

ICTHM 2023  
International Conference in Technology, Humanities and Management**TASK FORCE ON CLIMATE DISCLOSURE: EXAMINING  
CHALLENGES AND OPPORTUNITIES**

Nurhidayah Yahya (a)\*, Maslinawati Mohamad (b)

\*Corresponding author

- (a) Accounting Research Institute, Universiti Teknologi MARA, Shah Alam, Malaysia,  
nurhidayahyaha@uitm.edu.my
- (b) Accounting Research Institute, Universiti Teknologi MARA, Shah Alam, Malaysia,  
masli856@uitm.edu.my

**Abstract**

This paper delves into the intricate landscape of financial institutions' pursuit of sustainability through their engagement with the Task Force on Climate-Related Financial Disclosures (TCFD), which was initiated in 2015. The TCFD provides vital recommendations to encourage corporations in disclosing climate-related financial risks and opportunities. Beginning with a comprehensive introduction to the TCFD framework, it systematically dissects its four core elements, setting the stage for a meticulous analysis of the hurdles faced by financial institutions in adopting these recommendations. These challenges encompass the pressing need for standardized data, the inadequacy of governance infrastructure, and limited engagement from stakeholders throughout the disclosure process. Extensively, the article evaluates the myriad advantages stemming from TCFD compliance, including amplified transparency, fortified risk management capabilities, and an elevated standing in the eyes of stakeholders. It further underscores the profound impact that TCFD adherence can exert upon financial institutions, emphasizing the mounting call for a transition towards a more environmentally conscious business model. Ultimately, this paper advocates for heightened collaboration among financial institutions, regulatory bodies, and stakeholders as a pivotal means to confront the challenges and harness the opportunities that the TCFD framework offers in the pursuit of sustainability, ushering in a more ecologically sustainable future.

2357-1330 © 2023 Published by European Publisher.

*Keywords:* Challenges, Financial Institutions, Opportunities, Sustainability, Task Force On Climate-Related Financial Disclosures

## 1. Introduction

Climate change presents an enormous global challenge requiring concerted effort from all sectors, especially financial institutions. In 2015, the Task Force on Climate-Related Financial Disclosures (TCFD) was established to create an effective framework for disclosing climate-related financial information that can aid businesses in comprehending and articulating their exposure to climate-related risks and opportunities. Over 1,500 organisations have supported the TCFD's recommendations, which have become a widely accepted standard for climate-related financial disclosure (TCFD, 2022).

Despite the rising recognition of the TCFD's framework, financial institutions need help with their effective implementation. These obstacles involve more transparency in data and methodologies, more rigorous scenario analyses, and challenges in calculating climate risk's impact on financial (Cosma et al., 2022; O'Dwyer & Unerman, 2020). Additionally, the TCFD framework must be more consistent across different regions and sectors to support comparability and constrain the information's usefulness to stakeholders (TCFD, 2017).

This research paper delves into financial institutions' challenges and opportunities while implementing the TCFD framework. It mainly focuses on the problems associated with data and methodology, scenario analysis and measuring the impact of climate risks on financial performance. The paper also examines the degree of TCFD adoption across various regions and industries and the potential advantages of effectively implementing the TCFD framework. This analysis aims to identify any gaps in the existing literature and emphasise the unique contribution this paper brings to the table.

## 2. Literature Review

Climate change is one of the serious threats to the sustainable future of our planet. The loss due to natural catastrophes by climate change from 2017 until 2021 is \$ 1.28 trillion (TCFD, 2022). It can have disastrous consequences for generations to come (Intergovernmental Panel on Climate Change, 2022). Given its huge impact on the global economy, it is argue that the financial sector has a vital role to play in addressing climate change (Park & Kim, 2020). In particular, financial institutions can invest in sustainable projects, mitigate exposure to climate-related risks, and provide their clients with support to transition towards low-carbon business models (Dye et al., 2021).

Several studies have provided valuable insights into the realm of climate change disclosure and its impact on financial performance. Maji and Kalita (2022) observed that climate change disclosure can have a positive influence on a company's financial performance, highlighting its potential economic benefits. Achenbach (2021) conducted surveys and interviews, revealing that key factors influencing the level of disclosure included the pursuit of strategic adaptation, data availability, and alignment with other sustainability initiatives in line with TCFD recommendations. Demaria et al. (2019) found a correlation between high environmental impact industries and higher index ratings, indicating the importance of disclosure in such sectors. Kılıç and Kuzey (2019) noted a significant increase in banks' voluntary disclosures related to climate change between 2010 and 2016, as reported in their annual and sustainability reports. Auzepy et al. (2022) emphasized the utility of zero-shot analysis as a valuable tool for climate-related disclosures. Johnston (2018) suggested that adherence to TCFD recommendations is

likely to steer businesses toward higher sustainability levels, underlining their strategic importance. Lastly, Eccles and Krzus (2019) found that each of the 11 TCFD recommendations had been addressed by at least one company, demonstrating a widespread acknowledgment of the framework's significance in climate-related disclosure practices.

The Financial Stability Board established the TCFD in 2015 to recognize the significant role of financial institutions in addressing climate change. With the goal of improving the consistency and transparency of climate-related financial disclosures by companies, the TCFD has developed voluntary recommendations that cover governance, strategy, risk management, and metrics and targets. Multiple studies have emphasised the importance of these recommendations in enhancing the quality and comparability of climate-related financial disclosures. Standardised and comprehensive information provided by the TCFD recommendations allows investors, lenders, and other stakeholders to make well-informed decisions about capital allocation, potentially leading to more sustainable business practices and reduced exposure to climate-related risks.

The literature presents a multifaceted view of the intersection between financial institutions and climate-related risks and opportunities. In 2017, Middleton (2022) highlighted the pivotal role of the Task Force on Climate-Related Financial Disclosures (TCFD) in issuing guidelines for voluntary climate-related financial risk disclosures, emphasizing their importance in providing crucial information to investors and stakeholders about the implications of transitioning to a lower-carbon economy. Stenek et al. (2011) emphasized that institutions managing long-lived asset investments not only face direct financial risks but also have the potential to create value by proactively collaborating with clients and stakeholders to mitigate these risks. Kawabata (2019) underscored the role of climate finance initiatives in exerting pressure on financial institutions to mobilize resources for climate-related endeavors. Campiglio et al. (2018) acknowledged the financial risks posed by climate change, drawing attention to the need for robust risk management strategies. Haigh (2011) noted that financial services have historically remained somewhat peripheral to policy implementation. Hess (2022) stressed the importance of banks evaluating and managing both the physical and transitional hazards stemming from climate change, which can impact customers through various channels. González and Núñez (2021) emphasized the necessity for financial institutions to assess exposure to various risks beyond climate-related ones. Finally, Furrer et al. (2012) highlighted the tendency of banks to separate their climate strategies from core value-generating activities, such as lending and investing, raising questions about the integration of sustainability practices into their core operations.

Although the TCFD recommendations provide a promising framework for addressing climate-related financial risks and opportunities, they are slowly and unevenly implemented by financial institutions. This paper aims to add to the existing literature by examining the challenges and opportunities financial institutions face in implementing the TCFD recommendations and presenting strategies to overcome these challenges. The goal is to enhance the comprehension of the role of financial institutions in promoting sustainability and managing climate change.

### **3. Methodology**

In this conceptual paper, we conducted a literature review to gather data from academic journal articles published within the last five years. We used relevant keywords such as "climate change", "sustainability", "financial institutions", and "Task Force on Climate-Related Financial Disclosures". The articles selected for our review focusing on the role of financial institutions in addressing climate change and implementing the TCFD recommendations. We thoroughly read the selected articles and synthesized the extracted information based on the themes that emerged, with a focus on the challenges and opportunities for financial institutions in implementing the TCFD recommendations. Overall, this methodology allowed for a comprehensive review of the current state of the field, providing insights into the challenges and opportunities faced by financial institutions in addressing climate change and implementing the TCFD recommendations.

### **4. Discussion**

Financial institutions encounter various obstacles when attempting to implement the TCFD recommendations (Cosma et al., 2022; Park & Kim, 2020; TCFD, 2022). These include a need for more clarity regarding data and methodologies (Cosma et al., 2022; TCFD, 2017). Accurate, reliable, and consistent data is crucial for effective management of climate risks and opportunities, yet the data available is sometimes incomplete or unreliable, which can make it difficult for financial institutions to accurately assess such risks and opportunities.

Another significant challenge is the need for more rigorous scenario analysis (González & Núñez, 2021; TCFD, 2017). Scenario analysis involves modelling potential future states of the world under different climate change scenarios. However, the accuracy of scenario analysis depends on the quality and availability of data, as well as the assumptions made during modelling. In addition, scenario analysis can be complex and resource-intensive, requiring significant expertise and resources. Further, the TCFD challenge is the issue of measuring the effect of climate risks on financial performance (Cosma et al., 2022; O'Dwyer & Unerman, 2020). Furthermore, climate-related risks are complex and frequently manifest in indirect and nonlinear ways, making them difficult to model and measure.

Despite the challenges, there are also ample opportunities for these institutions to assume a crucial role in promoting sustainability and managing climate change risks. This includes the potential to create new products and services that support climate mitigation and adaptation efforts (Kılıç & Kuzey, 2019), enhanced risk management and reputation. Adopting more sustainable business practices and investing in climate-friendly projects can improve their credibility and draw more socially responsible clients. Additionally, leveraging their expertise and resources to promote low-carbon business models can contribute to sustainable economic growth. Such implementation can help ensure long-term financial stability and support the transition to a low-carbon economy. Moreover, financial institutions can leverage their position to influence other stakeholders and drive progress towards sustainability.

While this study highlights the significance of implementing TCFD recommendations, there is a need for further research to address the challenges identified and explore opportunities for enhancing sustainability practices. For instance, future research could explore the effectiveness of different data and

modelling approaches in scenario analysis, and the role of financial regulation in supporting the implementation of TCFD recommendations. Researchers could also investigate the potential of technology and innovation in improving TCFD reporting and analysis, as well as examine the challenges and opportunities for small and medium-sized financial institutions in implementing TCFD recommendations and the potential role of industry partnerships or collaborations in facilitating implementation. Finally, it is essential to investigate the potential impact of TCFD implementation on stakeholder engagement and perceptions of corporate social responsibility among financial institutions.

## 5. Conclusion

In this paper, the challenges, and opportunities for financial institutions in implementing the recommendations of the TCFD have been examined. The literature review underlines the need for financial institutions to address climate change and promote sustainability, with the TCFD's recommendations being a valuable tool towards this objective. The results show that while implementing the TCFD recommendations poses challenges, it can lead to improved risk management, better decision-making, and improved reputation for financial institutions.

The implications of these findings are important for financial institutions and the broader financial sector, particularly with the increasing climate risks faced by the world. It is crucial for financial institutions to incorporate these risks into their decision-making processes and provide transparent disclosures to stakeholders, which not only benefits the financial sector but also contributes to the global effort to address climate change and promote sustainability.

Further research is needed to explore potential gaps and limitations identified in this study. This includes investigating the effectiveness of the TCFD recommendations in promoting sustainability, understanding the challenges and opportunities faced by small and medium-sized financial institutions, and determining the role of regulators in promoting climate-related financial disclosures.

Overall, financial institutions play a critical role in addressing climate change and promoting sustainability, and the TCFD's recommendations provide a valuable framework towards achieving these objectives. However, continued efforts and research in this area are necessary for achieving a sustainable future.

## Acknowledgments

This work was supported by the Accounting Research Institute (ARI), Higher Institution Centre of Excellence (HiCoE), Ministry of Higher Education, Universiti Teknologi MARA (UiTM) Shah Alam, Malaysian under Grant: 600-RMC/ARI 5/3(017/2023)

## References

- Achenbach, M. (2021). Transparency of Climate-Related Risks and Opportunities: Determinants Influencing the Disclosure in Line with the Task Force on Climate-Related Financial Disclosures. *Glocality*, 4(1), 1–20. <https://doi.org/10.5334/glo.32>
- Auzepy, A., Tönjes, E., Lenz, D., & Funk, C. (2022). Evaluating TCFD Reporting: A New Application of Zero-Shot Analysis to Climate-Related Financial Disclosures. *Association for the Advancement of Artificial Intelligence*. <http://arxiv.org/abs/2302.00326>

- Campiglio, E., Dafermos, Y., Monnin, P., Ryan-Collins, J., Schotten, G., & Tanaka, M. (2018). Climate change challenges for central banks and financial regulators. *Nature Climate Change*, 8(6), 462–468. <https://doi.org/10.1038/s41558-018-0175-0>
- Cosma, S., Principale, S., & Venturelli, A. (2022). Sustainable governance and climate-change disclosure in European banking: the role of the corporate social responsibility committee. *Corporate Governance: The International Journal of Business in Society*, 22(6), 1345-1369. <https://doi.org/10.1108/cg-09-2021-0331>
- Demaria, S., Rigot, S., & Borie, S. (2019, May). A new measure of environmental reporting practice based on the recommendations of the Task Force on Climate-related Financial Disclosures. In *AFC 2019*.
- Dye, J., McKinnon, M., & Van der Byl, C. (2021). Green Gaps: Firm ESG Disclosure and Financial Institutions' Reporting Requirements. *Journal of Sustainability Research*, 3(1). <https://doi.org/10.20900/jsr20210006>
- Eccles, R. G., & Krzus, M. P. (2019). Implementing the Task Force on Climate-related Financial Disclosures Recommendations: An Assessment of Corporate Readiness. *Schmalenbach Business Review*, 71(2), 287–293. <https://doi.org/10.1007/s41464-018-0060-4>
- Furrer, B., Hamprecht, J., & Hoffmann, V. H. (2012). Much ado about nothing? How banks respond to climate change. *Business & Society*, 51(1), 62–88. <https://doi.org/10.1177/0007650311427428>
- González, C. I., & Núñez, S. (2021). Markets, financial institutions and central banks in the face of climate change: challenges and opportunities. *Banco de Espana Occasional Paper*, 2126, 77. [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3949560](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3949560)
- Haigh, M. (2011). Climate policy and financial institutions. *Climate Policy*, 11(6), 1367–1385. <https://doi.org/10.1080/14693062.2011.579265>
- Hess, P. (2022). The supervision and regulation of climate risks for banks: overview from the perspective of a European practitioner. *Green Finance*, 4(3), 295–309. <https://doi.org/10.3934/gf.2022014>
- Intergovernmental Panel on Climate Change. (2022). *Global warming of 1.5°C*. Retrieved on 22 September, 2023 from [https://www.ipcc.ch/site/assets/uploads/sites/3/2022/03/03\\_SROCC\\_Ch01\\_FINAL.pdf](https://www.ipcc.ch/site/assets/uploads/sites/3/2022/03/03_SROCC_Ch01_FINAL.pdf)
- Johnston, A. (2018). Climate-Related Financial Disclosures: What Next for Environmental Sustainability? *University of Oslo Faculty of Law Legal Studies Research Paper Series*, 2. [https://doi.org/10.1142/9789813109193\\_0020](https://doi.org/10.1142/9789813109193_0020)
- Kawabata, T. (2019). What are the determinants for financial institutions to mobilise climate finance? *Journal of Sustainable Finance & Investment*, 9(4), 263–281. <https://doi.org/10.1080/20430795.2019.1611148>
- Kılıç, M., & Kuzey, C. (2019). Determinants of climate change disclosures in the Turkish banking industry. *International Journal of Bank Marketing*, 37(3), 901–926. <https://doi.org/10.1108/IJBM-08-2018-0206>
- Maji, S. G., & Kalita, N. (2022). Climate change financial disclosure and firm performance: empirical evidence from Indian energy sector based on TCFD recommendations. *Society and Business Review*, 17(4), 594–612. <https://doi.org/10.1108/SBR-10-2021-0208>
- Middleton, A. (2022). Climate Change Accountability, Including TCFD in the Nordic Arctic Countries. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3815856>
- O'Dwyer, B., & Unerman, J. (2020). Shifting the focus of sustainability accounting from impacts to risks and dependencies: researching the transformative potential of TCFD reporting. *Accounting, Auditing & Accountability Journal*, 33(5), 1113-1141. <https://doi.org/10.1108/aaaj-02-2020-4445>
- Park, H., & Kim, J. D. (2020). Transition towards green banking: role of financial regulators and financial institutions. *Asian Journal of Sustainability and Social Responsibility*, 5(1). <https://doi.org/10.1186/s41180-020-00034-3>
- Stenek, V., Amado, J. C., & Connell, R. (2011). *Climate Risk and Financial Institutions*. <https://doi.org/10.1596/27888>
- Task Force on Climate-Related Financial Disclosures. (2017, June). Recommendations of the Task Force on Climate-related Financial Disclosures. *Task Force on Climate-Related Financial Disclosures*. <https://www.fsb-tcfd.org/recommendations/>

<https://doi.org/10.15405/epsbs.2023.11.71>

Corresponding Author: Nurhidayah Yahya

Selection and peer-review under responsibility of the Organizing Committee of the conference

eISSN: 2357-1330

Task Force on Climate-Related Financial Disclosures. (2022, September). *Task Force on Climate-Related Financial Disclosures, 2022 Status Report*. <https://www.fsb-tcfd.org/>