Australian Government
Australian Accounting Standards Board

Staff Paper

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Background and objective

1 This paper aims to provide an overview of academic papers staff identified relevant to the reporting of sustainability-related information. Note that this review focuses only on specific aspects of sustainability reporting and is not representative of the definition of sustainability as discussed in Agenda Paper 3.8 *Positioning sustainability reporting requirements in Australia*[1]. That is, this review of academic papers focuses only on:

(a) climate-related disclosures in a global setting; and

(b) the boundaries of leading sustainability reporting standards and frameworks.

2 All papers considered in this review were identified from Business Source Complete, Social Science Research Network (SSRN), Google Scholar and other databases of academic studies and included relevant working and published papers.

3 This literature review is based on 16 academic papers, which comprise:

(a) 13 academic papers for climate-related disclosures (see Appendix A); and

(b) three academic papers for the boundaries of leading sustainability reporting standards and frameworks (see Appendix B).

4 An important caveat when interpreting this review is that there have been developments in the sustainability reporting requirements and various disclosure methods in the past decade.

[1] Per Agenda Paper 3.8, the concept of sustainability (also referred to as sustainable development) was described by the 1987 Bruntland Commission Report as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs". Consequently, when staff refer to 'sustainability reporting' we mean reporting that broadly is consistent with this description.

As a result, the validity of the findings summarised in this paper may be affected (either positively or negatively) by developments after completing those academic papers.

5 Staff commentary is included for some papers where we identified something notable. Staff commentary is not intended to be an exhaustive list of all possible observations. The purpose of our review was primarily to identify the major academic findings and not thoroughly critique each academic paper.

6 This paper is for information purposes only and does not ask the Board to make any decisions.

Structure

7 This paper is structured as follows:

(a) Key messages (paragraphs 8-15)

(b) Question to Board members

(c) Appendix A: Literature review on climate-related disclosure

(d) Appendix B: Literature review on the boundaries of leading sustainability reporting standards and frameworks

(e) Appendix C: Simplified comparison across leading sustainability reporting standards and frameworks adapted from Bayne (2021)

Key messages

Climate-related disclosure

8 Researchers generally agree that there has been an increase in awareness, demand and adoption of climate-related disclosures globally. In particular, academic findings indicate that:

(a) there is an internal incentive (from the entity) to have better strategies in mitigating climate change issues and in improving their ability to communicate their actions to the market;

(b) climate-related disclosures are being well-received by stakeholders, with early adopters indicating positive responses to their climate-related disclosures;

(c) there is an increase in media coverage and shareholder actions related to environmental issues, such as climate change; and

(d) the practice of climate-related disclosure is becoming institutionalised, and non-compliance may result in public scrutiny.

9 Researchers agree that an ideal climate-related reporting standard or framework is still a long way away, but the consequences of not reporting climate-related information appear to be more detrimental to an entity than if it did report that information. The research observed that the current level of climate-related disclosure is still very low and, as such, express the need to mandate such disclosure.

10 Researchers document that climate-related disclosure requirements will not increase the burden of reporting given the availability and disclosure of such information in different media already (for example, in a sustainability report).

11 In addition to increased transparency and quality of investors' decision-making, additional benefits from disclosing climate-related information include:

(a) increasing return on assets (ROA) based on a study using Chinese listed entities; and

(b) encouraging innovation and new ways of thinking that can mitigate the negative consequences of climate-related matters.

12 Appendix A provides a summary of each of the 13 academic papers for climate-related disclosures.

Boundaries of leading sustainability standards and frameworks

13 One study (Bayne, 2021) provides an overview of existing sustainability standards and frameworks, including the similarities and differences of the reporting boundaries across ten dimensions.[2] A simplified version of the comparison is provided in Appendix C.

14 Two other studies had similar conclusions. While there are different reporting requirements in each of the identified sustainability standards and frameworks (which result in different outputs), there are enough similarities that these standards and frameworks can fit together to produce a more comprehensive reporting framework.

15 The joint alliance of leading sustainability reporting standard-setters and framework providers[3] also published a report that explained how their standards and frameworks could be combined for climate-related financial and other sustainability-related disclosures. This publication (*Reporting on enterprise value*) indicates that there are similarities which can be aligned across multiple sustainability reporting standards and frameworks (see also Agenda Paper 3.3 *Australian and selected jurisdictional perspectives*).

Question to Board members

Question to Board members

Q1: Does the Board have any questions or comments on the academic literature summarised in this paper?

[2] The 10 dimensions include: (1) definition of reporting entity, which compares the definition of a financial reporting entity based on IFRS (control and significant influence) to all activities of the reporting entity over sustainability aspects; (2) target users, which distinguish between information needs of investors and a wider stakeholder focus; (3) materiality, which relates to whether information can be material based on financial, enviro-socio-economic, or both thresholds; (4) boundary description, which relates to whether the boundary concepts are determined, applied and disclosed for the reporting entity as a whole or at the topic level; (5) impact, which compares the reporting on outward impacts of the reporting entity on society, environment and economy versus the inward impact of society, environment and economy on the entity; (6) outward impact, which distinguishes between the outward impact of the reporting entity and the outward impact of the supply chain and other entities related to the reporting entity; (7) time, which relates to the extent to which the information is historic versus prospective; (8) performance, which focuses on the extent to which the information related to an entity's financial or sustainability performance; (9) value, which focuses on the extent to which the information is related to entity value versus those focussing on value for a wider set of stakeholders; and (10) purpose of the report.

[3] Being the Value Reporting Foundation (the Sustainability Accounting Standards Board and the International Integrated Reporting Council), the CDP, Climate Disclosure Standards Board and Global Reporting Initiative.

Appendix A: Literature review on climate-related disclosure

Title, author(s) and scope	Overview of paper's conclusions and findings
David, B. and Giordano-Spring, S. (2021). 'Climate Reporting Related to the TCFD Framework: An Exploration of the Air Transport Sector', *Social and Environmental Accountability Journal*.	In this paper, the authors contend that the TCFD Framework[4] conveys normative pressure upon the air transport sector and examine how companies respond to climate reporting. The authors find that: (1) there is an increase in related disclosures from 2015 (before the issue of the TCFD Framework) to 2018 (after its issue); but (2) climate reporting exhibits poor compliance with TCFD Recommendations, specifically with those concerning the core element of strategy. Additionally, the authors assert that disclosures on climate change might be a good indicator of the gap to be filled in the industry to contribute to climate mitigation. However, the normative pressures exerted by the TCFD Framework accompanied by the coercive pressures exerted by various regulations may discourage companies from releasing certain sensitive information, such as capital expenditures, to avoid being sanctioned by the markets in the event of non-compliance with their commitments.
Eccles, R.G. and Krzus, M.P. (2018). 'Why Companies Should Report Financial Risks From Climate Change', *MIT Sloan Management Review.*	TCFD Recommendations ask companies to report on their response to the risks and opportunities created by climate change. The TCFD Recommendations emphasise that these disclosures can be made as part of existing reporting formats (such as the US Securities and Exchange Commission (SEC) Form 10-K).[5] Despite the voluntary nature of the TCFD Recommendations, the authors argue that companies have several reasons to start implementing them: (1) *Investor pressure*: Investors need this information and are mobilising to ensure companies take the TCFD Recommendations seriously; (2) *Investor decision-making*: Investors may be less inclined to invest in companies that do not implement the TCFD Recommendations. (3) *Self-interest*: Companies that comply with the TCFD Recommendations will have better strategies for adapting to climate change and can better explain these strategies to the investment community.

[4] Note that the authors refer to the TCFD Recommendations as the TCFD Framework in this paper.
[5] Form 10-K "Annual report pursuant to Section 13 or 15(d)".

Title, author(s) and scope	Overview of paper's conclusions and findings
	(4) *The TCFD Recommendations will likely lead to regulation*: Laggards will find themselves playing catch-up, perhaps under time pressure and great expense if they have done nothing to lay the groundwork for following the TCFD Recommendations. In this paper, the authors focus on oil and gas companies and analyse: (1) to what extent companies have complied with TCFD Recommendations given their compliance with US SEC, Global Reporting Initiative (GRI) and the Sustainability Accounting Standards Board (SASB); (2) whether the additional compliance with TCFD Recommendations increases legal liabilities from disclosures; and (3) what needs to be done to facilitate the adoption of the TCFD Recommendations. The authors find that: (1) while there are only three companies that stood out (Eni, ExxonMobil and Statoil), the objectives of the TCFD Recommendations can be met within existing financial filings; (2) more information relevant to the TCFD Recommendations can be found in voluntary sustainability reports than in official financial filings. Thus, companies are already disclosing information they are not required to. While the inclusion of the information in official financial filings gets greater scrutiny, subject to better internal controls and procedures, in reality, it poses no legal risk and is more credible to investors; and (3) there are simple, three-step processes to meet the spirit of the TCFD Recommendations: (i) the board of directors should direct executive management to adopt the recommendations of the TCFD; (ii) executive management should develop a plan for how it can meet the TCFD Recommendations; and (iii) executive management should develop a plan for how it can shift the emphasis of its TCFD Recommendation-related reporting from the sustainability report to its official and mandated financial filing.
Fonseca, A., McAllister, M.L. and Fitzpatrick, P. (2014). 'Sustainability reporting among mining corporations: a constructive critique of the	One of the International Council on Mining and Metals (ICMM) programs is the Sustainable Development Framework (SDF), consisting of ten principles, for sustainability reporting and external third-party assurance. All member companies are expected to implement the SDF and publish independently verified reports on their sustainability performance. Driven by ICMM and a global corporate trend, mining corporations increasingly publish GRI-based sustainability reports, with 40 out of the world's 44 major international mining companies producing annual sustainability reports.

Title, author(s) and scope	Overview of paper's conclusions and findings
GRI approach', *Journal of Cleaner Production*.	While the authors corroborate Nola Buhr's argument[6], asserting that the pathway to an 'ideal' reporting system might be much longer than many would like, one needs to bear in mind that far more daunting are the potential consequences of not effectively progressing towards sustainability.
Halkos, G. and Nomikos, S. (2021). 'Corporate social responsibility: Trends in global reporting initiative standards', *Economic Analysis and Policy.*	In this study, the authors consider the diffusion of the GRI worldwide in the period of 1999 to 2017. Analysing based on continent, the authors perform trend analysis and find that Asia and Europe behave in the same way in the growth of reporting initiatives and are being followed by Latin America, Caribbean, and Northern America. Asia is still in the spreading out stage, showing a steady expansion with Latin America, the Caribbean, and Africa which have already reached the full-grown stage. Notably, North American corporations have not implemented GRI reporting on the scale expected because firms may use other means and channels to inform society on their sustainability policies.
Demaria, S. and Rigot, S. (2020). 'Corporate environmental reporting: Are French firms compliant with the Task Force on Climate Financial Disclosures' recommendations?', *Business Strategy and the Environment*.	In this study, the authors try to answer the following questions: (1) Do companies disclose information on climate-related risk and their impacts in their reference documents? (2) What is the content of environmental and climate-related risk disclosures regarding these recommendations? The authors find that the level of environmental and climate information reporting by 40 French companies, in accordance with the TCFD Recommendations, is increasing over the period 2015-2018, especially in the case of firms belonging to more polluting sectors (such as energy, construction, transport and food sectors). Further, the authors find that better disclosure can be observed in the areas of risk management and metrics, which are far ahead of governance and strategy.
Bingler, J.A., Kraus, M. and Leippold, M. (2021). 'Cheap Talk and Cherry-Picking: What ClimateBert has to say on Corporate Climate Risk Disclosures', *SSRN*.	The authors observe whether the arrival of the TCFD Recommendations had a significant impact on disclosures of companies that support those Recommendations. The authors find that the voluntary disclosure commitments seem to suffer from cheap talk, in the sense that announcing support of the TCFD Recommendations does not lead to an increase in disclosures, and cherry-picking, in the sense that companies prefer disclosure on non-material categories. Therefore, the authors suggest that a viable solution may be to convert voluntary reporting into regulatory disclosures in the near future.

[6] According to Buhr (2007), sustainability reporting is an admirable target to work towards". However, the pathway to the ideal reporting system is unclear, disputed and much longer than many would like.

Title, author(s) and scope	Overview of paper's conclusions and findings
Eccles, R.G. and Krzus, M.P. (2018). 'Implementing the Task Force on Climate-related Financial Disclosures Recommendations: An Assessment of Corporate Readiness', *Schmalenbach Business Review*.	The authors explore how difficult it will be for companies to implement the TCFD Recommendations by examining the disclosures of 14 of the largest oil and gas companies that had filed a US SEC Form 10-K or Form 20-F[7] in 2016 and their sustainability reports. In general, the authors find that reporting for 2016 (prior to the release of TCFD Recommendations) is uneven, with some thematic areas of the TCFD Recommendations being fairly well covered and others not. Some companies are making fairly modest disclosures, while others are being fairly progressive in this regard. The fact that even a few companies are coming close to the TCFD Recommendations, even before they were published, is evidence that it is not an impossible or overly burdensome task to do.
Bose, S., and Hossain, A. (2021). 'An Exploratory Study on Climate-Related Financial Disclosures: International Evidence', *Corporate Narrative Reporting: Beyond the Numbers*.	The authors examine the extent of firm-level disclosure of climate-related financial information based on the TCFD Framework[8] and find that the level of climate-related financial disclosures has gradually increased across 57 counties after the issuance of the TCFD Framework, indicating companies' commitment to recognising and integrating climate change risks and opportunities into their operations, and their intention to reduce their climate change footprint.
Yang, Y., Orzes, G. and Jia, F. (2019). 'Does GRI Sustainability Reporting Pay Off? An Empirical Investigation of Publicly Listed Firms in China', *Business and Society*.	In this paper, the authors seek the answer to these questions: (1) What is the impact of the adoption of the GRI in sustainability reporting on Chinese firms' profitability? (2) What factors affect the relationship between the adoption of the GRI and a Chinese firm's profitability? Analysing 122 listed firms in China, the authors find a significant improvement in ROA due to the adoption of GRI guidelines. The authors further analyse and find that the performance improvement is significantly correlated with firms' ties with the local government. However, the internationalisation of the companies appear to benefit less from the adoption of the GRI.
Jain, A., Islam, M.A., Keneley, M. and Kansal, M. (2021). 'Social contagion and the	Based on the social contagion theory (SCT), the authors investigate the extent and logic of diffusion of GRI-based sustainability reporting within the global financial sector.

[7] Form 20-F “Registration statement / Annual report / Transition report”.
[8] Note that the authors refer to the TCFD Recommendations as the TCFD Framework in this paper.

Title, author(s) and scope	Overview of paper's conclusions and findings
institutionalisation of GRI-based sustainability reporting practices', *Meditari Accounting Research*.	The authors find that GRI-based sustainability reporting by early adopters (thought leaders) and the accompanying media attention have positively influenced its continued adoption. The increasing diffusion of GRI reporting was encouraged by the expanding coverage by mass media, positive reports by early adopters, the growing number of GRI conferences, and regulatory bodies' recommendations. Institutionalisation occurred as firms became increasingly aware of GRI reporting and began to accept it as a normal and legitimate business practice. Companies adopt the approach because it has become the norm, and not doing so may negatively impact public perceptions of the company. Later, uptake of such practices is argued to be isomorphic as the actions of early and median adopters in introducing the new managerial fashion encourages non-adopters to copy this practice.
Koloukoui, D., Gomes, S.M.S., Marinho, M.M.O., Torres, E.A., Kiperstok, A. and Jong, P. (2018). 'Disclosure of climate risk information by the world's largest companies', *Mitigation and Adaption Strategies for Global Change*.	In this paper, the authors investigate what kind of information is being disclosed when it comes to climate risks and which specific characteristics of a company can explain and influence the amount of disclosure information about climate risks. Analysing the 100 largest companies in the world, according to the Bloomberg and PwC classification, the authors find that 14% of companies did not disclose any climate risk information in the CDP (formerly the Carbon Disclosure Project) report and, from those that report GRI, 9.9% did not provide information regarding policies, actions, and strategies for mitigating the risks related to climate change. The results from content analysis suggest that, in general, there is still a low level of disclosure about climate risks by these companies. Given the low level of disclosure found, the authors argue that companies are at serious threat of facing regulatory risks and encourage the government of all countries to investigate and make corporate environmental reporting mandatory in the future.
Reid, E.M. and Toffel, M.W. (2009). 'Responding to Public and Private Politics: Corporate Disclosure of Climate Change Strategies', *Strategic Management Journal,* 30 (11), 1157-1178.	The authors of this paper explore corporate responses to shareholder activism. Specifically, this study explores how private and public politics associated with the climate change movement influence firms' greenhouse gas emissions disclosure practices and encourage greater corporate transparency. The authors find that firms that have been targeted, and firms in industries in which other firms have been targeted, by shareholder actions on environmental issues are more likely to publicly disclose information to the CDP. The authors also find that firms headquartered in states with proposed greenhouse gas regulations, which remained uncertain in stringency and scope, are more likely than other firms to disclose information to the CDP publicly.
Wasim, R. (2019). 'Corporate (non)disclosure of climate change information', *Columbia*	In this note, the author raises a concern that there is virtually no discussion of climate change risks in publicly traded companies' filings with the US SEC and on other public platforms, although a growing number of investors are demanding more information from companies about their vulnerabilities to climate change. This indifference to climate

Title, author(s) and scope	Overview of paper's conclusions and findings
Law Review, 119(5), 1311-1354	change matters is potentially harmful to investors, who may be trading inaccurately priced securities that fail to account for the risks posed by climate change. Thus, the author encourages companies to assess and disclose climate change risks, which are critical to maintaining transparency and efficiency in financial markets and may also spur innovation and new modes of thinking that can help mitigate the harmful impacts of climate change.

Appendix B: Literature review on the boundaries of leading sustainability reporting standards and frameworks

Title, author(s) and scope	Overview of paper's conclusions and findings
Bayne, L. (2021). 'Understanding reporting boundaries in annual reports: a conceptual framework', *Accounting, Auditing and Accountability Journal.*	In the paper, the author provides a table that compares ten leading sustainability reporting standards and frameworks across ten boundary dimensions relevant to both financial and sustainability reporting. The combinations of dimensions can be used to compare and understand how these different standards and frameworks share some similarities and yet differ from one another. By focusing on the dimensions, the author compares different boundaries, allowing an understanding of similarities and differences along each dimension, which may be useful for standard-setters in trying to bring congruence amongst standards and frameworks. In short, the author argues that all the standards and frameworks appear internally consistent in their boundary dimensions (except the Strategic-Report-Guidance for Public Interest Entities[9]). It is suggested that the IFRS *Conceptual Framework for Financial Reporting* can be viewed on one extreme of the dimension combinations, while the NFRD-Proposal and GRI-ED are similar to each other and represent another extreme of the dimension combinations. The other standards and frameworks are in the middle of these extremes. The simplified version of this Table is presented in Appendix C.
O'Dwyer, B. and Unerman, J. (2020). 'Shifting the focus of sustainability accounting from impacts to risks and dependencies: Researching the transformative potential of TCFD reporting', *Accounting, Auditing and Accountability Journal.*	While both reporting under the TCFD Recommendations and Integrated Reporting <IR> Framework have investor focus, reporting under the TCFD Recommendations is fundamentally different from reporting under the <IR> Framework because the TCFD Recommendations focus on climate dependencies rather than the <IR> Framework's focus on sustainability impacts. Understanding the differences is important because: (1) broad stakeholder-targeted sustainability reporting (such as reporting under the GRI) aims to provide accountability information to a range of stakeholders about the impacts on these stakeholders from a corporation's actions. It, therefore, discloses corporate sustainability impact information to stakeholders whose primary information needs relate to these sustainability impacts; (2) reporting under the TCFD Recommendations aims to provide the finance sector with information about dependencies-related financial risks to which a corporation is exposed. It, therefore, discloses corporate climate dependencies information to financial stakeholders whose main climate information needs relate to these corporate dependencies (and risks flowing therefrom); and

[9] Public Interest Entities, following the definition in FRC (2018), refers to 'a traded, baning or insurance company with more than 500 employees'.

Title, author(s) and scope	Overview of paper's conclusions and findings
	(3) reporting under the <IR> Framework primarily discloses corporate sustainability impact information to financial stakeholders who, in this role, are primarily interested in a corporation's sustainability dependencies. As such, there may be a mismatch between the information provided by integrated reporting and the information needs of investor target audiences for integrated reports.
Baumuller, J. and Sopp, K. (2021). 'Double materiality and the shift from non-financial to European sustainability reporting: review, outlook and implications', *European Sustainability Reporting*.	In recent decades, four important concepts for reporting on a company's sustainability performance have emerged: (1) non-financial reporting (e.g., NFRD (2014/95/EU)[10]); (2) sustainability reporting (e.g., GRI); (3) integrated reporting (e.g., <IR> Framework); and (4) climate reporting (e.g., CDP, CDSB, TCFD Recommendations). Although they share a common core (i.e., ESG matters) and refer to one another, they are also considerably different in terms of their target audience and prioritising sustainability matters over financial matters. As a result, the different reporting also lead to different reporting contents. Most recently, an initiative headed by the joint alliance of leading sustainability standard-setters and framework providers published a paper that described how to align their reporting frameworks. Clearly describing how they fit together and represent elements of a comprehensive corporate reporting framework, they built their ideas around a perspective of "dynamic materiality": Different target groups are associated with different information needs and, the more comprehensive they become, the wider the scope of the applicable principle of materiality.

[10] Non-Financial Reporting Directive (2014/95/EU)—see also Agenda Paper 3.3.

Appendix C: Simplified comparison across leading sustainability reporting standards and frameworks adapted from Bayne (2021)

	Reporting entity: Financial vs sustainability control/influence	*Target users: Investor vs wider stakeholder focus*	*Materiality: Financial vs enviro- socio-economic (ESE)*	*Boundary description: Entity-wide vs topic boundary*	*Impact: Outward or inward*[11]	*Outward impact: Direct or indirect*	*Time: Historic or future*	*Performance: Financial or Sustainability*	*Value: Entity vs wider stakeholder*
IFRS-CF[12]	Financial	Investor	Financial	Entity-wide	Inward	-	Historic and future	Financial	Entity
IFRS-MC-ED[13]	Financial	Investor	Financial	Entity-wide	Inward and circular	Direct and indirect circular	Historic and future	Financial	Entity
IFRS Foundation Consultation paper[14]	Financial	Investor	Financial	Entity-wide	Inward and circular	-	-	-	Entity
TCFD Recommendations	Financial	Investor	Financial	Entity-wide	Inward and select outward	Direct and indirect select	Historic and future	Financial and select enviro	Entity
Strategic Report Guidance (UK)	Financial (Non-PIE) Beyond Financial (PIE)	Investor	Financial	Entity-wide	Inward and select outward	Direct and indirect	Historic and future	Financial and Sustainability	Entity
SASB	Financial	Investor	Financial	Entity-wide	Inward and circular	Direct and indirect circular	Historic and future	Financial and circular Sustainability	Entity
<IR> Framework	Beyond Financial	Investor	Financial	Entity-wide	Inward and circular	Direct and indirect circular	Historic and future	Financial and circular Sustainability	Entity and circular wider stakeholder
NFRD (2014/95/EU)	Sustainability	Wider stakeholder	Financial and ESE	Entity-wide	Inward and outward	Direct and indirect	Historic and future	Financial and Sustainability	Wider stakeholder
GRI	Sustainability	Wider stakeholder	ESE	Topic	Outward	Direct and indirect	Historic and future	Sustainability	Wider stakeholder

[11] 'Circular' outward-inward refers to the situation in which the entity report the outward impacts only if the outward impacts result in inward impacts on the reporting entity.
[12] IFRS *Conceptual Framework for Financial Reporting*
[13] IFRS Practice Statement 1 *Management Commentary* Exposure Draft
[14] IFRS Foundation Consultation Paper on Sustainability Reporting