

Standards for Responsible Digital Financial Services Working Group Meeting: Algorithm Bias

12 April 2022

AGENDA

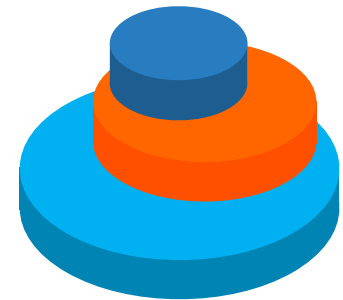
10:00 to 10:05 INTRODUCTIONS & UPDATES

10:05 to 10:15 DRAFT ALGORITHM BIAS STANDARDS: review ideas so far

10:15 to 10:30 EXPERT REFLECTIONS: a) WWB; b) ORCAA; c) CFI

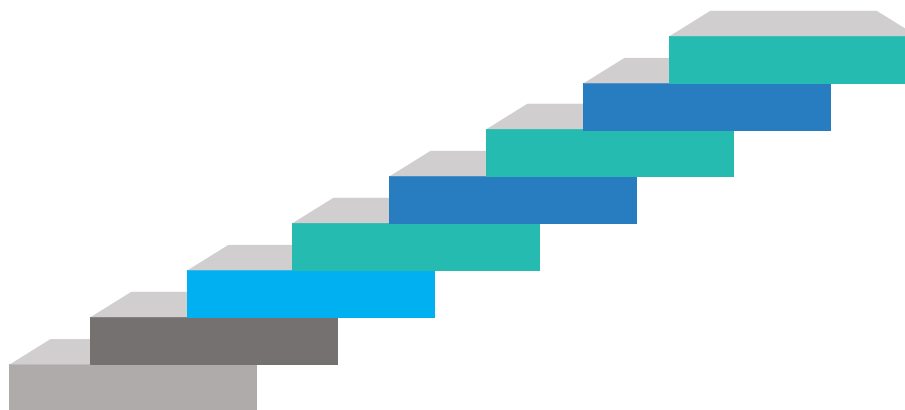
10:30 to 10:55 DISCUSSION

10:55 to 11:00 NEXT STEPS and conclusion



Updates

- Meeting minutes, recording, and notes are now posted to the DFS Working Group page
- The Responsible DFS Standards document contains an updated section on agent management
- Schedule for virtual meetings: bi-monthly, 90 minutes, two topics
- In-person (we hope) meeting in Paris, 28th of September



Standards for Responsible Digital Financial Services:

Working Group Meeting



cerise + SPTF



AFD



OUR WORK ON STANDARDS (1 of 2)

The Universal Standard for Social and Environmental Performance Management

A complete guide of best practices to help financial service providers (FSPs) put clients and the environment at the center of all decisions and align their policies and procedures with responsible business practices.



OUR WORK ON STANDARDS (2 of 2)

Standards for Responsible Digital Financial Services

Why?

- Clarifies what “good” practice means
- Enhances transparency
- Encourages good practices to grow
- Proposes concrete solutions to the risks we observe
- Enables stakeholders to distinguish between providers with a desire to create value for clients versus those focused solely on profits
- Facilitates partnerships with responsible providers

How?

- Review of existing resources: research, articles, blogs, codes of conduct
- Expert interviews: ~40 so far
- Harmonization with existing principles and standards: GSMA, BTCA, IFC, GOGILA, G20 High-Level Principles for Digital Financial Inclusion
- DFS Working Group: open to all, provides a forum to share information and debate

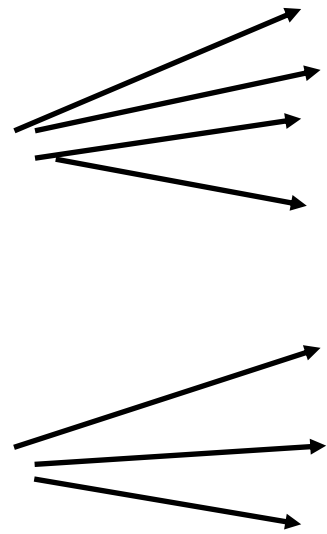
Reminder: the standards say the what, but not the how

What
(universal)

Example 1: Select the criteria you will use to understand whether your algorithm is biased

Example 2: Share reports on algorithm function with senior management, credit department, the risk management team, and the board of directors

How
(varies by context)

- 
- Who gets approved for a loan
 - What size loan a customer gets
 - When a customers gets an increase in maximum loan amount
 - Who gets an interest rate deduction
-
- Have separate in-person meetings with each department
 - Have one big in-person meeting with all departments
 - Email the report to everyone

- “All algorithms are unfair according to some definition of fairness.”

- March 31, 2022 • Irineo Cabreros, Los Angeles Times (Article: *Opinion: Algorithms Will Never Be Completely Fair, Unbiased*)

What is already in the Universal Standards for SEPM related to algorithm bias?

Number	Type	Text
4.A.1	EP	The provider makes loan decisions based on a client's repayment capacity.
4.A.1.4	Indicator	If the loan approval analysis is done through an algorithm, the provider reviews how well the algorithm functions. Minimum frequency: annually
4.A.1.4.1	Detail	The provider reviews the effectiveness of the algorithm for predicting client repayment.
4.A.1.4.2	Detail	The provider checks its algorithms for bias against Protected Categories and corrects as needed.

Algorithm bias:

ideas for management practices so far (1 of 4)

1. If outsourcing algorithm development, inform your development partner of target customers and discuss a strategy to avoid algorithmic discrimination.
2. If outsourcing algorithm development, in the service agreement, do the following:
 - a. Define parameters for algorithm
 - b. Require that the partner will annually check for algorithm's accuracy
 - c. Require the partner test for bias at least annually
 - d. Either require the partner to share the process they undertook to design the algorithm OR require them to certify or demonstrate a lack of bias.
3. If developing the algorithm in-house, credit officers and management take part in the development of algorithm design.
4. If you have information technology (IT) specialists developing your algorithm, train them on your mission and vision and target customers so they understand the context in which the algorithm will be deployed.
5. Before you launch using an algorithm, use synthetic or real data to test who gets approved for what product, and for what amount.
6. When designing how you will test whether your algorithm is biased, do the following:
 - a. Select customer segments that are relevant to you and plan to analyze them separately to see whether the algorithm treats them equally (e.g., men vs. women, rural vs. urban)
 - b. Select the criteria you will use to understand whether the algorithm is biased.

Algorithm bias:

ideas for management practices so far (2 of 4)

7. Have at least one employee who is able to read any algorithm you use.
8. Test whether your data are biased.
9. Monitor / check your data [when - daily?] to determine whether there is no bias (done either in-house or by the algorithm provider).
10. Management reviews the algorithm function at least once per [X time period] to make sure it is comfortable with the balance between fairness and efficiency that the algorithm achieves.
11. Use information from customer complaints to inform your review of algorithm function.
12. Prepare reports, at minimum quarterly, on algorithm function. Analyze at minimum the following::
 - a. Who is being approved, by customer segment, and compare who is actually being served with the market that you are wanting to serve.
 - b. Whether the algorithm is accurate (e.g., are the algorithm's decisions on loan sizes for target customers the same that traditional repayment capacity analyses would make?)
13. Share reports on algorithm function with senior management, credit department, the risk management team, and the board of directors; discuss results and identify potential bias.

Algorithm bias:

ideas for management practices so far (3 of 4)

14. If you find that bias exists, determine if it is coherent with your social goals and strategy.
15. In cases of a systemic shock (e.g., a pandemic), discontinue the algorithm and review it.
16. At least some members of the management team represent the population whose data are being scored by the algorithm. Their cultural knowledge can identify factors in the data that might bias or discriminate.
17. Do not use algorithms if you do not have the capacity to make sure they are not biased.

Algorithm bias: ideas for management practices so far (4 of 4)

_____ Additional ideas after an interview with ORCAA _____

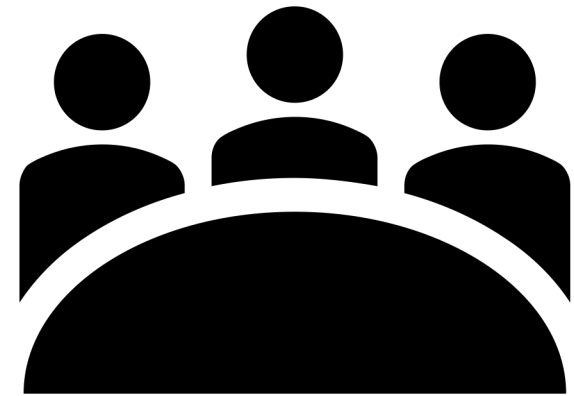
- In order to understand if the algorithm is functioning well, do these steps:
 - Identify the stakeholders involved in the use of this algorithm
 - NB: In financial inclusion, these would be at minimum the fintech that created the algorithm, the FSP, and its customers. Interview each major segment of customer (e.g., women/men), as identified by the FSP.
 - Speak with representatives from each of the stakeholder groups to identify any concerns they have about the use of the algorithm
 - Document what you've learned in a way that makes it clear which stakeholder group had which concerns.
 - Qualify risks in terms of which would be high or low priority to mitigate, and then decide which you will address and which you will not
 - Design and implement an action plan to mitigate the risks you are going to address
 - Develop and implement a monitoring plan to make sure the algorithm continues to function without the biases you eliminated even as time goes on
- If you find the algorithm is not functioning, either update the algorithm or redefine how the FSP uses the information it gets from the algorithm.

_____ Additional idea from CFI _____

- Have a mechanism to solicit customer feedback and address concerns about algorithm function

What do you think? Expert commenters will start off the discussion.

- [Women's World Banking](#)
 - Sonja Kelly
- [ORCAA](#)
 - Jacob Appel
- [Center for Financial Inclusion](#)
 - Alex Rizzi



DISCUSS AND DEBATE

What do you think?



MARK YOUR CALENDARS

Complaints Mechanism and Fair & Respectful Treatment of Customers

May 3, 10 a.m. - 11:30 a.m. EDT

Cyber Security and Fraud

May 17, 10 a.m. - 11:30 a.m. EDT

Responsible Pricing and Transparency

May 31, 10 a.m. - 11:30 a.m. EDT

Data Rights & Privacy and Partnerships

June 14, 10 a.m. - 11:30 a.m. EDT

For further information, contact ameliagreenberg@sptfnetwork.org

Thank you!