial banks have introduced WSME-oriented financial services. Of these, several market-leading banks have elevated the importance of this customer segment, with a holistic set of financial and non-financial services aimed at boosting the growth potential of women’s businesses. Such efforts have helped them grow their customer base, enhance their brand, and differentiate from the competition.

As banks experience positive outcomes from their initial forays into the women’s economy, it could create a gateway into vastly expanded financial services for a wider range of women customer segments. In fact, the evidence shows that a more comprehensive approach to the women’s market in Turkey could yield strong business results. The modeling revealed the potential for $1.16 billion in additional annual FSP revenue by broadly expanding women’s market offerings and increasing women’s use of financial services (Figure 2).

Here is where the use of widely available supply-side gender data could play an important role. Data analysis could generate valuable insights on women customer behaviors and the types of products that will attract them, enabling FSPs to take advantage of this market potential.

But at present, this is not happening to the extent possible. FSPs have sophisticated core banking systems that capture granular, individual account-level data that could be sex-disaggregated. However, they conduct little to no analysis of their portfolio by gender; nor do they incorporate it into their regular management reporting. In interviews, it was clear that FSPs lacked knowledge about the value of using data to inform their approach to the women’s market. It was equally clear that they are open to learning more. Further complicating this situation is the lack of a uniform WSME definition, which makes it difficult to capture an accurate picture of this segment or understand more about the types of products and services that would resonate most strongly with these businesses.

*We note that the model for the size of the overall addressable market (and the respective shares of un- and underserved) for Retail and MSME financial services implies a higher degree of uncertainty as compared to other countries assessed within the WFID project. The Turkish economy has seen some of the highest macro-economic volatility among large emerging market economies in the past few years including large-scale devaluation, very high rates of inflation, and central bank policies that include pro-cyclical interest rate setting. We therefore encourage users of the model to review assumptions for their continued relevance as even over the course of a few weeks and months, the market context may have shifted substantial to merit revision and update of key assumptions.
FSPs also indicated some confusion about the degree to which such data can be shared, since Turkey has harmonized its data policies with those of the European Union, which is governed by the General Data Protection Regulation (GDPR).4

The sector’s regulator, the Banking Regulation and Supervision Agency (BRSA), does not require data disaggregation by sex as part of the statutory reporting template. Although BRSA is aware of the importance of such data, there are concerns about asking for additional data before FSPs have clarity on what’s permissible under the EU regulations. Going forward, BRSA plans to conduct its own disaggregation of the unique customer-level information already reported by FSPs, using census data. Plans also include publishing regular analysis to reveal market-level trends.

With a degree of WFI awareness in Turkey’s financial services ecosystem, the regulator in the consider-to-action phase, and some banks in the action phase of the WFI pathway, priority efforts should focus on several recommendations, including:

- Encouraging increased use of available data as part of routine internal reporting. This will allow for a deeper look into women customers’ usage patterns to identify gaps and design solutions to close the gaps.
- Providing learning opportunities for FSPs and the regulator on application of the EU’s GDPR regulation to clarify permissibility of sharing anonymized individual account-level data.
- Supporting the regulator’s plans to leverage banks’ granular data collection capabilities for market trends analysis.
- Highlighting FSP successes with women’s propositions through peer-to-peer knowledge sharing.
- Showcasing the experiences of FSPs in other countries on leveraging donor and government support to initiate women’s market programs, how to move beyond that support, and best-practice approaches to mainstreaming women’s offerings.
- Pursuing other interventions to move FSPs and other stakeholders forward along the WFI pathway, such as highlighting the business case for serving the women’s market and demonstrating use cases for data insights in scaling up women’s propositions and marketing to women customers.
OVERVIEW: WOMEN’S FINANCIAL INCLUSION IN TURKEY

Box 1. TURKEY AT A GLANCE

ECONOMY
• Strategically located upper middle-income country; boundaries straddle Europe and Asia
• Key industries include automotive, petrochemicals, electronics, textiles, and clothing
• $761.4 billion GDP (2020)
• $9,127 GDP per capita
• -5.3% GDP growth in 2020; 10.6% in 2021
• 34% of GDP from government expenditures

SOCIOECONOMIC STATUS
• 83 million people; 50.6% female; 24.3% younger than 15 years of age
• 2.7% of residents live on $1.90/day or less
• 75.6% of people live in urban areas
• 93.5% overall literacy rate for women; 98.8% for men
• 38.5% of women are in the labor force
• 86% of girls enrolled in secondary school; 88.4% of boys
• World Economic Forum gender gap rank: 133 out of 156 countries in the world

WOMEN IN BUSINESS
• 11.3% of firms have majority female ownership
• Women represent 3.9% of top managers in Turkish firms
• Women represent 18% of directors on boards of Turkey’s listed companies
• 9% of Turkish SMEs are women-owned/-led
• 16.7% unemployment rate for women; 12.6% for men

FINANCIAL INCLUSION
• 83% of men hold formal accounts; 54% of women
• 29% gender gap in account ownership
• 22.9% of Turks have saved and 13.8% have borrowed from financial institutions
• 18% of women have saved and 11% have borrowed from formal financial institutions
• 63.8% of Turks use digital payments
• 50% of surveyed commercial banks reported having women-focused products and services

WOMEN’S VOICE & PARTICIPATION
• 17.3% of Turkey’s parliamentarians are women
• 11.8% of government ministers are women
• 1 female head of state in past 50 years

Turkey, an upper-middle-income country, has experienced rapid social and economic progress in the past 20 years, moving many people out of poverty, increasing people’s access to public services, and aligning many policies with those of the European Union. This progress extends to financial inclusion. In the last 10 years, Turkey has succeeded in bringing millions of women into the formal financial services sector. In 2011, only 33 percent of Turkish women had access to financial services, while 82 percent of men were included—representing a nearly 50 percent gender gap in access. As of 2017, this gap decreased to 29 percent, with just over half of Turkey’s women—54 percent—owning formal accounts (Figure 3).6

The nation is on track to shrink the gender gap in access to financial services even further, declining to about 22 percent by 2030, when an estimated 68 percent of Turkish women will hold accounts (see Figure 4; for a description of the forecasting model, see Appendix A).7 In fact, women’s access to financial services has increased in all verticals, from saving and borrowing to making and receiving digital payments.8

This progress is the result of changes that are reshaping multiple aspects of Turkish life, in combination with intentional WFI efforts. These influences include growth in the female labor force; government actions, including the formalization of wage payments via bank transfers and enabling Islamic finance at participating banks; and donor involvement, especially in the WSME market segment.

Increasing access serves as a strong foundation, but further data is needed for the market to understand and respond to women’s evolving needs. With a stronger focus on data, Turkey has the potential to advance WFI even further by going beyond access, creating the products and services that women need, and ensuring that specific gender gaps such as in entrepreneurship and access to credit are closed.

Overlaying the available census bureau data with existing bank data to enable disaggregation by sex, as BRSA plans to do, could play an important role in guiding FSPs’ strategic approach to the women’s market and better understanding the needs of women customers—many of whom are newly banked.

There are some clouds on the horizon, however. In an economic environment characterized by precipitous currency devaluations and high inflation, coupled with ongoing fallout from the COVID-19 pandemic and the resource strains of welcoming large refugee populations, among other challenges,9 Turkey’s financial services industry stakeholders might not prioritize WFI. Here again, data could help, by demonstrating the business case for women’s market offerings as a way to strengthen banks’ revenue streams and by providing quantitative evidence to better inform future central bank policies.

**KEY TAKEAWAYS**

- Turkey has succeeded in vastly increasing the number of women with access to financial services in recent years.
- A gender gap in WFI remains, but it is shrinking, due to the growing numbers of women in the workforce, digitization of wage and salary payments, donor focus on increasing WSMEs’ access to credit, and government actions.
- However, societal factors continue to inhibit WFI and WSMEs continue to face a significant credit gap.
- There is significant untapped potential in the women’s market, representing nearly $600 million in additional annual FSP revenue.
- FSPs acknowledge the importance of serving some segments of the women’s market and many have launched WSME offerings.
- FSPs have the capability to sex-disaggregate detailed, individual account-level data.
- The regulator does not require sex-disaggregated reporting for retail or business clients. BRSA acknowledges that FSPs need additional clarity on compliance with GDPR regulations before asking for additional data.
- FSPs and regulators do not use available data to yield insights into women customer behaviors or market trends.
- Concerns about data privacy and how to interpret compliance with EU regulations influence FSPs’ data management approach.
Figure 3. WFI progress in Turkey, 2011–2017

Access to finance: Global Findex

Source: Global Findex, 2011-2017

Figure 4. Predictive modelling shows continued improvement in Turkish women’s access to finance

Access to finance by Gender (2020 to 2030)

Source: World Data Lab forecast, based on World Bank, IIASA, IMF databases
BARRIERS TO WOMEN’S ACCESS TO FINANCIAL SERVICES

While Turkey’s WFI progress is notable, an estimated 35 percent of women do not have bank accounts as of 2021— with a gender gap that is considerably higher than that of comparable emerging market economies like South Africa (0.8%) and Vietnam (-1.6%), or Colombia, with a 7 percent gap. Social norms play an important role in influencing men’s and women’s attitudes towards WFI in Turkey and in understanding some of the barriers faced. For example, there is a sense among men and women alike in some segments of society that women should not have financial independence, as defined by holding individual accounts in their own names. In the World Bank’s 2017 Global Findex study, unbanked women were asked why they don’t have accounts. Seventy-two percent responded that they don’t have accounts because another family member already had one. Other barriers cited include the relatively low numbers of working women in Turkey. The study notes that 89 percent of unbanked women do not hold formal jobs. As women’s workforce participation increases, it is possible that this will result in a concurrent increase in women’s account ownership, particularly given the government’s wage digitization initiatives.

Would-be female entrepreneurs and already established women’s businesses in Turkey also face significant financial obstacles. In an OECD entrepreneurship report on Turkey, many more women than men said that access to finance represented a barrier to starting a business. Indeed, it is estimated that WSMEs in Turkey face a $400M financing gap. These statistics are concerning not just for the women business owners themselves, but for the country, which could benefit from the economic value that thriving, non-financially constrained businesses can offer.

Box 2. COVID-19 AND THE IMPACT ON WFI IN TURKEY

With the 2020 advent of the COVID-19 pandemic, the government moved quickly to encourage social distancing and reduce in-person interactions, as public health measures. Efforts included promoting the use of mobile financial services, including for government service transactions, which triggered a spike in new accounts, including among women. An earlier government mandate to digitize all public and private sector wage and salary payments helped push more women to open accounts. However, women’s employment declined more than 8 percent during the pandemic, due in part to their increased care responsibilities. This change may have negative impacts on their use of financial services, although the long-term effect on WFI progress remains unclear.
THE ROLE OF DIGITIZATION

Turkey’s transition to digitized wage and salary payments has contributed to the nation’s progress on financial inclusion. This shift has required people to open bank accounts—a profound change given that in the past, many smaller businesses paid workers in cash.

The digital transformation underway offers strong potential in helping to increase women’s use of banking services, particularly since most Turkish women own mobile phones. This includes the unbanked, 88 percent of whom have mobile devices.14 However, it is not a given. Globally, there are significant gender gaps in women’s usage of digital financial services, according to research from the Financial Alliance for Women. The study shows that if digital FSPs want to maximize women’s uptake, they need to design a comprehensive gender-informed approach that includes collecting and analyzing sex-disaggregated performance metrics.15 This represents another important use case for supply-side data.

ENABLING POLICY ENVIRONMENT ON WFI

In recent years, the Turkish government has taken meaningful actions that have increased financial inclusion, including implementing the National Financial Inclusion Strategy of 2014. Although the strategy did not specifically address WFI, and no WFI targets were set, initiatives associated with the strategy helped to catalyze progress; financial literacy and consumer education efforts reached about 40,000 women. A follow-on strategy, currently in the planning stages, will have a more explicit focus on WFI, with a particular emphasis on increasing access to digital financial services. The banking sector’s regulator, BRSA, is expected to take the lead in the WFI sections of the new strategy. It is developing its own action plan—the Sustainable Banking Prospective Plan—with several specific efforts designed to advance WFI, including the use of census data to undertake in-house sex-disaggregation of the data it collects from FSPs. BRSA also plans to publish quarterly reports with analysis of the gender data.

To date, there are no plans to require sex-disaggregated reporting from FSPs. The regulator has indicated that more work needs to be done to help banks interpret the EU’s GDPR and feel comfortable with the strength of data privacy protections before asking for additional information.

“We want to work with banks on getting more comfortable with the strength of our data sharing and privacy protections before we ask more of them.”

– BRSA representative
Focus on women’s businesses

The government has endorsed several public and private sector-led initiatives to address the challenges faced by WSMEs in accessing finance. Agencies and organizations sponsoring these programs include:

- **Republic of Turkey Ministry of Treasury and Finance**: Lead agency on financial inclusion strategy; provides COVID-19-related loan packages for WSMEs.

- **Republic of Turkey Ministry of Industry and Technology**: Houses KOSGEB, the Small and Medium Enterprises Development Organization of Turkey, which oversees SME policies and provides various SME supports that have benefited WSMEs.

- **Credit Guarantee Fund (KGF)**: Non-profit joint-stock company whose shareholders include financial services stakeholders; provides credit guarantees for WSMEs; efforts have helped WSMEs access more than $8.4 million (55 million Turkish lira)\(^\text{16}\) as of 2018.

- **Women Entrepreneurs Association of Turkey (KAGIDER)**: Affiliated with the Association of Organisations of Mediterranean Businesswomen (AFAEMME); provides capacity building, networking, and early-stage investment.

SIZE OF THE MARKET OPPORTUNITY

Although demand-side data is limited, the existing data did allow for scoping of the untapped market opportunity in women’s financial services—estimated at $1.16 billion in potential annual FSP revenue across all segments of the market.\(^\text{17}\)

Calculations highlight that the bulk of the market opportunity ($868 million) lies in the top quarter of the female population that actively participates in the labor force with individual monthly earnings valued at over $280. In a stark contrast, 76% of adult women, most of whom are out of the labor force, represent only a quarter of the market opportunity ($291 million). For more details on the market opportunity modeling, see Appendix B.
TURKEY’S FINANCIAL SERVICE PROVIDERS AND WFI

Turkey’s FSPs are aware of the importance of serving the women’s market. This general awareness is due to several factors, including a heightened focus on corporate social responsibility (CSR) and strengthened environmental, social, and governance (ESG) standards. It’s also due to the effectiveness of the messaging on the economic importance of WSMEs, amplified by the government, donors, and regional and local business associations. Most FSPs have overlooked the business potential in developing offerings geared toward women retail customers.

Among the FSPs surveyed, 75 percent of commercial banks reported that their interest in the women’s market was driven by CSR or ESG objectives. About 50 percent of commercial banks acknowledged the value of the women’s market as a way to grow their customer base, while about 40 percent agreed that a focus on women customers represented a way to differentiate from the competition (Figure 5). For fintechs, the calculus is slightly different, with 100 percent reporting that entering the women’s market would help them expand their customer base. About half said they were actively considering introducing women’s offerings, with most focused on business customers. While most of the surveyed institutions reported no perceived gender difference in most dimensions, the ones who did so reported a positive perception of women overall when compared to men, highlighting loan repayment and NFS participation as dimensions where women are better.

Turkey’s microfinance segment is dominated by two non-profits, the Turkish Grameen Microfinance Program, and KEDV’s Maya Foundation, which exclusively serves women. These microfinance institutions (MFIs) represent a tiny portion of Turkey’s financial services market. Combined, they serve about 60,000 clients, most of whom are women.

Figure 5. How Turkey’s FSPs perceive the women’s market opportunity
Availability of women-focused offerings

Nearly 50 percent of Turkey’s commercial banks have introduced women’s offerings, most of which are geared towards WSMEs. The role of EBRD in catalyzing progress for this segment of the women’s market cannot be overstated. As a direct result of EBRD’s Women in Business program and its credit facility, many Turkish banks have increased their focus on WSME customers. With this support, and assistance from other DFIs such as IFC, two Turkish banks have gained global recognition for their leadership in the WSME market segment: Garanti BBVA—Turkey’s second largest private bank by assets—and Turk Economi Bankasi (TEB) (see Box 3). Other banks that participate in the EBRD program include: Turkiye Is Bankasi, VakifBank, QNB FinansBank, DenizBank, YapiKredi, Sekerbank, AKBank, and Ziraat Bankasi.

The awareness gained and actions taken to date set up opportunities for further advancement along the WFI pathway. Banks are well positioned to broaden their focus beyond WSMEs, expanding their women’s market footprint with offerings for other customer segments.

Bank have the tools, processes, and systems to collect and analyze detailed, individual-account-level sex-disaggregated data. However, they do not include it in their internal reporting, nor do they make use of it to inform their women’s market strategy or products offered. This represents a knowledge gap—and an opportunity. Among the FSPs interviewed, many noted a lack of understanding on how data could be used to uncover untapped opportunities in the women’s market or to enhance the effectiveness of their women’s propositions. They also indicated an interest in learning more about the data value chain.

Box 3. MARKET-LEADING WSME PROPOSITIONS IN TURKEY

Garanti BBVA: With a strategic vision to become the bank of choice for Turkey’s women entrepreneurs, Garanti has provided products and services specifically targeting WSMEs since 2006. In 2018, with the support of IFC and a joint IFC/Goldman Sachs credit facility, the bank became the first emerging market financial institution to issue a bond focused exclusively on the women’s market. Proceeds from the bond are financing Turkish WSMEs, growing this business line and yielding positive bottom-line results for the bank. Today, the bank’s women entrepreneur program serves more than 300,000 women, with an outstanding loan portfolio of $1.2 million.

Turk Economi Bankasi (TEB): Already established as Turkey’s leading SME bank, TEB launched its Women Banking program in 2015, providing credit to WSMEs via EBRD’s on-lending facility. TEB also provides personalized non-financial services with the goal of helping its WSME thrive.
ROLE OF RESEARCH INSTITUTES, DONORS, AND DEVELOPMENT FINANCE INSTITUTIONS

Local and international organizations, donors, and development finance institutions are playing an important role in advancing women’s financial inclusion in Turkey and increasing gender data collection and use. They are providing significant levels of funding and expertise and supporting FSPs in developing women-focused financial solutions. Among the activities making a difference:

- **Financing facilities to boost WSME lending:** EBRD’s Women in Business program offers dedicated credit lines of up to €600 million plus risk-sharing mechanisms for participating FSPs to increase on-lending to WSMEs; IFC’s Banking on Women program has provided similar support.

- **Capacity building for FSPs:** Garanti Bank and TEB are members of the Alliance and have participated in its All-Stars Academy; other groups providing direct support to FSPs include Agence Française de Développement (AFD), EBRD, the European Fund for Southeast Europe (EFSE), IFC, and the United Kingdom’s Prosperity Fund.

- **Regulatory support:** BRSA is receiving support from the Bill & Melinda Gates Foundation, EBRD, and the World Bank Group, with a focus on leveraging data to inform decisions.

- **Research and knowledge generation:** The UK’s Prosperity Fund has commissioned gender inclusion briefing papers; CGAP studies include profiles of Syrian women entrepreneurs and research on the role of gendered social norms in financial inclusion. KAGİDER is conducting research on WFI and the impacts of COVID-19. Other institutions conducting WFI research in Turkey include the Frankfurt School of Business and Management, IFC, and the World Bank.
MAPPING TURKEY’S SUPPLY-SIDE DATA ECOSYSTEM

The primary stakeholders in Turkey’s financial services sector include:

**Data producers/financial service providers**
- Commercial banks
- Participation (Islamic finance) banks
- Consumer finance, leasing, and factoring companies
- Pension companies
- Insurance companies
- Fintechs

**Data aggregators/users**
- Banking Regulation and Supervision Agency (BRSA): Regulates commercial banks, participation banks, and consumer finance, leasing, and factoring companies; also collects data from fintechs, although fintechs are not regulated
- Ministry of Treasury and Finance
- Capital Markets Board
- Insurance and Private Pension Regulation Supervision Agency (IRSA)
- Credit Guarantee Fund (KGF)
- Credit bureaus
- Donors and impact investors
- Investors

Other FSPs include two microfinance institutions, although they do not have a dominant position in the market. There is little information available about Turkey’s informal financial services sector. Figure 6 shows an overview of the data flow between the primary stakeholders in Turkey’s formal supply-side data ecosystem. The blue arrows indicate where data is disaggregated by sex.
Figure 6. Turkey’s formal supply-side data ecosystem

Source: BRSA, stakeholder interviews and CCX research
DIGGING DEEPER: GAPS AND OPPORTUNITIES IN SUPPLY-SIDE DATA COLLECTION AND USE

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

DATA PRODUCERS

Fifty-five banks operate in Turkey, including 34 deposit banks, 14 development and investment banks, and 6 participation (Islamic finance) banks, with 86 percent of all banking sector assets held by deposit banks.\(^\text{19}\)

Banks

All commercial banks collect individual account-level sex-disaggregated data, for both retail and business customers. The majority—75 percent—gather sex-disaggregated retail and business customer data on the number of products used, loans by value and number, deposit/savings accounts by value, and loan loss statistics (non-performing loans) (Figure 7). The lack of a standardized WSME definition impedes the reliability of the business customer data.

Half of the banks surveyed indicated that they also track transactional data and profitability variables such as revenue, while a few also sex-disaggregate customer lifetime value data.

Banks have in place electronic platforms, and they have the staff capabilities to conduct sophisticated analytics. However, they do not make use of these capabilities to generate insights that could support the business case for building robust women’s market propositions. For the most part, banks have created women’s market propositions for some segments due to donor involvement. There is limited organic understanding that the women’s market represents a significant business opportunity. Since the business case is not on their radar, banks may not see the need to use the data.

Internal reporting happens only on an occasional, as-needed basis. When it does occur, data reliability becomes an issue since recordation is manual—outside the automated reporting template.

KEY TAKEAWAYS

- All Turkish FSPs generate individual account-level sex-disaggregated data on retail customers and WSMEs.
- Many also track more detailed data, transactional data, and profitability indicators.
- Banks have both the staff and technological capabilities to conduct analysis on the available data, but currently they do not undertake such analysis to inform decision making; nor do they include gender data in their regular internal management reporting.
- Banks report WSME data to donors and public agencies and donors that support their WSME offerings.
- BRSA, the bank regulator, does not require sex-disaggregated reporting and has no plans to do so. BRSA acknowledges that FSPs need additional clarity on compliance with GDPR regulations before asking for additional data.
- Beginning in 2022, BRSA will conduct in-house sex-disaggregation of the data it routinely collects from FSPs, applying census data and unique national identifiers to extract the information. Plans include publishing quarterly reports.
- There are significant opportunities to leverage existing data capabilities for detailed analysis, which could yield actionable insights for FSPs and the regulator.
Lack of understanding on the business value of data usage

Survey respondents indicated that they were not sure how data analytics could help them refine existing women’s propositions or identify solutions that would be of interest to women customer segments. In addition, they expressed concern about using and sharing data because they wanted to ensure compliance with the EU’s data privacy regulation. They also noted that when it came to business customers, they did not see much need to conduct separate analysis on women’s businesses beyond what was required by donors and public agencies that support these business lines. Several respondents indicated that they did not see a difference in the financial needs of businesses based on the gender of the leadership.

They said they would welcome guidance in several areas, including clarification on permissible uses of data under the GDPR and on how data analytics could inform their women’s market propositions.

Non-bank financial institutions

This category includes fintechs, and leasing, factoring, consumer finance, and insurance companies, among others, in Turkey’s well developed financial ecosystem. Several of these companies have received donor support, such as credit guarantees, to increase lending for WSMEs. They generate gender data on only the small portion of their portfolio that has resulted from donor involvement. This activity could trigger an appetite for more, encouraging such institutions to sex-disaggregate all their portfolio data, which currently does not happen.

As with the banking sector, these institutions lack an understanding about the unique needs of women customers. They typically look at other areas, such as business size or industry sector, in targeting their financial service offerings.
POTENTIAL DATA AGGREGATOR: BANKING REGULATION AND SUPERVISION AGENCY

BRSA publishes easily accessible regular reports with sophisticated and detailed analysis, including daily, weekly, and monthly bulletins, as well as a main indicators report. However, the indicators are not disaggregated by sex. The regulator does not collect gender data from FSPs and has no plans to do so going forward.

But this does not mean that BRSA is uninterested in gender data. The regulator has signaled plans for an ambitious new initiative—to disaggregate data using in-house capabilities, leveraging census information and data from e-Devlet, the national e-government electronic platform. This data is available by individual identifiers. The new effort includes undertaking analysis and publishing quarterly reports with the data and the analytical findings. The availability of such market-wide information would enable a more comprehensive understanding of the state of women’s financial inclusion in Turkey, and the degree to which women are using the financial services available to them, among other important insights (Figure 8).

**Figure 8.** BRSA will begin sex-disaggregating data in 2022, collecting raw data from banks and internally disaggregating it using census data from TurkStat

---

**Other data users**

Although FSPs do not report gender data to the regulator, they do provide WSME data to public agencies, donors, and impact investors that support their WSME propositions. Most make use of this data in their own reporting on outcomes of the initiatives they finance.
OPPORTUNITIES: FOCUS ON DEEP DATA DIVES FOR MARKET INSIGHTS

Turkey’s FSPs have an immediate opportunity to make better use of the large amount of available data. Examination and analysis will produce insights supporting the business case for more women’s market offerings. The information can enhance product design and marketing to increase women’s usage of financial services. Detailed data analysis will bring to light the types of products and services of interest to women customers, providing a roadmap of sorts as FSPs refine their WSME offerings and branch out by introducing new solutions targeting other women customer segments. In addition, data analysis could help quantify the business case, generating interest in building women’s propositions as part of business strategy rather than as an add-on that reflects corporate social responsibility commitments.

BRSA also has an opportunity to leverage its analytical capabilities for a deeper understanding of the women’s market. As the regulator begins to conduct in-house sex-disaggregation of bank data, valuable insights could be uncovered. The proposed quarterly publication of this data and analysis will help demonstrate the business value of developing women’s propositions, conveying an important message to financial services stakeholders and to the public at large. Table 1 presents an overview of the opportunities.

Table 1. Opportunities to be leveraged

<table>
<thead>
<tr>
<th>OPPORTUNITIES TO BE LEVERAGED</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMERCIAL BANKS/ DATA PRODUCERS</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>FINTECHS/OTHER NBFIS/ DATA PRODUCERS</td>
</tr>
<tr>
<td>BRSA DATA AGGREGATOR</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>CREDIT GUARANTEE FUND DATA AGGREGATOR</td>
</tr>
</tbody>
</table>
LESSONS LEARNED FROM TURKEY’S EXPERIENCE

The information uncovered in the diagnostic has yielded insights that offer lessons for Turkey—as well as for other countries. Turkey has made notable progress on WFI to date, driven in part by a heightened focus on the importance of WSMEs in strengthening the economy. It is hoped that the following lessons and recommendations can assist in advancing WFI even further:

- **Without data, it is difficult to understand the state of WFI or the steps needed to reduce the gender gap in financial inclusion.** High-quality, timely, and comprehensive datasets can provide clarity on progress to date and point the way for effective policy actions going forward.

- **Awareness of the women’s market and awareness of the value of gender data are not the same thing.** Many FSPs have introduced WSME solutions; however, many say that they do not see how data could be used to track the success of current offerings or chart their future women’s market path. By contrast, the most successful programs—which may have started without data—have now expanded their offerings based on what the data tells them. This has helped embed a business rationale into their efforts, enhancing the long-term viability of their women’s market programs.

- **Donor/DFI involvement can play a market-making role.** The efforts of EBRD and others are helping to close the WSME credit gap. Further involvement—including demonstrating the value of gender data in making the business case—could encourage expansion into other women customer segments. Robust sex-disaggregated data collection and analysis—demonstrating the business rationale for women-focused offerings—will also help ensure longer-term sustainability following donor exit.

- **Intentionality and ecosystem-level coordination matter.** To raise FSPs’ ambition on expanding women-focused offerings and on deploying data to inform such offerings, coordinated approaches and ecosystem-wide strategies with an explicit focus on women are needed.

- **If misinterpreted, new national-, regional- and global-level data privacy regulations can prevent customer-level analytics and impede the development of customer-centric solutions.**

RECOMMENDATIONS

The recommendations that follow are aimed at increasing the collection and use of supply-side sex-disaggregated financial data in Turkey. 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 Turkey Gender Data Diagnostic to data gaps and interventions

<table>
<thead>
<tr>
<th>DATA GAPS</th>
<th>POTENTIAL INTERVENTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>COMMERCIAL BANKS / Data Producers</strong></td>
<td></td>
</tr>
<tr>
<td>Awareness of the women’s market potential is often driven by CSR or ESG objectives and not necessarily linked to business opportunity</td>
<td>Limited availability of data on the importance of data and the full data value chain</td>
</tr>
<tr>
<td>Limited knowledge on the importance of data and the full data value chain</td>
<td>Lack of uniform WSME definition</td>
</tr>
<tr>
<td>Interest in women’s market mainly focused on WSMEs</td>
<td>General Data Protection Regulation (GDPR) influences data management</td>
</tr>
<tr>
<td>Gender data available on a small share of total portfolio and only when donors are involved, such as credit guarantors for certain WSMEs</td>
<td>No data gap identified</td>
</tr>
<tr>
<td>Awareness of the importance of collecting sex-disaggregated data is relatively new and still growing</td>
<td>Statutory reporting is not sex-disaggregated</td>
</tr>
<tr>
<td>Currently no collection of sex-disaggregated supply side data; disaggregation and publication are planned beginning in 2022</td>
<td>No data gap identified</td>
</tr>
<tr>
<td><strong>NON-BANK FINANCIAL INSTITUTIONS / Data Producers</strong></td>
<td></td>
</tr>
<tr>
<td>Women’s marketInterest focused on WSMEs</td>
<td>Gender data available</td>
</tr>
<tr>
<td>General Data Protection Regulation (GDPR) influences data management</td>
<td></td>
</tr>
<tr>
<td><strong>BRSA/Data user</strong></td>
<td></td>
</tr>
<tr>
<td>Awareness of the importance of collecting sex-disaggregated data is relatively new and still growing</td>
<td>Statutory reporting is not sex-disaggregated</td>
</tr>
<tr>
<td>Currently no collection of sex-disaggregated supply side data; disaggregation and publication are planned beginning in 2022</td>
<td>No data gap identified</td>
</tr>
<tr>
<td>No designated women’s champion</td>
<td>No plans for collection of sex-disaggregated data from FSPs</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Ecosystem recommendations**

Awareness is growing about the importance of sex-disaggregated data in some parts of Turkey’s financial ecosystem. Recommendations here include:

- Raise awareness on how data insights can help guide market actions in ways that can benefit all stakeholders.
- Develop and share knowledge materials about collection of sex-disaggregated data and compliance with GDPR regulations.
- Encourage coordinated action and ecosystem wide WFI commitments.
- Support the Ministry of Finance and Treasury and BRSA in their efforts to integrate the gender perspective into overall financial inclusion and sustainability goals.
- Work with stakeholders on standardizing WSME definitions.
- Share the sex-disaggregated data collected and publish reports that are available to the public.

**Industry recommendations**

Most of Turkey’s commercial banks are in the action stage of the WFI journey. The launch of many WSME offerings in recent years has contributed to increasing access to financial services for female business customers. However, FSPs have placed less focus on solutions designed specifically for female retail customers. Increased use of the gender data already available could shed light on the types of products women customers want, enabling them to design new products that meet these needs and increasing the potential for strong returns. Recommendations for FSPs include:

- Share knowledge on the value of sex-disaggregated data analysis.
- Showcase experiences from peer banks in other countries on how data insights can inform women’s market offerings.
- Raise awareness on the business case for a more holistic and integrated approach to serving the women’s market.
- Build capacity on designing comprehensive women’s market business models and products.
- Provide learning opportunities on data sharing and alignment with data privacy regulations.
**Regulatory recommendations**

BRSA is currently at the action stage of the WFI pathway. While there is understanding about the importance of integrating gender-intentional policies into new financial inclusion policies, the regulator has no plans of mandating sex-disaggregated reporting, and there are no clear WFI targets. The lack of a coordinated focus could stall future WFI progress. Here are some recommendations:

- Share knowledge on the importance of integrating a gender dimension into financial policy frameworks.
- Provide technical support for implementation of plans to conduct in-house sex-disaggregation of reported data, along with guidance on improving the visibility of market-level gender data and analysis.
- Encourage the inclusion of WFI targets in the access to finance pillar of the National Financial Inclusion Strategy, currently in development.
- Offer opportunities for interaction and knowledge sharing with regulatory counterparts in other countries on best practices in sex-disaggregated data collection, use, analysis, and publication of insights for industry.

Through 2022, WFID 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:

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

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

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

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 $\bar{x}$:

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

This differs from a linear model, where:

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

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 increase in school completion rates or mobile phone ownership, where ownership status would have to change for individual households to match the projected growth rate. Therefore, 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 are Global Findex 2017 microdata.
- The survey was carried out as part of its Gallup World Poll, which since 2005 has annually conducted surveys of approximately 1,000 people in each of more than 160 economies and in over 150 languages, using randomly selected and nationally representative samples.
- The survey targeted individuals aged 15 years and above and comprised of 1,000 observations.
- Data collected within the survey include usage of banking services, including payments, savings, credit, and transfers. In addition, data on household and individual characteristics are collected.

Model estimates by gender

<table>
<thead>
<tr>
<th>Variables</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income class</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Mid)</td>
<td>0.2926</td>
<td>-0.2276</td>
</tr>
<tr>
<td>(High)</td>
<td>0.4624</td>
<td>0.7277</td>
</tr>
<tr>
<td>Secondary education</td>
<td>0.2646</td>
<td>1.0835 ***</td>
</tr>
<tr>
<td>Completed tertiary or more</td>
<td>2.1370 ***</td>
<td>2.4359 ***</td>
</tr>
<tr>
<td>Age</td>
<td>0.0506 ***</td>
<td>0.0147 ***</td>
</tr>
<tr>
<td>Income from salary or wage</td>
<td>2.1597 ***</td>
<td>2.4197 ***</td>
</tr>
<tr>
<td>Income from farming</td>
<td>2.7983 ***</td>
<td>1.9077 ***</td>
</tr>
<tr>
<td>Income from business</td>
<td>0.7329</td>
<td>3.1716 **</td>
</tr>
<tr>
<td>Owns mobile phone</td>
<td>1.5722 ***</td>
<td>0.7093</td>
</tr>
<tr>
<td>Constant</td>
<td>(3.2353) ***</td>
<td>(2.7205) ***</td>
</tr>
<tr>
<td>Number of observations</td>
<td>510</td>
<td>490</td>
</tr>
<tr>
<td>Pseudo R-squared</td>
<td>0.2833</td>
<td>0.3015</td>
</tr>
</tbody>
</table>

- Overall estimates show similar patterns between men and women, with the most important determinant of access to finance for men identified as income from farming, while for women it’s income from business.
- Other important determinants for both genders are completion of tertiary education and owning a mobile phone.
- Estimates also show some striking differences:
  - Higher levels of education are more likely to be correlated with access to finance for women than men.
  - Income from salaries or wages and business are more likely to be correlated with access to finance for women than men.
  - Women in the middle-income class households are likely to have lower levels of access to finance for women than men.
Projections indicate an increase in access to finance of 3.2 percentage points for men, and 11.8 percentage points for women between 2020 and 2030.

Projections indicate a narrowing of the access gap by 9 percentage points over the forecast period.

The projections are made on the basis of a marginal analysis at mean values, due to the non-linear nature of the logit model.
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:

<table>
<thead>
<tr>
<th>Area</th>
<th>Assumption</th>
<th>Source(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Sociodemographic / economic</td>
<td>Global Findex 2017 Survey, TÜİK HH budget survey individual income 2019, TurkStat The Results of Address Based Population Registration System 2020; assumptions based on the Nigeria market opportunity model</td>
</tr>
<tr>
<td></td>
<td>Economic activity</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Access to finance / banked</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Usage/degree of being underserved</td>
<td>CCX assumptions based on past experience – validated by local market participants</td>
</tr>
<tr>
<td>Products</td>
<td>Deposits/savings</td>
<td>Banks’ and MFIs’ terms and conditions sheets; CCX assumptions for credit card penetration based on Global Findex 2017 Survey</td>
</tr>
<tr>
<td></td>
<td>Loans</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Payments</td>
<td></td>
</tr>
</tbody>
</table>

We note that the model for the size of the overall addressable market (and the respective shares of un- and underserved) for Retail and MSME financial services implies a higher degree of uncertainty as compared to other countries assessed during the WFID project. The Turkish economy has seen some of the highest macro-economic volatility among large emerging market economies in the past few years including large-scale devaluation, very high rates of inflation, and central bank policies that include pro-cyclical interest rate setting. We therefore encourage users of the model to review assumptions for their continued relevance as even over the course of a few weeks and months, the market context may have shifted substantially to merit revision and update of key assumptions.
Revenue source assumptions used for the modelling

**Bottom-up Market Estimate**

- **Net Interest Income (after risk cost)**
  - From Loans
  - From Deposits
  - Retail
  - MSME / Agri

- **Refinancing Rate**
- **Fees & Commission Income**
- **Fees & Charges**
  - Assumptions per segment:
    - Assumptions per segment:
      - Ratio of short-term savings of monthly income (up to 1 month)
      - Ratio of medium-term savings (>1 month)
      - Average NPL ratio
      - Average loan interest rate

**Assumptions per segment and loan type** (short-term Retail, medium-term Retail, Small Biz, Agri):
- Credit volumes as share of income
- Market Penetration
- Expected NPL ratio
- Average loan interest rate

**Assumptions per segment**:
- Money transfers per month
- Withdrawals per month
- Share of income used in cashless payments

**The untapped potential banking revenues of women and men in Turkey (in $ millions and by %)**

Breakdown of the total un- and underserved potential banking revenue (USD 3.6bn p.a.)

- Women Unserved: 20%
- Men Unserved: 35%
- Women Underserved: 33%
- Men Underserved: 12%
An overview of the assumptions deployed in the model can be found below:

<table>
<thead>
<tr>
<th></th>
<th>Segment D</th>
<th>Segment C</th>
<th>Segment B</th>
<th>Segment A</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deposits and Savings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short term savings (...)</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>Long term savings (...)</td>
<td>8%</td>
<td>8%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td><strong>Transactions &amp; Payments</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Money transfers per month</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Withdrawals per month</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>% of income used in cashless payments</td>
<td>30%</td>
<td>30%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td><strong>Loans Retail, (very) short-term liquidity mgmt</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Volume (% of MONTHLY income)</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Credit Penetration (% of clients)</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Expected Loan Losses (net of recovery)</td>
<td>3.0%</td>
<td>2.0%</td>
<td>2.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>Loans Retail, medium-term</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Volume (% of ANNUAL income)</td>
<td>40%</td>
<td>40%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>Credit Penetration (% of clients)</td>
<td>10%</td>
<td>10%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Expected Loan Losses (net of recovery)</td>
<td>5.0%</td>
<td>3.0%</td>
<td>4.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Loans Credit Card</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Volume (avg. as share of MONTHLY income)</td>
<td>20.0%</td>
<td>20.0%</td>
<td>20.0%</td>
<td>20.0%</td>
</tr>
<tr>
<td>Share of Segment owning a credit card (as of 2017)</td>
<td>40.7%</td>
<td>25.8%</td>
<td>23.1%</td>
<td>25.8%</td>
</tr>
<tr>
<td>Assumption of share of Segment owning a credit card</td>
<td>55.0%</td>
<td>45.0%</td>
<td>60.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Credit Penetration (% of clients having a loan outstanding at any time)</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td>Expected ratio of Loan Losses (net of recovery proceeds)</td>
<td>3.0%</td>
<td>2.0%</td>
<td>2.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td><strong>Loans Small Business, e.g. inventory finance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Volume (% of MONTHLY income)</td>
<td>40%</td>
<td>40%</td>
<td>35%</td>
<td>35%</td>
</tr>
<tr>
<td>% of Segment small business owners</td>
<td>8%</td>
<td>4%</td>
<td>14%</td>
<td>5%</td>
</tr>
<tr>
<td>Credit Penetration (% of clients)</td>
<td>90%</td>
<td>90%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Expected Loan Losses (net of recovery)</td>
<td>5.0%</td>
<td>3.0%</td>
<td>4.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Loans Small Business, longer term finance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Volume (avg. as share of ANNUAL income)</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Share of Segment active as small business owners</td>
<td>8%</td>
<td>4%</td>
<td>14%</td>
<td>5%</td>
</tr>
<tr>
<td>Credit Penetration (% of clients having a loan outstanding at any time)</td>
<td>10%</td>
<td>10%</td>
<td>15%</td>
<td>15%</td>
</tr>
<tr>
<td>Expected ratio of Loan Losses (net of recovery proceeds)</td>
<td>5.0%</td>
<td>3.0%</td>
<td>4.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>Loans Agri-Finance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Credit Volume (% of ANNUAL income)</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
</tr>
<tr>
<td>Share of Segment active in agriculture</td>
<td>8%</td>
<td>2%</td>
<td>11%</td>
<td>3%</td>
</tr>
<tr>
<td>Credit Penetration (% of clients)</td>
<td>60%</td>
<td>60%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Expected Loan Losses (net of recovery)</td>
<td>5.0%</td>
<td>3.0%</td>
<td>4.0%</td>
<td>2.5%</td>
</tr>
<tr>
<td><strong>RATES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrowing rate</td>
<td>33.0%</td>
<td>33.0%</td>
<td>32.2%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Deposit rate</td>
<td>7.6%</td>
<td>7.6%</td>
<td>8.3%</td>
<td>8.3%</td>
</tr>
<tr>
<td>Credit card rate</td>
<td>3.2%</td>
<td>3.2%</td>
<td>2.9%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Compound credit card rate (12 months)</td>
<td>46.6%</td>
<td>46.6%</td>
<td>41.7%</td>
<td>41.7%</td>
</tr>
<tr>
<td>Refinancing rate</td>
<td>15.6%</td>
<td>15.6%</td>
<td>15.6%</td>
<td>15.6%</td>
</tr>
<tr>
<td>Money transfer fee, US$</td>
<td>0.1</td>
<td>0.1</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Withdrawal fee, US$</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
</tr>
<tr>
<td>Fee for cashless payments (% of value of transactions, banks’ share)</td>
<td>1.9%</td>
<td>1.9%</td>
<td>1.9%</td>
<td>1.9%</td>
</tr>
</tbody>
</table>
REFERENCES

- Banking Regulation and Supervision Agency of Turkey. "Turkish Banking Main Indicators." Monthly report. September 2021
- International Monetary Fund. 2019. "World Economic Outlook."
- International Monetary Fund. 2021. "World Economic Outlook."
- World Bank. S.A. The World Bank in Turkey. (Web page)

Prepared by the WFID Partnership April 2022
Towards Women’s Financial Inclusion: a Gender Data Diagnostic of Turkey 37
END NOTES

4. The EU’s General Data Protection Regulation (GDPR) is a data privacy and security law that stipulates protections for personal data and conditions under which the sharing of such data is permissible.
5. World Bank. S.A.
7. World Data Lab forecast, based on Global Findex 2017, World Bank, IIASA, IMF databases. The WorldData Lab forecast this gender gap in access to finance by using non-linear modelling methodology. They looked at which variables from Findex, World Bank, IIASA, IMF databases—such as literacy, proximity to banks/agents, or secondary/tertiary education—have significant impact on the likelihood of being banked. They used this information to project the level of access to finance by gender for the next decade. Gender gap in financial access; it is the absolute gap between (formal) access to finance for men and women.
15. FAFW. 2021.
16. Dollar value based on September 2018 exchange rate: 1 Turkish lira=0.152 US dollars
18. The FSPs surveyed represent 50 percent of the market, based on assets.
20. For more, see Turkey’s e-Government Gateway
Towards Women’s Financial Inclusion: A Gender Data Diagnostic of Turkey

Prepared by the WFID Partnership
April 2022