Carbon Tracker Initiative

PRI Principles for Responsible Investment

Flying blind

The glaring absence of climate risks in financial reporting

Report

September 2021

About Carbon Tracker

The Carbon Tracker Initiative is a team of financial specialists making climate risk real in today's capital markets. Our research to date on unburnable carbon and stranded assets has started a new debate on how to align the financial system in the transition to a low carbon economy.

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About the Climate Accounting Project team

The Climate Accounting Project is an informal team of accounting and finance experts drawn from the investor community and commissioned by the Principles for Responsible Investment (PRI).

Acknowledgements

This report is the result of the work of both Carbon Tracker Initiative and the Climate Accounting Project (CAP). We would like to thank the following individuals for their contribution to the report: Sue Harding, Paul Lee, David Pitt-Watson, Samantha Ross and Peter Taylor. Thanks to Charles Guy-Knapp for his significant work on the report and Savani Mahoorkar for her support with data collection and schedules. We also thank Carbon Tracker staff Catharina Hillenbrand Von Der Neyen, Mike Coffin and Simon Perham for their reviews and helpful comments, and the entire Carbon Tracker team for their work on publishing the report. We are grateful to the staff from CERES, IIGCC and PRI for their valuable insight and continued focus on these issues with companies and auditors. All errors and omissions are the responsibility of the authors.

About the Authors

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Rob Schuwerk is Executive Director of Carbon Tracker's North American office. Rob leads Carbon Tracker's outreach and data provision to the Climate Action 100+ Initiative, as well as its work with securities market regulators and accounting standard setters around the globe, as they aim to bring greater transparency to climate-related financial risk. He has authored several papers on how climate-related risks are likely to impact financial reporting and the role that securities markets regulators can play.

Prior to joining Carbon Tracker in 2014, Rob was an assistant attorney general with the New York State Office of the Attorney General and, prior to that, a litigator in the New York City offices of Paul, Weiss, Rifkind, Wharton & Garrison LLP. He is a graduate of The Yale Law School.

Table of Contents

Figures

Tables

1. Key findings

The following six findings are despite the fact that the relevant regulators for global company reporting and audit have set out their expectations that climate change issues should be considered in the creation and audit of financial statements.

- **There is little evidence that companies incorporate material climate-related matters into their financial statements.**

Of the 107 companies that we reviewed, over 70% did not indicate that they had considered climate matters when preparing their 2020 financial statements. This is despite the fact that significant institutional investors have identified these companies as highly carbon exposed, and most are included among the Climate Action 100+ investor focus list.

- **Most climate-related assumptions and estimates are not visible in the financial statements.**

Only 25% of the companies provided disclosure of at least some of the quantitative assumptions and estimates that they used in preparing the financial statements.

- **Most companies do not tell a consistent story across their reporting.**

For 72% of the companies, the treatment of climate matters within their financial statements appeared to be inconsistent with their disclosures of climate-related risks (and commitments, when relevant) in their other reporting. This included instances where the company conceded that climate-related risks were financially material.

- **There is little evidence that auditors consider the effects of material climate-related financial risks or companies' announced climate strategies.**

80% of auditors provided no indication of whether or how they had considered material climate-related matters, such as the impact of emissions reduction targets, changes to regulations, or declining demand for company products, in their audits.

- **Even with considerable observable inconsistencies across company reporting ('other information' and financial statements), auditors rarely comment on any differences.**

We had significant concerns for 59% of the consistency checks that the auditors were required to perform. For the remaining 41%, around half of the companies' discussions of and responses to climate matters were consistently limited across their reporting.

- **Companies do not appear to use 'Paris-aligned' assumptions and estimates.**

While some of the companies used inputs from published climate scenarios, none appeared to use assumptions and estimates that were 'Paris-aligned', or provided sensitivities to this.

2. Executive summary

2.1 Background: Climate accounting - overview of our work

This study examines whether 107 publicly-listed carbon-intensive firms (and their auditors) considered material climate-related risks in financial reporting, particularly in the light of clarifications from three of the four global accounting and auditing standard-setters that climate change issues should be considered in the preparation and audit of financial statements. The study also assesses whether investor concerns about Paris-alignment of assumptions and estimates have been addressed[1].

The firms subject to this review were primarily Climate Action 100+ (CA100+) focus companies. These companies are seen as key to driving the global net-zero emissions transition as they form part of the "world's largest corporate industrial greenhouse gas emitters".[2]

Accordingly, there was an underlying expectation that these companies would consider climate issues in their 2020 financial reporting (and their auditors, in their audits of the financial statements).

Climate can have a material impact on financial reporting

Climate-related matters such as declining demand for oil and gas, the switch to renewable energy for power, regulations to limit emissions, and the phase out of internal combustion engines can directly and significantly affect financial statement results. They can impact current financial reporting since many of the numbers in the financial statements include estimates and assumptions about the future. For example, climate matters can lead to shorter estimated useful lives for productive assets or changes to the assumptions used to determine expected future cash flows for impairment testing, resulting in impairments and altering the reported amounts of assets and liabilities. Similarly, shifting product demand may result in inventory obsolescence, leading to increased costs, reduced revenues and profits and lower returns on capital which can impact a company's ability to continue as a going concern. If a company ignores the clear signs that dramatic changes lie ahead, it runs the risk of overstating assets, or understating liabilities, all to the detriment of the company and ultimately its investors.

Standard-setters acknowledge that companies must account for climate-related matters

In 2019, the International Accounting Standards Board (IASB) published an *article*, followed by educational material in 2020, making it clear that material climate-related matters, such as transition risks and emission reduction targets, must be incorporated into financial statements under International Financial Reporting Standards (IFRS) and that material assumptions and estimates should be disclosed. The International Audit and Assurance Standards Board (IAASB)

[1] *See definition of Paris-alignment used for the purposes of this study in Section 4.3 Overall Approach.*
[2] *See Appendix 3 – List of companies. These companies have been selected by investors for engagement. The majority of the companies that we reviewed form part of the 167 Climate Action (CA)100+ focus companies, which are key to driving the global net-zero emissions transition. In total, CA100+ companies account for "over 80% of corporate industrial greenhouse gas emissions".* https://www.climateaction100.org/whos-involved/companies/

published *staff guidance* clarifying that climate-related issues should be considered as part of audits. In early 2021 the staff of the US Financial Accounting Standards Board (FASB) published *guidance* about the intersection of environmental, social and governance (ESG) matters including climate change, and US Generally Accepted Accounting Principles (GAAP) requirements, with a reminder that many of these accounting standards already require consideration of material effects from changes in the company's business and operating environment. These guidance documents reflect the rapidly growing awareness that climate-related issues pose material risks to many companies and therefore should now be reflected in their accounts.

Auditors, via the Global Public Policy Committee (GPPC)[3], wrote to the IASB in December 2020, indicating that they will: communicate the IASB/IAASB guidance to their networks and encourage, "greater transparency on the impact of climate-related matters on companies' financial statements." The results of our study suggest that more work is needed.

Investors are concerned about the about the lack of transparency of climate-related financial risks

Investor concerns about the impact of climate on company financials are growing. In late 2020 the Principles for Responsible Investment (PRI), the UN Environment Programme Finance Initiative (UNEP FI), the UN-convened Net-Zero Asset Owner Alliance initiative, the Institutional Investors Group on Climate Change (IIGCC), the Investor Group on Climate Change (IGCC), the Asia Investor Group on Climate Change (AIGCC), and the Pensions and Lifetime Savings Association (together, investor groups), along with individual investor organisations[4] (together representing more than $100 trillion in global assets under management)[5] urged companies and their auditors to ensure that they follow the relevant requirements to consider climate in the 2020 financials (and the audits thereof)[6]. These investor groups and individual investor organisations (herein, 'investors') also requested that companies use assumptions and estimates that are compatible with achieving the goals of the Paris Agreement[7].

The CA100+ is also looking to develop a climate accounting indicator "to assess whether a company's accounting practices and related disclosures reflect consideration of transition risk relative to a range of possible climate scenarios"[8].

Importantly, these investors' requests were predicated not just upon investor needs, but also on what accounting and auditing standard setters have said is required.

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[3] *The Global Public Policy Committee (GPPC) is made up of senior representatives from BDO, Deloitte, EY, Grant Thornton, KPMG, and PwC. Its objectives include participating in global public policy matters and enhancing confidence in the [audit] profession. It is also a forum for communication with regulators and stakeholders. See* Global Public Policy Committee | Deloitte | Audit, *and full text of letter at* gx-audit-climate-related-matters-gppc-letter-to-iasb.pdf (deloitte.com).

[4] *A group of 38 long-term investors and members of the Institutional Investor Group on Climate Change (IIGCC). See full list of these investors here:* https://www.iigcc.org/download/iigcc-letter-to-european-companies-on-paris-aligned-accounts/?wpdmdl=4006&masterkey=5fabc9c5af24f

[5] *See details in Section 3. Background. There is some overlap between the signatories to these two letters.*

[6] *See* Investor groups call on companies to reflect climate-related risks in financial reporting | PRI Web Page | PRI (unpri.org) *and IIGCC Letter to European Companies on Paris Aligned Accounts, authored by Sarasin & Partners LLP* https://www.iigcc.org/download/iigcc-letter-to-european-companies-on-paris-aligned-accounts/

[7] *See definition used for the purposes of our study in Section 2.2 Scope and Approach.*

[8] Background and Future Development | Climate Action 100+

2.2 Scope and approach

This study is a coordination of efforts by Carbon Tracker and the Climate Accounting Project (CAP)[9]. Carbon Tracker reviewed reports for 55 companies that operate primarily in the energy, transportation and industrials sectors. The CAP team reviewed reports for 52 companies that operate across a variety of sectors, including consumer goods and services, energy and industrials and transportation.

The study examines the degree to which over one hundred climate-exposed companies, which form part of the "world's largest corporate industrial greenhouse gas emitters"[10], have demonstrated that they considered material climate issues when drawing up their accounts, and disclosed the material relevant assumptions and estimates they used as expected under relevant accounting and auditing requirements. The research discussed in this report suggests that companies and their auditors need to drastically improve their reporting.

It examines whether the auditors of these companies have considered the effects of climate in performing their work. It suggests that auditors must also significantly up their game to fully deliver their role and appropriately respond to the needs of the users of accounts and the ultimate clients of the audit.

Investors have requested that companies use assumptions and estimates that are 'Paris-aligned'[11]. The study also examines the degree to which companies have used and disclosed assumptions and estimates that are 'sustainable'- e.g., aligned with the goals of the Paris Agreement. It finds that the request of these investors have yet to be met.

Defining Paris-alignment

The investors referenced in this report have expressed a need to achieve the preferred goals of the Paris Agreement - specifically, to limit global warming to no more than 1.5°C - and to reduce emissions to net zero by 2050. For the purpose of our study, we viewed oil, gas and carbon prices and demand projections provided in the International Energy Agency's Net Zero Emissions by 2050 Scenario (IEA NZE2050) as a benchmark for 'Paris-alignment'.

The IEA NZE2050 was published in May 2021 and may not have been available as a reference price deck for most 2020 annual filings. While the IEA's Sustainable Development Scenario (SDS) was used by some companies in 2020, other scenarios that more closely addressed the preferred goals of the Paris Agreement were however already in existence, including, for example, the IEA's "Beyond 2 Degrees" Scenario (B2DS) which has been used in previous Carbon Tracker reports.

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[9] *An informal team of accounting and finance experts drawn from the investor community and commissioned by the PRI.*

[10] *94 of the companies that we reviewed form part of the 167 CA100+ focus companies. See* [Climate Action 100+](#).

[11] *See also Ceres' report:* https://www.ceres.org/resources/reports/lifting-veil-investor-expectations-paris-aligned-financial-reporting-oil-and-gas

2.3 Results

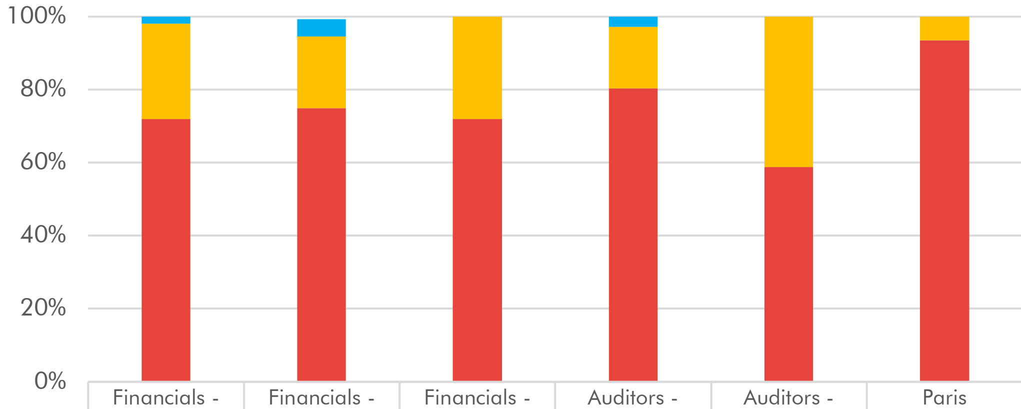
Our reviews looked for evidence of whether companies and their auditors had considered climate as might be expected under the relevant requirements, and whether they had responded to specific investor requests to align assumptions with the goals of the Paris Agreement or disclose the impact of such assumptions. To do so, we asked the following six questions:

1. **Did the company consider the effects of climate-related matters in preparing its financials?**
2. **Did the company disclose quantitative climate-related estimates and assumptions[12]?**
3. **Were the company's financials consistent with its discussions of climate matters in its other reporting?**
4. **Did the auditor appear to consider climate matters in its audit?**
5. **Did the auditor's consistency check indicate inconsistencies in company reporting related to climate matters?**
6. **Did the company and its auditor respond to specific investor requests to align assumptions and estimates with the goals of the Paris Agreement or disclose the impact thereof?**

Figure 1 shows the results, by category, for each of these six questions. Most of the statistics in the Key Findings refer to reporting about which we had 'significant concerns' (red in Figure 1). When we add those reports which we rated as giving us 'some concerns' (orange in Figure 1), this suggests an even more significant departure from requirements or requests. Overall, we found little evidence that companies or their auditors considered climate-related matters in the 2020 financial statements. Only a small fraction of reports, and for only three of the six assessments, were rated as having achieved a rating of 'few concerns', and none were assessed as being 'good practice'[13].

[12] *Also referred to as 'inputs' in this report.*
[13] *See description of rating system in Appendix 1– Approach to reviews and ratings.*

Figure 1 – Overall results: consideration of climate matters in financial statements and audit reports[14]



	Financials - consideration of climate	Financials - visibility of assumptions	Financials - consistency w/ other reporting	Auditors - consideration of climate	Auditors - consistency check	Paris alignment of assumptions
Good practice	0%	0%	0%	0%	0%	0%
Few concerns	2%	5%	0%	3%	0%	0%
Some concerns	26%	20%	28%	17%	41%	7%
Significant concerns	72%	75%	72%	80%	59%	93%

Source: Carbon Tracker and CAP team analyses

The implications of these findings are profound. The apparent lack of consideration of material, climate-related matters in the financials raises the prospect that those accounts, like the shadows on Plato's cave, are failing to reflect the true material, climate-related risks. Accounting and auditing standards are established in order to give investors the information they need, via financial reporting, to compare companies, allocate capital and undertake stewardship. Failure to meet these standards suggests that investors will lack the necessary information to carry out those tasks. If the underlying judgements used to prepare the financials ignore climate considerations, there is a risk that capital is misallocated to activities that are both loss-making and that bring the solvency of companies into question.

Finally, if companies do not use 'Paris-aligned' assumptions in their financial statements, they are encouraged to invest in polluting technologies which will exacerbate the climate problem and delay the energy transition, reducing our chances of decarbonising in the time required and risking a Minsky moment when those unsustainable assumptions are made evident.

2.4 Recommendations

By failing to provide transparency around whether and how they have taken climate-related risks into account in the related assumptions and estimates used in the financials, companies, and their auditors, are leaving investors in the dark. As a result, this:

- raises concerns about whether companies and auditors are following the relevant requirements and whether investors are receiving the appropriate information related to

[14] *Note there may be slight differences due to rounding. See description of ratings in Appendix 1-Approach to reviews and ratings.*

climate matters in financial statements;

- limits the ability of investors to allocate capital in accordance with their objectives, including meeting the goals of the Paris Agreement[15];
- disregards that a significant coalition of investors have asked for this and need this information; and
- reduces an investor's ability to make investment, engagement and voting decisions.

Companies, auditors, regulators and investors all have important roles to play in improving the content and quality of financial reporting of climate matters.

Companies should increase both the consideration of and the transparency around the incorporation of climate matters in their financial statements.

In order to do so, companies need to:

- improve their climate governance (and financial reporting thereof) by establishing appropriate oversight, internal control and risk management systems, and ensuring that such issues are part of audit plans;
- clearly indicate whether and how they have incorporated material climate-related risks and/or commitments into their financial statements;
- disclose quantitative climate-related estimates and assumptions and describe how they are taking climate-related risks and their own targets[16] into account; and
- explain why, and provide Paris-aligned sensitivities to assumptions and estimates, if they are not using aligned inputs in their financial statements.

Auditors must provide better transparency around whether and how they addressed climate-related matters in their audits. This is particularly important in the light of the GPPC's December 2020 letter.

As part of this, auditors need to:

- provide evidence of the work they did to address climate-related issues, including how they scrutinised and used professional scepticism in evaluating management's inputs;
- ensure that company financial statements are not inconsistent with other company disclosures which may extend beyond annual filings;
- ensure that companies consider climate-impacted assumptions and estimates and that these are transparently disclosed;
- develop firm-wide policies to consistently address these issues; and
- encourage that management meet investor demands for Paris-aligned assumptions and sensitivities,

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[15] *For example, as part of investors' own risk management policies, stakeholder expectations (such as demands from pension clients) and their own climate commitments.*

[16] *See also IFAC's "Corporate Reporting: Climate Change Information and the 2021 Reporting Cycle" ,* https://www.ifac.org/knowledge-gateway/contributing-global-economy/discussion/corporate-reporting-climate-change-information-and-2021-reporting-cycle

examine these inputs themselves and provide sensitivities thereon.

Regulators should identify whether companies have incorporated material climate-related matters in their financial statements, look for inconsistencies and identify audit failures[17].

Our findings suggest the need for enforcement of these issues. Regulators should:

- increase their focus on ensuring consistency between company narrative reporting and the financial statements;
- expand the definition of 'other information' for audit consistency checks to ensure the inclusion of climate related disclosures in documents such as sustainability or climate reports; and
- announce their inclusion of these issues in forthcoming supervisory and enforcement reviews.

Investors can use the results of this study to inform ongoing engagement, voting and investments decisions.

Investors are a key lever of change. Accordingly, they should:

- engage with companies and establish expectations of climate-related matters for the 2021 accounts and upcoming proxy season;
- help ensure proper governance of these issues through communication with audit committees or others in charge of oversight; and
- communicate their expectations to auditors, either directly or via proxy voting.

[17] *Current standards already set expectations beyond what companies (and auditors) are delivering. However additional steps by the SEC, such as a Staff Accounting Bulletin or the IASB such as in their Agenda Consultation and the PCAOB providing clarifications may help facilitate the requisite increase in transparency and consideration of climate matters in financial statements.*

3. Background

3.1 The impact of climate change on financial reporting

Climate-related matters can impact a company's profitability, cost of capital, and ability to continue as a going concern

Financial reporting[18] is not entirely backwards looking—indeed, many of the numbers in the accounts are based on estimates and assumptions about the future. If a company ignores the clear signs that dramatic changes lie ahead, it runs the risk of overstating assets, or understating liabilities, all to the detriment of the company and ultimately its investors. In this report, references to financial statements include the notes thereon.

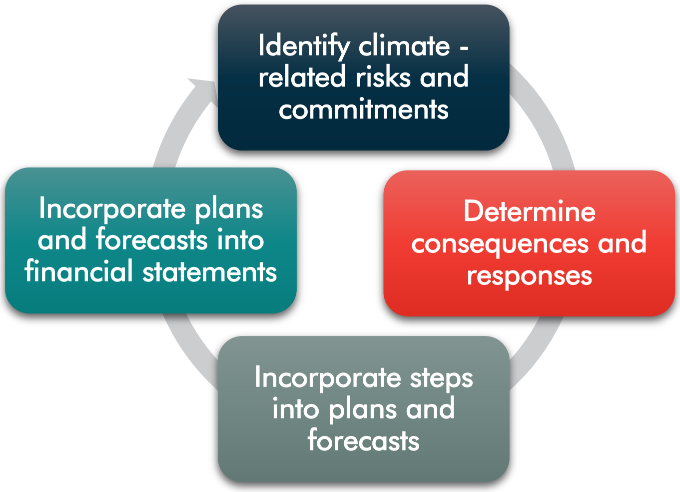
For example, declining demand for oil and gas, the switch to renewable energy for power, regulations to limit emissions, and the phase out of internal combustion engines are examples of climate-related risks that can directly and significantly affect financial statement results. They can shorten the estimated useful lives of productive assets, or change the assumptions used to determine expected future cash flows for impairment testing, resulting in impairments and altering the reported amounts of assets and liabilities. Similarly, shifting product demand may result in inventory obsolescence, leading to increased costs, reduced revenues and profits and lower returns on capital.

In the context of the financial statements and this report, 'climate-related matters' (climate matters[19]) include the risks related to climate change and the energy transition, together with a company's response such as changes in strategy or emissions reduction targets (e.g., climate commitments). As noted, these matters can impact a company's financial position and results, its access to capital, and its ability to continue as a going concern.

Companies must continuously assess the financial impacts of these risks and any climate-related commitments, including their effects on the financial statements and the notes thereto (collectively, financial statements).

[18] *We use financial reporting, financial statements, financials and accounts interchangeably within this report.*
[19] *We refer to matters and issues interchangeably within this report.*

FIGURE 2 – THE INTERACTION OF CLIMATE MATTERS AND FINANCIAL STATEMENTS



Source: Carbon Tracker graphic

Financial reporting should reflect material issues[20], especially those relevant to investors

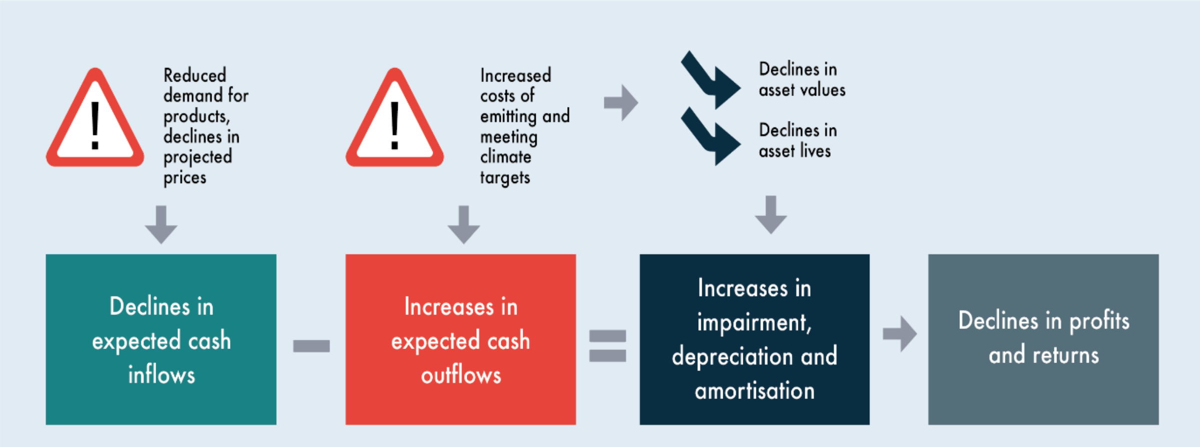
While investors can observe and come to their own judgments around climate matters, what they lack, barring disclosure in the accounts, is an understanding of how (or whether) companies have adjusted the numbers (e.g., assets, liabilities and/or profits) to reflect these changed circumstances.

Indeed, companies[21] may *say* that they are planning for a low-carbon future, that they are taking climate-related risks into account, but without understanding *how* companies have applied those representations in the relevant calculations of their assets and liabilities, investors cannot know whether management's actions mirror their statements. For example, investors would want to know whether a company – particularly one which was saying it was committed to net zero – is using corresponding assumptions in calculating its balance sheet values and profitability and whether its investment plans reflect its stated aims, or if it is still in the process of considering the corresponding adjustments.

Where companies are still evaluating the full financial implications of climate-related risks or emissions targets, information on the extent of the companies' considerations can also provide meaningful insight[22]—as can information that such impacts are not material.

[20] *See further discussion in Appendix 1– Approach to reviews and ratings.*
[21] *We refer to management and companies interchangeably throughout this report.*
[22] *For example, the 2020 financial statements of Rio Tinto and the report of its auditor illustrated this by disclosing that Rio Tinto was still determining the consequences of its 2050 net zero targets when it prepared its financials.*

FIGURE 3 – EXAMPLE OF THE EFFECTS OF CLIMATE MATTERS ON INPUTS USED IN ACCOUNTING FOR PROPERTY, PLANT AND EQUIPMENT



Source: Carbon Tracker graphic

Might Climate-Related Risks Materially Impact the Accounts?

In May 2021, the International Energy Agency published "Net Zero by 2050: A Roadmap for the Global Energy Sector"[23], in which it provides the oil and gas (O&G) price levels that are required to achieve net zero by 2050 ("IEA NZE2050")[24]. These prices are less than those disclosed by the O&G companies that we reviewed. This suggests that many O&G companies did not consider the full effects of the energy transition on the long-term price assumptions that they used in their impairment testing.

However, there were also O&G companies that did not disclose the prices that they used for impairment testing. In the absence of disclosures of long-term price assumptions, the results of the 2020 Standardized Measure of Oil and Gas (the "SMOG")[25] can be a proxy for upstream impairment testing. The SMOG requires companies to use a common set of assumptions to value the expected future cash flows from their proven reserves, including an average price from the last year. This means that, as a result of the pandemic and the resulting drop in prices, the prices that companies were required to use to prepare their 2020 SMOGs were close to "Paris-aligned" prices, such as those provided in the IEA's NZE2050 price deck.

In the absence of better disclosures from companies about their impairment assessments, the SMOG provides a useful proxy for investors. It can be used to examine whether a company's upstream property, plant and equipment (PPE) could face impairment in the face of the energy transition.

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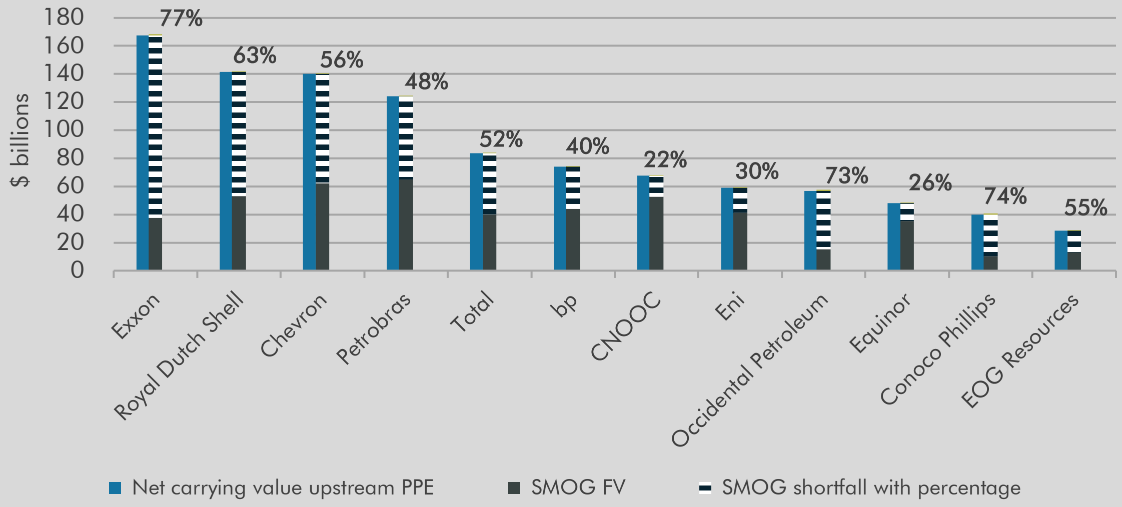
[23] https://www.iea.org/reports/net-zero-by-2050

[24] *(Real Terms USD 2019) For crude oil: 2020: \$37/bbl, 2030: \$35/bbl, 2040: \$28/bbl and 2050: \$24/bbl. For natural gas: United States – 2020: \$2.1/MBtu, 2030: \$1.9MBtu, European Union – 2020: \$2.0/MBtu and 2030: \$3.8/MBtu. "Net Zero by 2050: A Roadmap for the Global Energy Sector", Chapter 2, Table 2.1: "Fossil fuel prices in the NZE" (IEA NZE 2050). p. 51,* https://www.iea.org/reports/net-zero-by-2050

[25] *As required by FASB Accounting Standards Codification 932 Extractive Activities – Oil and Gas and the SEC's reported value requirements or "PV-10".*

Figure 4 – An example of SMOG calculations



Source: Carbon Tracker analysis based on the information in the 2020 10-Ks and 20-Fs for a sample of Carbon Tracker and CAP oil and gas companies. Based off "Can you see stranded assets through the SMOG?. Currencies were converted using 31 December 2020 rates from Historical Rates Tables - USD | Xe.

While useful, the SMOG is only a proxy. Companies may make other assumptions[26] in testing for impairment under accounting requirements, and so the SMOG may not represent estimated future cash flows to be obtained from a company's O&G properties. However, the 'SMOG shortfall', which we have identified as the difference between the SMOG fair value (SMOG FV) and the net carrying values of upstream PPE (Figure 4), demonstrates that these assumptions are material. At a minimum, such disparate valuations reinforce the need for disclosure of the prices that have been used in supporting the carrying amounts on the balance sheet.

3.2 The role of standard setters

Standard-setters are clear that companies and auditors should consider climate-related matters

Accounting standard-setters write the accounting requirements for preparing financial statements and so by which companies calculate profitability. These bodies play an important role in financial markets. Most companies use International Financial Reporting Standards (IFRS)[27], which are established by the International Accounting Standards Board (IASB). US Generally Accepted Accounting Standards (US GAAP) are established by the Financial Accounting Standards Board (FASB) and are required for US public companies.

[26] *Including, but not limited to, the inclusion of probable/possible reserves in the calculation of future cash flows for impairment accounting, and the use of a different discount rate for calculating the recoverable amount versus the 10% rate required by the SMOG methodology, which would likely reduce the estimated 'impairment loss'. Finally, asset retirement costs are not generally included when calculating expected future cash flows in testing for impairment.*

[27] *Used in over 140 countries, with some applying limited modifications. See* https://www.ifrs.org/use-around-the-world/use-of-ifrs-standards-by-jurisdiction/#use-of-ifrs-standards-by-jurisdiction.

Auditors provide independent assurance about the reliability of a company's financials (or other information), and the internal controls and processes overseen by management that led to their creation. The International Auditing and Assurance Standards Board (IAASB) establishes the International Standards on Auditing (ISAs) which are used in most jurisdictions that follow IFRS[28].

US auditing standards are set by the US Public Company Accounting Oversight Board (PCAOB) which oversees the audits that are performed, in relation to US filings, for both those of US public companies and the financials of SEC registered foreign private issuers.

Enforcement of these standards is typically delegated to national regulators, although additional complexities arise for companies having multiple listings or registrations across markets.

Both IFRS and US GAAP provide principles for preparing financial statements. While they do not specifically reference the word "climate", there is no exception for the consideration of material risks related to climate change or the energy transition in applying these standards. The IASB, the FASB and the IAASB[29] have acknowledged this in recent publications. They have clarified that material climate-related matters should be considered in preparing and auditing the financial statements[30]. Specifically:

- **IASB:** "Companies must consider climate-related matters in applying IFRS Standards when the effect of those matters is material in the context of the financial statements taken as a whole"[31].
- **FASB:** "When applying financial accounting standards, an entity may consider the effects of certain material ESG matters, similar to how an entity considers other changes in its business and operating environment that have a material direct or indirect effect on the financial statements and notes thereto."[32]
- **IAASB:** "If climate change impacts the entity, the auditor needs to consider whether the financial statements appropriately reflect this in accordance with the applicable financial reporting framework (i.e., in the context of risks of material misstatement related to amounts and disclosures that may be affected depending on the fact and circumstances of the entity)."[33]

In response to these clarifications, in December 2020 the auditors' Global Public Policy Committee (GPPC) wrote to the IASB, indicating that all "GPPC networks will provide technical

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[28] *Some national auditing standard setters will apply limited modifications to these standards. For more information on adoption status see:* Global Impact Map | IFAC

[29] *The Public Company Accounting Oversight Board (PCAOB), which oversees auditing standards in the United States, has not published additional guidance on climate-related risks. However, the guidance on addressing risks in financial statement audits does not significantly differ between the International Standards on Auditing (ISAs) and the PCAOB Auditing Standards.*

[30] In-brief-climate-change-nick-anderson.pdf (ifrs.org) (November 2019), effects of climate related matters on financial statements (ifrs.org) (November 2020), FASB Staff Educational Paper—Intersection of Environmental, Social, and Governance Matters with Financial Accounting Standards (March 2021), IAASB-Climate-Audit-Practice-Alert.pdf (ifac.org) *(October 2020)*

[31] *Effects of climate related matters on financial statements (ifrs.org)* *(November 2020)*, p.1.

[32] FASB Staff Educational Paper – Intersection of Environmental, Social, and Governance Matters with Financial Accounting Standards *(March 2021), p. 3.*

[33] IAASB-Climate-Audit-Practice-Alert.pdf (ifac.org) *(October 2020), p. 4.*

communications to audit partners and professionals on the recent IASB and IAASB developments and engage with companies and other stakeholders to encourage greater transparency on the impact of climate-related matters on companies' financial statements."

The UK Financial Reporting Council (FRC) has already started to look at these issues. In November 2020, it published its Climate Thematic. Among other things it found that companies need to do more to address the impact of climate change on their accounts, while auditors need "to improve their consideration of climate-related risks when planning and executing their audits."[34]

In *Appendix – Approach to reviews and ratings,* we provide further detail of the approach to our reviews and why both consideration of climate-related matters in accounting and auditing, and the disclosures thereof, are important in financial reporting.

3.3 The lack of transparency around climate-related financial risks

Investor concerns about the impact of climate on company financials are growing

Given the foregoing, investors, especially those that have long been engaging with companies on climate matters[35], have become increasingly concerned about whether companies are capturing the energy transition in their financial statements, or if companies' profits and so financial strength are based on assumptions that cannot be sustained in the long-term.

In an *Open Letter* published in September 2020, the Principles for Responsible Investment (PRI), the UN Environment Programme Finance Initiative (UNEP FI), the UN-convened Net-Zero Asset Owner Alliance initiative, the Institutional Investors Group on Climate Change (IIGCC), the Investor Group on Climate Change (IGCC), the Asia Investor Group on Climate Change (AIGCC), and the Pensions and Lifetime Savings Association (herein, 'investor group letter') representing US$103 trillion in assets under management globally, welcomed the International Accounting Standards Board's (IASB) *article* that made clear that material climate change matters must be incorporated into IFRS financial statements. The investor group letter urged companies to ensure that they apply the accounting requirements to consider climate in their 2020 financials, and hence auditors to consider these issues in their audit work. It also asked that the assumptions used in preparing the financial statements be consistent with a sustainable climate.

In November 2020, individual investor organisations,[36] as members of the IIGCC, collectively representing over $9 trillion in assets under management *wrote* to 36 EU/UK companies' audit committee chairs and audit partners (the "IIGCC letter"). They echoed the investor group letter and requested that these companies (and their auditors) ensure that "material climate risks associated with the transition onto a 2050 net zero pathway are fully incorporated into the financial statements"[37]. The IIGCC letter further references the IIGCC's *Investor Expectations for Paris-Aligned Accounts*, which states investors' causes for concern: "Financial statements that leave

[34] *Financial Reporting Council, "Climate Thematic", November 2020,* Summary-FINAL.pdf (frc.org.uk)*, p. 4.*
[35] *For example, Sarasin & Partners started engaging on this topic in 2017 and subsequently published "Are oil and gas companies overstating their position? Underpinning Company Balance Sheets" in which it reviewed eight oil and gas company 2017 financial statements and highlighted the accounting inconsistencies and flaws therein.*
[36] *A group of 38 long-term investors and members of the Institutional Investor Group on Climate Change (IIGCC). See full list of these investors here:* https://www.iigcc.org/download/iigcc-letter-to-european-companies-on-paris-aligned-accounts/?wpdmdl=4006&masterkey=5fabc9c5af24f *. Some of these overlap with the signatories of the investor group letter.*
[37] *IIGCC Letter to European Companies on Paris Aligned Accounts, authored by Sarasin & Partners LLP* https://www.iigcc.org/download/iigcc-letter-to-european-companies-on-paris-aligned-accounts/

out material climate impacts misinform executives and shareholders and thus, result in misdirected capital." [38]

The Climate Action (CA) 100+ is also looking to develop a climate accounting indicator "to assess whether a company's accounting practices and related disclosures reflect consideration of transition risk relative to a range of possible climate scenarios"[39].

Throughout this report any reference to 'investors' means the aforementioned investor groups and individual investor organisations, collectively.

Importantly, these investors' requests were predicated not just upon investor needs, but also on what accounting and auditing standard setters have said is required.

[38] *IIGCC, November 2020, "Investor Expectations for Paris-aligned Accounts",* https://www.iigcc.org/download/investor-expectations-for-paris-aligned-accounts/?wpdmdl=4001&masterkey=5fabc4d15595d*, p. 4. See also Ceres' report on investor expectations for oil and gas companies at:* https://www.ceres.org/resources/reports/lifting-veil-investor-expectations-paris-aligned-financial-reporting-oil-and-gas

[39] Background and Future Development | Climate Action 100+

4. Scope, coverage and approach to research

4.1 Scope

Given both investor demands and the requirements of accounting and auditing standard-setters, this research has sought to determine whether specifically identified companies and their auditors had considered climate matters in their 2020 financial statements (and the audits thereof).

This study was performed by a coordination of efforts between Carbon Tracker and the CAP team. It examined the degree to which 107 large climate-exposed companies demonstrated that they considered material climate-related matters when preparing their 2020 financial statements, and disclosed the key assumptions and estimates that they used to do so. It examined the extent to which the auditors appeared to consider climate-matters in their audits of these companies.

The companies that were the subject of this study form part of the "world's largest corporate industrial greenhouse gas emitters"[40]. Accordingly, there was an underlying expectation that these companies would consider climate issues in their 2020 financial reporting and their auditors, in their audits of the financial statements.

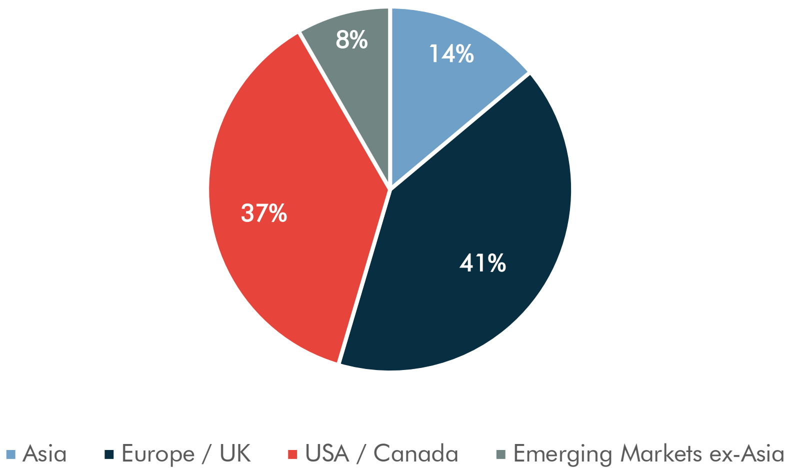
- Carbon Tracker reviewed 2020 reports for 55 companies[41] that operate primarily in the energy, transportation, and materials/industrial sectors. These included 36 European and UK companies which were the focus of engagement by the IIGCC, and 19 US energy companies. Of the 55 companies, 42 are CA100+ focus companies.
- CAP reviewed the 2020 reports for 52 companies that operate across a variety of sectors, and which were located across Europe, the USA/Canada, Asia, and Emerging Markets ex-Asia. These are all CA100+ focus companies which were chosen based partially on their year-ends to ensure availability of predominantly December 2020 reporting documents.[42]

4.2 Coverage

Our review covered companies operating across a wide range of sectors and locations.

[40] *As noted, 94 of the 107 companies that we reviewed were part of the Climate Action 100+ focus companies. The remaining 13 companies were companies with obvious energy transition related financial risks.*
[41] *Carbon Tracker also reviewed the 2019 reports for 53 of these companies.*
[42] *The CAP company analyses are publicly available at* https://www.unpri.org/accounting-for-climate-change/climate-accounting-analyses/7906.article .

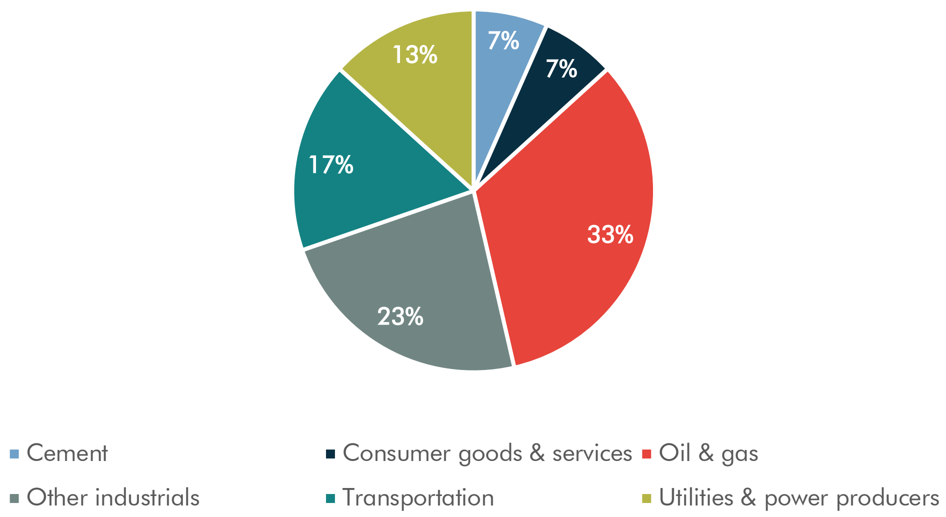
FIGURE 5 – COMPANIES BY LOCATION[43]



Source: Carbon Tracker and CAP analyses

The USA/Canada split includes only one Canadian company (Teck Resources Limited). It also includes two companies (Linde and Trane Technologies plc) that, while headquartered in Europe and the UK, are classified as US domestic companies for the purposes of their US SEC filings.

FIGURE 6 – COMPANIES BY SECTOR[44]



Source: Carbon Tracker and CAP analyses

[43] *The Emerging Markets ex-Asia grouping comprises Brazil, Colombia, Mexico, Nigeria, and Saudi Arabia while Asia includes China, Indonesia, South Korea, and Taiwan.*

[44] *Sector classification is based on the* [Companies | Climate Action 100+Climate Action 100+ sector and sector cluster classification.]

The oil & gas sector comprises upstream (exploration and production) and midstream companies. Transportation is composed of airlines, automobiles and other. The Other industrials sector covers diversified mining, chemicals, steel, coal mining, and paper.

4.3 Overall approach

We conducted a comprehensive desktop review of company reports, with a focus on the audited financial statements and audit reports that were included in annual reports or filings[45]. When available, we reviewed other company information to inform the context of our focus on financial reporting (e.g., management reports, risks factors, MD&A, sustainability, climate or TCFD[46] reports, CDP reports, and proxy statements) that was published before or at the same time as the audited financial statements.

Our reviews looked for evidence of whether companies and their auditors had considered climate as might be expected under the relevant requirements, and whether they had responded to specific investor requests to align assumptions with the goals of the Paris Agreement (or disclose the impact of such assumptions). To do so, we asked the following six questions:

1. **Did the company consider the effects of climate-related matters in preparing its financials?**
2. **Did the company disclose quantitative climate-related estimates and assumptions[47]?**
3. **Were the company's financials consistent with its discussions of climate matters in its other reporting?**
4. **Did the auditor appear to consider climate matters in its audit?**
5. **Did the auditor's consistency check indicate inconsistencies in company reporting related to climate matters?**
6. **Did the company (and its auditor) respond to specific investor requests to align assumptions and estimates with the goals of the Paris Agreement (or disclose the impact thereof)?**

Our approach to assessing these questions was partly determined by each company's own reporting (including any discussions about climate-related risks and stated targets) as well as the sector in which they operated. We also considered the nature of the company's assets, liabilities and transactions that could be affected by climate-related matters, particularly transition risks, as well as the quantitative amounts of relevant items. For example, for companies operating in the oil and gas sector, we looked for evidence of whether climate matters were considered in the valuations of long-lived and productive assets, assessments of asset lives and calculations of decommissioning obligations. We evaluated each assessment using a four-tiered rating system: 'good practice', 'few concerns', 'some concerns' and 'significant concerns'. See further discussion of our approach in *Appendix-Approach to reviews and ratings*.

[45] *The individuals that performed these reviews have financial market experience; some previously worked as accountants, auditors, analysts and/or investors.*
[46] *Task Force on Climate-related Financial Disclosures.*
[47] *Also referred to as 'inputs' in this report.*

Defining Paris-alignment

The investors referenced in this report have expressed a need to achieve the preferred goals of the Paris Agreement - specifically, to limit global warming to no more than 1.5°C - and to reduce emissions to net zero by 2050. For the purpose of our study, we viewed oil, gas and carbon prices and demand projections provided in the International Energy Agency's Net Zero Emissions by 2050 Scenario (IEA NZE2050) as a benchmark for 'Paris-alignment'.

The IEA NZE2050 was published in May 2021 and may not have been available as a reference price deck for most 2020 annual filings. While the IEA's Sustainable Development Scenario (SDS) was used by some companies in 2020, other scenarios that more closely addressed the preferred goals of the Paris Agreement were however already in existence, including, for example, the IEA's "Beyond 2 Degrees" Scenario (B2DS) which has been used in previous Carbon Tracker reports.

5. Results

In this section we provide the results of our assessments which include the ratings for financial statements and audit reports and examples of better and worse practice for each of the six categories that we assessed. The examples that we provided are illustrative only and are not intended to single out the reporting of any of the companies or auditors to which the described reporting relates.

Our sample size was not large enough to draw overall conclusions by sector or geography. Nonetheless, companies operating in certain sectors and locations stood out as providing relatively better, or worse, information for the categories that we assessed. For example, companies operating in the oil and gas sector scored the highest amongst all sectors. Accordingly, many of the better examples of reporting (e.g., via transparency of information) that we provide herein pertain to these companies. We have included additional graphs of results in *Appendix - Findings by sector and geography*.

5.1 Financial statements

5.1.1 Financials – consideration of climate

Expectation 1: The company included the effects of material climate-related matters when preparing its financial statements.

We found that, out of 107 companies, 72% did not appear to demonstrate that climate matters had been factored into preparing the financial statements in any meaningful way. In fact, we rated only two companies as having few concerns for this topic.

This means that we did not find much evidence that companies considered items such as the impact of changes to regulations, declining demand for their products, or emissions reduction targets, when relevant, in their financials.

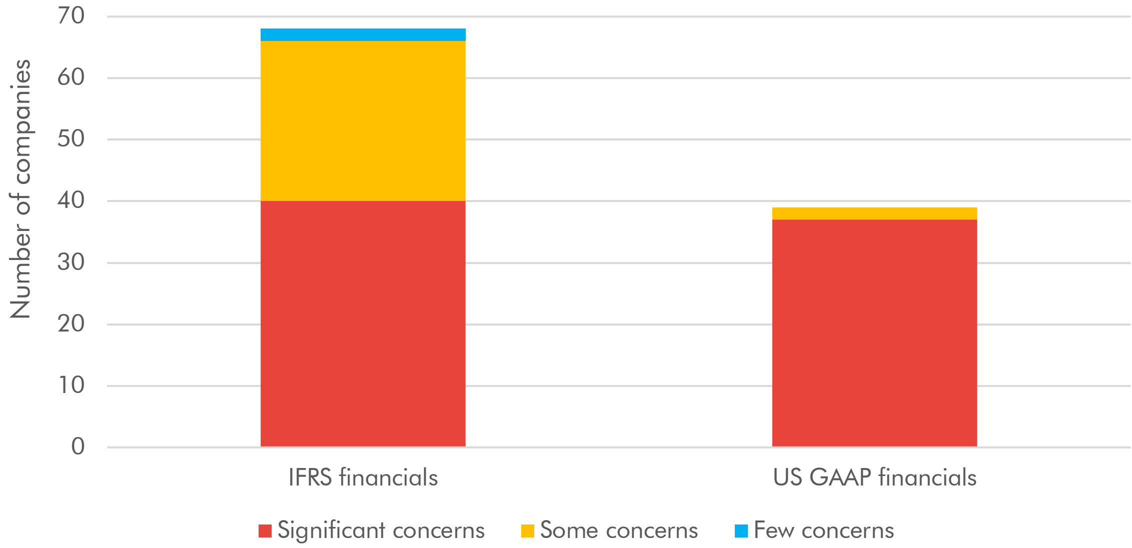
For example, it was not clear whether or how these issues affected the expected cash flows used in impairment testing, the useful lives of productive assets, the timing of decommissioning obligations or the existence of onerous contracts that could have plausibly resulted from changed assumptions and estimates.

We also noted differences depending on the accounting standards applied. Of the 107 companies, 68 followed IFRS[48] when preparing their accounts; the remaining 39 used US GAAP. More companies (41%) that reported under IFRS demonstrated consideration of climate matters than those using US GAAP (5%). In other words, nearly all US GAAP companies were assessed as being of 'significant concern' versus 59% of those applying IFRS. Additionally, the only two US GAAP companies that were assessed as 'some concerns' in this area were considered to have special circumstances that meant their exposure to climate-related risk was reduced.

Overall, these findings suggest a lack of oversight over climate matters, especially those changes which might impact financial results.

[48] *Reference to IFRS herein includes those companies that have followed local versions of IFRS and IFRS – EU.*

Figure 7 – Analysis of consideration of climate matters in financial statements under IFRS vs US GAAP



Source: Carbon Tracker and CAP analyses

Table 1 includes examples of how different companies have (or have not) demonstrated consideration of climate in their financial statements for certain topics.

Table 1 – Examples: Consideration of climate in the financials

Company	**EOG Resources (EOG)**
Topic / Accounting	**The effects of emissions regulations and declining oil prices on asset impairment and useful lives / US GAAP**
Rating: significant concerns	EOG stated that it has significant exposure to transition risks such as emissions regulations. As noted in Section 3 of this report, this might lead to declines in revenues due to declines in commodity prices or consumer demand. In 2020, EOG suffered an impairment of property, plant and equipment of $2.1bn, reducing the net book value of these items to $28.6bn at year end[49]. While EOG indicated that changes in demand could lead to further price declines and impairments, it did not indicate if it factored the effects of climate-related risks into the prices used to calculate its impairment losses, or the related assets' useful lives. This leaves investors wondering whether taking climate-related risks into account would have resulted in a greater impairment charge.

[49] *EOG 10-K 2020, p. 38.*

TABLE 1 CONT. – EXAMPLES: CONSIDERATION OF CLIMATE IN THE FINANCIALS

Company	**BHP**
Topic/ Accounting	**Consideration of the energy transition and onerous contracts/ IFRS**
Rating: some concerns	As part of its shift towards renewable energy supply in order to meet its emissions targets, BHP recorded an onerous contract provision of $0.8bn ($0.5bn after tax) for the cancellation of contracts that were replaced with new renewable power purchase agreements[50]. BHP states that "where sufficiently developed" the potential impact of climate change and the energy transition have been considered. While BHP's financial statement disclosures indicate some consideration of impacts related to climate change and the transition to a lower carbon economy, it remains unclear the extent to which these considerations have been made apart from a few relatively isolated examples of property, plant and equipment (PPE) impairment indicators and steps to trigger onerous contract provisions.
Company	**bp**
Topic / Accounting	**The effects of oil price declines from the energy transition on asset impairment and useful lives / IFRS**
Rating: few concerns	bp indicated that it considered climate change and the transition to a lower carbon economy in relation to the long-term prices used in impairment testing. In 2020 it recorded $12.9bn in upstream asset impairments, and approximately $10bn in exploration and appraisal write-offs, primarily due to revised price assumptions from the energy transition. It also recorded downstream impairments of $0.8bn primarily due to portfolio changes in the fuels business[51]. bp noted that most of its reserves and resources that "support the carrying value of the group's existing oil and gas properties are expected to be produced over the next 10 years". It expected a significant amount of those assets to be fully depreciated during that time. It also indicated that it included carbon taxes and the costs of emissions allowances in future cash flows as applicable.

Source: Carbon Tracker and CAP analyses

[50] *BHP Annual Report 2020, p. 182.*
[51] *bp Annual Report and Form 20-F 2020, pp. 178, 184.*

Audit committees

The audit committee, on behalf of the Board, is tasked with overseeing management's preparation of the financial statements. It bears a heavy responsibility for the quality of the accounts and their consistency with company strategy and narrative reporting.

As part of these reviews, Carbon Tracker examined audit committee reports. Out of 55 companies, only 29 provided such reports. Of these, only seven audit committees indicated some level of consideration of the effects of climate on the financial statements. For those that did not, this may suggest weak governance and controls over monitoring the impact of the energy transition on financial results.

For example, although **EOG Resources** stated that it had significant exposure to climate-related risks, such as emissions regulations, it was unclear from its one-page report if its audit committee considered climate in financial reporting. In contrast, **bp**'s audit committee noted consideration of the impact of the energy transition on assumptions used for impairment testing and discussions about decommissioning provisions. It also concluded that the prices bp used were "broadly in line" with Paris-goals and that, "reasonable changes in the expected timing of decommissioning" would not significantly impact the provisions[52].

5.1.2 Financials – visibility of assumptions and estimates

Expectation 2: The company disclosed the significant quantitative climate-related assumptions and estimates that it used in preparing its financial statements.

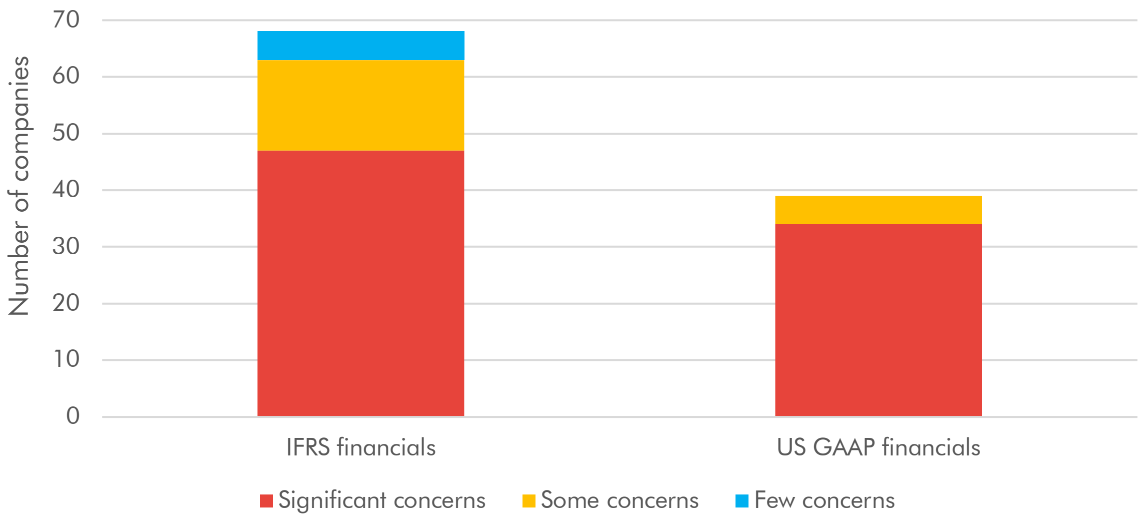
Out of 107 companies, three-quarters did not appear to provide quantitative, climate-related assumptions and estimates. This means that, for example, companies did not disclose the remaining useful lives of emissions-producing assets or manufacturing assets used in producing inventory associated with high emissions, the commodity or carbon prices used in impairment testing, the inputs used to calculate decommissioning obligations when applicable, the estimated costs of meeting emissions reduction targets, and/or the contract terms, such as for purchase price agreements for fossil fuel that could be affected by climate and result in losses under onerous contracts.

In general, companies reporting under IFRS were slightly more forthcoming in their disclosures. While 31%, or 21 IFRS companies avoided a rating of 'significant concerns', this only applied to 13%, or five companies following US GAAP.

Overall these results suggest that companies are not translating climate matters into financial impacts and providing transparency around those analyses.

[52] *bp Annual Report and Form 20-F 2020, p. 98.*

FIGURE 8 – VISIBILITY OF ASSUMPTIONS AND ESTIMATES FOR COMPANIES USING IFRS VS. US GAAP



Source: Carbon Tracker and CAP analyses.

Table 2 provides examples of differences we found related to the transparency of quantitative climate-related inputs that companies used to value specific items in their financials.

TABLE 2 – EXAMPLES: VISIBILITY OF QUANTITATIVE CLIMATE-RELATED ASSUMPTIONS AND ESTIMATES

Company	**Exxon Mobil**
Topic / Accounting	**Commodity price assumptions for impairment testing / US GAAP**
Rating: significant concerns	We noted that, as a large oil and gas company, Exxon is materially exposed to climate-related matters, including resulting declines in oil and gas prices. In 2020 Exxon identified nearly $25.9bn in PPE impairments which was greater than 10% of net PPE at year end[53]. However, Exxon did not disclose the key quantitative climate-related assumptions, including commodity prices, that it used to test the economics of the projects with asset impairments.

[53] *Exxon 10-K 2020, p. 38.*

TABLE 2 CONT. – EXAMPLES: VISIBILITY OF QUANTITATIVE CLIMATE-RELATED ASSUMPTIONS AND ESTIMATES

Company	TOTAL (now TotalEnergies)
Topic / Accounting	Commodity price assumptions for impairment testing / IFRS
Rating: few concerns	TOTAL disclosed the projected oil and gas price assumptions that it used for its impairment testing, including Brent Oil – $40/bbl in 2021, $50/bbl in 2022, $60/bbl in 2023, $70/bbl by 2025 and $50/bbl by 2040[54]. It also provided two sensitivity analyses identifying how changes to the oil and gas prices it used would further impact operating and net income from those projects. For example, TOTAL indicated that for the exploration and production segment, a 10% variation in oil and gas prices would have a negative impact of $1.6bn on net income (Group share)[55].

Source: Carbon Tracker analysis

5.1.3 Financials – consistency with other reporting

Expectation 3: The company's financial statements were consistent with its discussions of climate-related matters in other reporting, or it explained any differences.

We noted inconsistencies in reporting of climate matters for 72% of the companies that we reviewed. This related to consideration of climate within the financial statements as compared to a company's other disclosures in its annual report (including for US reporters, sections of the 10-K or 20-F on risk factors and management's discussion and analysis). To assess consistency we also considered statements made in reporting outside of the annual filings, for example sustainability or climate reports, and other types of reports produced by the company before or at the same time as the annual filing.

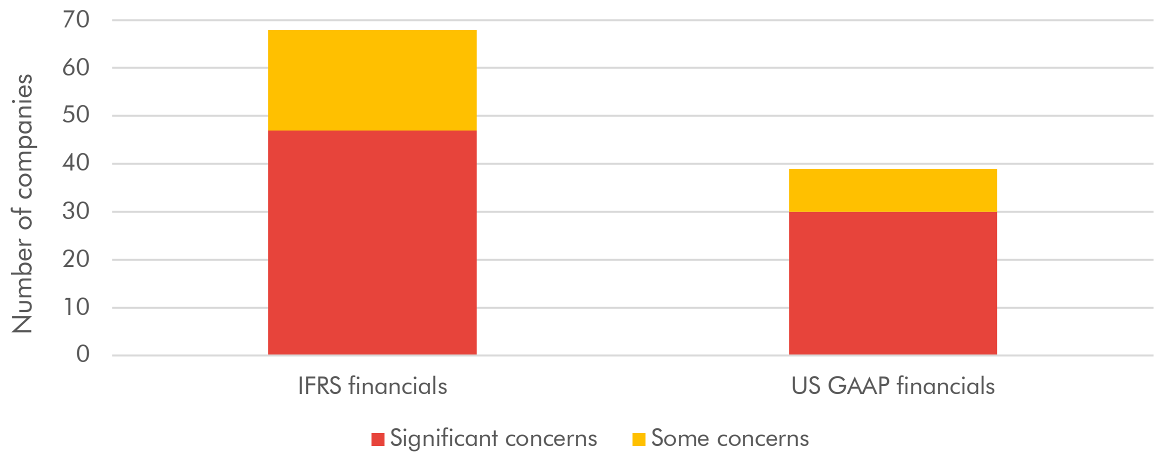
Our rating of 'some concerns', rather than 'significant concerns', for consistency included both companies that were improving consistency across reporting, and companies that appeared to consistently limit their considerations of climate-related matters in both the financial statements and other reports. The latter group of 'some concerns' ratings is not indicative of those companies' overall performance in considering and reporting climate-related issues. Note that none of the consistency reviews were assessed as having 'few concerns'.

Companies using IFRS appeared to be more consistent across their reporting with respect to climate matters than those applying US GAAP.

Overall, this may suggest that companies are not considering the implications of climate commitments and constraints on financial reporting and results, even when they discuss these issues in other reporting.

[54] *TOTAL Universal Registration Document 2020 p. 330.*
[55] *Ibid, p. 331.*

FIGURE 9 – CONSISTENCY ACROSS COMPANY REPORTING BY COMPANIES USING IFRS VS. US GAAP



Source: Carbon Tracker and CAP analyses

A focus on the through-line to the financial statements (Carbon Tracker only)

Of the 55 companies that Carbon Tracker reviewed, 100% acknowledged risks related to climate change. However, only 45% appeared to consider the effects of these risks, such as the energy transition in preparing their financial statements.

Nearly 90% of these 55 companies disclosed emissions reduction targets in their management, sustainability, or climate change reports. Of these, only 42% followed through and explained, to varying degrees, how they integrated steps to achieving their targets, into their accounts.

This also means that 58% of these companies did not provide evidence of how the estimated costs of reducing emissions were incorporated into their financial statements. For example, all six of the automobile manufacturers that Carbon Tracker reviewed discussed electrification strategies in their narrative reporting. Despite this, none appear to follow through and include the relevant quantitative inputs that they used in their financials and that could be affected by these electrification strategies, as well as climate risks.

At 47% with some concerns, the companies that Carbon Tracker reviewed scored better overall for consistency in financial reporting than the companies that CAP reviewed (for which 8% of were rated with 'some concerns'). While clearly insufficient, this is substantially better than the overall 'some concerns' rating of 28% for all 107 companies reviewed. The difference between Carbon Tracker's results and the overall results can be attributed to the high percentage of energy companies, oil & gas -45% and utilities & power producers-15%, that were in the population of companies that Carbon Tracker reviewed compared to CAP's review - and that scored higher than other sectors in this category. See graphs in *Appendix 2 - Findings by sector and geography*. The relatively better scores for oil and gas companies when compared to other sectors may reflect both the changes in the external environment and increased investor pressure on the industry to focus specifically on the financial statement effects. The better scores for utilities reflect the regulated nature of many of the companies, making it possible or even likely that regulators would compensate them for risks to their carbon intensive assets.

Table 3 provides examples of inconsistencies that we observed in company reporting. Table 4 includes examples of financial statements that were more consistent with the company's other reporting, resulting in an assessment of 'some concerns' instead of 'significant concerns'.

Table 3 – Examples: Inconsistencies across company reporting

Company	**Airbus**
Topic / Accounting	**Emission reduction targets / IFRS**
Rating: significant concerns	**Discussions of emissions targets outside the financials** Airbus indicated various emissions targets, including reducing its Scope 1, 2 and 3 emissions by 40% by 2030 (from 2019) and an ambition to reach net-zero for its manufacturing sites and site operations by 2050. It discussed steps to meet its targets, which included replacing current fleets with more performant aircraft, investing in technologies enabling it to market zero-carbon vehicles, and developing and deploying sustainable aviation fuel (SAF).[56] **Lack of consideration of effects of emissions targets on calculation of relevant financial statement items** Despite this, Airbus did not state whether it considered the effects of its emissions reduction targets in its 2020 inventory write-downs, in its provisions for its A380 programme, or in the recoverability of its deferred tax assets. It is not clear how its SAF ambitions may affect the useful lives of aircraft or whether it must make any changes to manufacturing equipment/PPE to meet its ambitions. It did not appear to consider the effects of other actions to achieve net emissions reductions, such as the estimated costs of carbon capture, in the key estimates and assumptions it used to prepare its financial statements.
Company	**Cummins**
Topic / Accounting	**Climate-related commitments / US GAAP**
Rating: significant concerns	**Discussions of climate commitments in sustainability report** Cummins indicated that it had some climate-related commitments. In its sustainability report it disclosed its progress on previously set 2020 goals which included reduced energy intensity of its facilities and greater use of electricity from renewable sources. It included financial data for some of these initiatives. **No indication of whether or how commitments were considered in the financials** However, Cummins' 2020 financial statements lacked any references to financial considerations that might be expected as its plans become more concrete.

Source: Carbon Tracker and CAP analyses

[56] *Airbus Universal Registration Document 2020, p. 70, 71 and Airbus' Decarbonisation Strategy at* https://www.airbus.com/company/sustainability/environment/climate-change/decarbonisation.html

TABLE 4 – EXAMPLES: SOME CONSISTENCIES ACROSS REPORTING

Company	**Continental Resources**
Topic/ Accounting	**Demand for hydrocarbons / US GAAP**
Rating: some concerns	**Indicates belief that climate matters will not yet affect demand** Continental Resources acknowledged that actions to mitigate climate change are a material risk factor which could increase costs, reduce demand for hydrocarbons, and harm profits. While it "anticipate[d] that initiatives to reduce greenhouse gas emissions will continue to develop"[57], it did not believe that demand for hydrocarbons would decline (at least not for decades). **Lack of adjustments to financial statements relatively consistent** Although Continental Resources did not appear to consider climate matters in its financials, the apparent lack of adjustments to forward-looking assumptions related to an energy transition was not entirely inconsistent with Continental Resources' other reporting.
Company	**Repsol**
Topic / Accounting	**Commodity and carbon prices / IFRS**
Rating: Some concerns	**Discussion of targets, strategy and risks and price assumptions in other reporting** Repsol included a discussion about consideration of its strategy, emission targets and climate-related risks both in its financial statements and in other parts of the annual report. It linked its revised price assumptions to its new strategic plan and stated that they were consistent with its commitments to achieve the objectives of the Paris Agreement. **Differences noted in the prices used in other reporting versus financials** While Repsol was consistent in some of its reporting, we observed differences in the carbon and commodity prices that Repsol referenced in strategy discussions in its management report versus the prices that it used for the same period in its impairment testing. For example, Repsol used a price of $50/bbl Brent crude[58] for its "self-financing" scenario as part of its 2021-2025 Strategic Plan. This differs from the prices that it used in its impairment testing (i.e., 2021: $49/bbl, 2022: $55/bbl, 2023: $58/bbl, 2024: $62/bbl and 2025: $67/bbl Brent) [59].

Source: Carbon Tracker analysis

[57] *Continental Resources, Inc., Form 10-K for the year ended December 31, 2020, p. 20.*
[58] *Management Report, Repsol Group Annual Financial Report 2020, p. 15.*
[59] *(Real terms 2020). We noted that these average to $58.2/bbl for that five-year period. Financial Statements 2020, Repsol Group Annual Financial Report 2020, p. 52.*

5.1.4 Financial statements – overall results

Overall, for the three financial statement assessments (consideration of climate, visibility of quantitative assumptions and estimates and consistency in reporting), around three-quarters of companies did not appear to follow requirements to consider climate in the financials, to disclose relevant inputs used, or to ensure consistency across their reporting, to any meaningful extent.

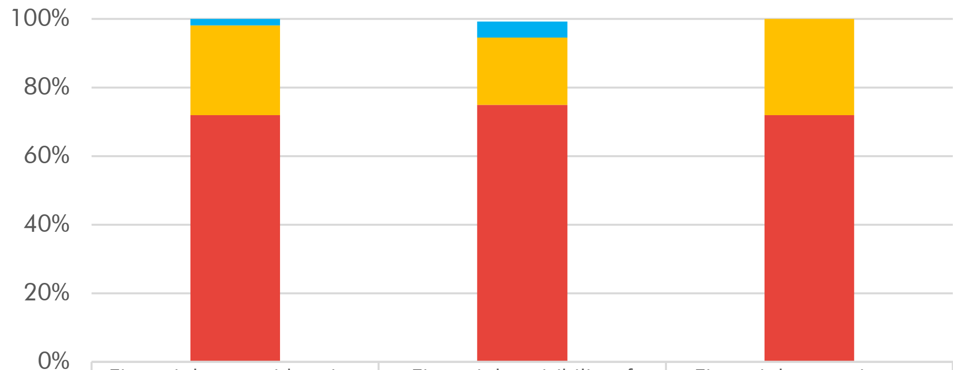
We found little evidence that companies incorporated material climate-related matters into their 2020 financial statements. We found slightly more evidence of companies having considered climate-related matters in preparing the financial statements, than having disclosed the actual climate-related inputs used.

Most companies did not provide the quantitative climate-related inputs that they used in their financial statements. While some companies suggested that they had considered, for example, lower commodity prices achievable in the future or higher carbon costs, they did not always disclose the prices that they used. Of those that did disclose the prices used, many did not appear to take any account of climate risks or any commitments to reduce emissions in such prices or other inputs.

Overall, companies did not consistently address climate matters across their reporting. We found that although many companies acknowledged climate-related risks and some had strategies to address these risks, the majority did not appear to consider the effects of these items when preparing their financial statements. Notably, for some companies, the rating of 'some concerns' regarding consistency was the result of their discussion of climate risk and targets being limited across their reporting rather than an indication of consideration of climate matters in their financials.

Figure 10 provides the results of these three financial statement assessments. Note that no companies were rated with a good practice score in any of the areas assessed.

FIGURE 10 – RESULTS OF ASSESSMENTS OF CLIMATE MATTERS IN FINANCIAL STATEMENTS



	Financials - consideration of climate	Financials - visibility of assumptions	Financials - consistency w/ other reporting
Good practice	0%	0%	0%
Few concerns	2%	5%	0%
Some concerns	26%	20%	28%
Significant concerns	72%	75%	72%

Source: Carbon Tracker and CAP team analyses.

5.2 Audit Reports

5.2.1 Auditors – consideration of climate

Expectation 4: The auditor considered the effects of material climate-related risks and commitments as part of its audit.

When assessing audit reports for evidence of consideration of climate-related matters in audits, we generally found discussions within the relevant key audit matters (KAMs) for audits under ISAs or critical audit matters (CAMs) for audits performed under PCAOB standards[60]. Only 20% of the auditors of the 107 companies provided some type of evidence that they had considered climate as part of the audit. These were all for audits performed under ISAs.

Of these 20%, three audit reports stood out as examples of better practice (e.g., they received 'few concerns' ratings for consideration of climate see Table 5). In these reports, the auditors clearly identified the climate-related issues that they had considered in the audit, and provided insightful information in the relevant KAMs[61] on how the issues were addressed. For example, they discussed the work and testing they performed, such as consideration of the effects of climate on inputs used in cash flow estimates for in impairment testing, and assessing the underlying commodity price assumptions used against external climate scenarios. Of the audit reports reviewed, 53% of the auditors followed ISAs, and the remaining 47% applied the PCAOB standards. None of the PCAOB audit reports[62] appeared to consider climate.

Consideration of climate in audit reports –other differences

We noticed other differences for audits performed under ISAs versus PCAOB standards.

Of the 20% of the audit reports that did consider climate matters, eight were for Europe/UK companies that were also listed in the US. This means that their auditors were required to follow PCAOB auditing standards for their US filings and so provided two audit reports. This gave us an opportunity to observe differences between audits under ISAs and PCAOB standards for the same company.

We found that three[63] of the above eight auditors removed all references to climate change and provided reduced disclosure in their US audit reports for the same audit matters (e.g., the CAMs). Additionally, the auditors of bp and Shell both had specific KAMs on climate change and the energy transition (and bp's auditor disclosed one on Covid-19), that were not included as CAMs in the corresponding US audit reports.[64]

While we observed these differences, it is difficult to draw conclusions or explain them. As noted in the *Appendix -Approach to reviews and ratings*, there are differences in required disclosures under international and US auditing standards. However, these audit reports are on the same

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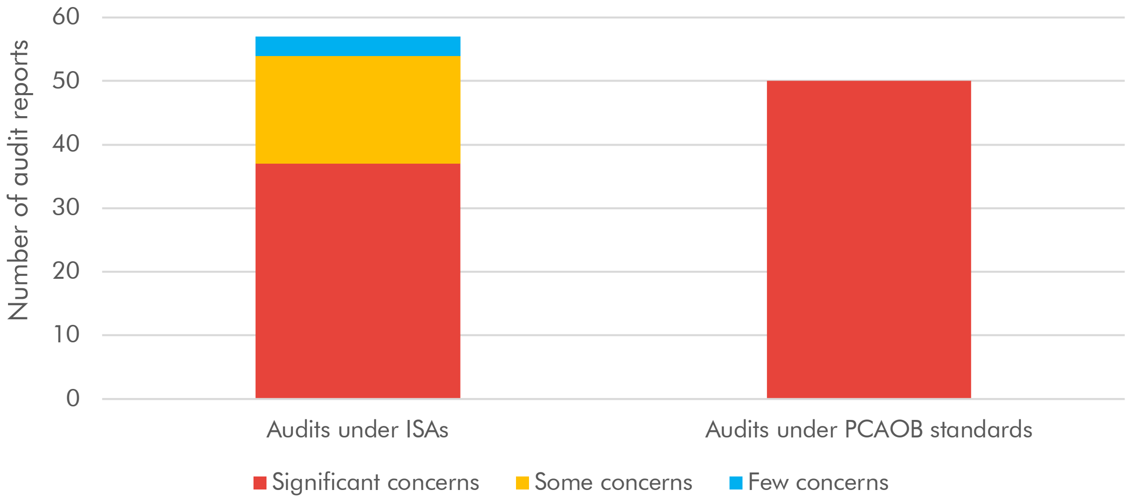
[60] *See further discussion in Appendix 1 - Approach to reviews and ratings.*
[61] *There were no US company audit reports which referenced climate-related issues.*
[62] *These exclude the US audit reports for Europe/UK SEC registrants. For these companies we only counted the local audit reports, which are included in the percentages for the ISA audits.*
[63] *The auditors of BHP, Eni and Rio Tinto.*
[64] *We noted other differences between PCAOB and ISA audit reports. For example, auditors of two companies included KAMs on control matters that did not appear in the US CAMs, as in the US control matters tend to be addressed in a separate report provided by the auditor. Others had topics such as revenue recognition that were only in the KAMs, but not in the US CAMs.*

financials, by the same audit firm, and in some cases signed by the same lead audit partner. We believe that for these companies, the same or similar climate-related information in both CAMs and KAMs would have been appropriate. We are not aware of any prohibition on including such information in CAMs.

Overall, this suggests a lack of firm or network-wide policies to address climate matters and that US market investors are receiving less information than their overseas counterparts.

FIGURE 11 – CONSIDERATION OF CLIMATE IN AUDIT REPORTS UNDER ISAS VS PCAOB STANDARDS[65]



Source: Carbon Tracker and CAP team analyses

Consideration of climate in audit reports –matters that could be affected by climate

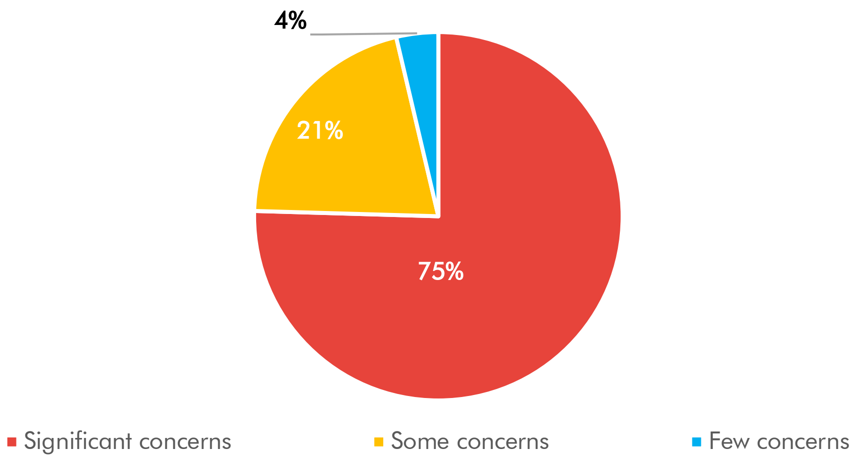
By far the most frequent topics covered in key or critical audit matters was impairment of tangible and/or intangible assets. Seventy-seven percent of audit reports included this topic in one or more audit matters. Less frequently covered were other topics associated with productive assets such as their useful lives (20%) and asset retirement/decommissioning obligations (11%). All of these have likely links to climate-related risk and estimation uncertainty, as do many of the other key or critical audit matters that the auditors identified. These include, for example, the recovery of deferred tax assets and acquisition accounting that assigns fair values to the net assets of an acquired company.

[65] *These ratings exclude the audit report for NextEra Energy, Inc. which was assessed according to PCAOB Auditing Standards. Nearly all of NextEra's fossil fuel generation capacity is rate-regulated and NextEra recently wrote down a substantial portion of the book value of a new pipeline. Accordingly, its financial risk is mostly dependent upon whether regulators disallow cost recovery for accelerated retirement. Although the auditors did not reference consideration of climate-related matters in their audit report for NextEra, we rated them with "some concerns" instead of "significant concerns" based on the remaining financial risks.*

Despite the apparent number of audit matters identified by auditors that could be affected by climate, 80% of these audit reports were not making the link, leaving investors wondering whether they are exposed to the risk that climate had not been considered.

Looking more directly, Figure 12 shows that for those audit reports where impairment was specifically identified in one or more key or critical audit matters, only one-quarter of the reports evidenced consideration of climate matters. Given the general dependency of impairment assessments on long-term cash flow generation, this seems to be a significant lack of regard for climate, particularly for the group of climate-challenged companies that we reviewed.

FIGURE 12 – EVIDENCE OF CONSIDERATION OF CLIMATE IN IMPAIRMENT AUDIT MATTERS



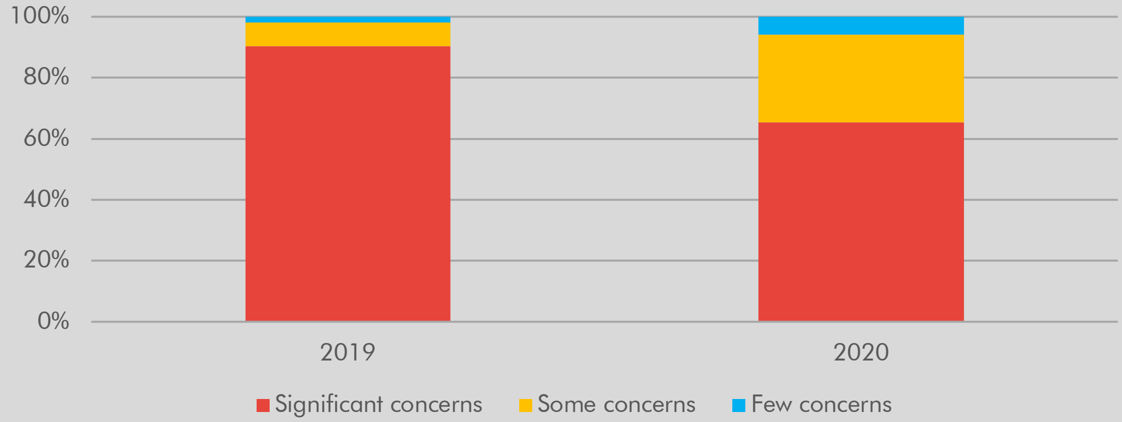
Source: Carbon Tracker and CAP team analyses

Even though only 20% of all the audit reports that we reviewed were scored with 'some' or 'few concerns' for consideration of climate matters (see Figure 15), 2020 still represented an improvement from 2019, as shown for the audit reports assessed by Carbon Tracker in Figure 13.

Consideration of climate in audit reports – a year on year improvement

Carbon Tracker noted a 25% increase between 2019 and 2020 in the number of auditors that appeared to consider climate-related issues, either as a separate key audit matter on climate, or as a component of how another key audit matter was addressed[66]. However, of the 2020 audit reports that Carbon Tracker assessed, 65% still showed no evidence of consideration of climate matters. In addition, none of the audit reports for the 19 US energy companies indicated consideration of climate-related issues in either year.

FIGURE 13 - CONSIDERATION IN AUDIT REPORTS -YEAR ON YEAR CHANGES (CARBON TRACKER ONLY)



Source: Carbon Tracker analysis

The auditor's use of experts

Our reviews also highlighted differences in the auditors' use of experts, particularly in the face of climate-related matters. We also observed differences in what some auditors said they did in relation to the use of experts. For example:

- **Exxon's auditor** (PCAOB) used management's specialists (and not its own) in assessing the reasonableness of future production volumes for impairment testing. **Apache's auditor** (PCAOB) appeared to focus on evaluating whether it could rely on the work of management's internal and external petroleum engineers.
- By contrast, **Shell's auditor** (ISAs), the same firm that audits Apache, used its own colleagues with expertise in climate change to assess the carbon prices that Shell used in its forecast operating plan and to challenge "the reasonableness of Shell's narrative disclosures around material climate risk"[67]. **bp's auditor** (ISAs) also used its own climate change specialists to assess the effects of the energy transition and bp's strategy.

While the need for using experts is a judgment for the auditor to make in fulfilling its responsibilities, the variation in use of experts may be of concern to investors to the extent it may

[66] Due to their 30 June and 30 September year-ends, Carbon Tracker did not review the 2019 reports for BHP and Thyssenkrupp, respectively. Accordingly, this comparison omits the audit reports relating to these companies.
[67] Shell Annual Report and Accounts 2020, p. 202.

suggest different levels of audit quality, particularly as the majority of audit reports did not mention any use of experts in climate-related matters.

Table 5 – Examples: Consideration of climate in audit reports

Company	**Chevron**
Topic / Audit standards[68]	**Auditor's consideration of commodity prices used in impairment testing / PCAOB**
Auditor rating: significant concerns	In 2020, Chevron recorded impairment to upstream properties due to changes in price forecasts. It also fully impaired its investments in Venezuelan oil activities. In its audit report, Chevron's auditor identified two CAMs[69]: *-The Impact of Proved Crude Oil and Natural Gas Reserves on Upstream Property, Plant, and Equipment, Net* and *-The Acquisition of Noble Energy, Inc. - Valuation of Crude Oil and Natural Gas Properties.* These CAMs included estimation of proved oil and gas reserves and measurements of oil and gas assets and liabilities (that we noted are susceptible to climate-related assumptions and estimation uncertainties). Although the auditor recognised future commodity prices as key variables impacting estimated reserve volumes, it made no reference to consideration of climate change anywhere in the audit report, including when assessing the above-referenced CAMs.
Company	**bp**
Topic /Audit standards	**Auditor's consideration of climate risk and strategy on inputs used in impairment testing / ISAs and PCAOB-US**
Auditor rating: few concerns	bp's auditor included three of the same key and critical audit matters in both the Annual Report (UK audit report) and bp's 20-F (US audit report). For two of these, it discussed how the matters were affected by considerations related to climate: *-Impairment of upstream oil and gas property, plant and equipment (PP&E) assets* and *-Write-off of exploration and appraisal (E&A) assets.* When reviewing commodity prices, carbon prices, refining margins, asset lives, provisions and AROs, the auditor challenged bp's assumptions in the face of climate change risks. It compared the prices that bp used to third party Paris-scenarios. It performed its own sensitivity analysis, identifying another $32.1bn in cash generating units that would be at risk from changes in prices /discount rates (significant audit risks) and $16.0bn which would be less sensitive, but still at risk (higher audit risk)[70]. It also included a separate KAM on climate in the annual report audit report: *-Potential impact of climate change and the energy transition.*

[68] *References to ISAs include those auditors that followed a local version of ISAs.*
[69] *Chevron Corporation, Form 10-K for the year ended December 31, 2020, p. 57.*
[70] *bp Annual Report and Form 20-F 2020, p. 137.*

Company	Glencore
Topic / Audit standards	**Auditor's consideration of the effects of changes to demand and regulations on asset impairment / ISAs**
Auditor rating: few concerns	Glencore's auditor identified six KAMs, two of which could be affected by climate-related matters: -*Impairments of non-current assets* and -*Potential impact of climate change on non-current assets.* The auditor acknowledged that climate change presents significant uncertainties for assets sensitive to fossil fuel demand and regulatory responses to climate change, particularly thermal coal. It compared Glencore's assessment of the effects of climate-change risks on its thermal coal portfolio to external industry demand projections/ long-term price scenario and: -assessed whether coal life of mine plans were consistent with Glencore's long-term investment plans, public disclosures, and external climate transition scenarios; -tested additional assets for impairment due to lower headroom and performed sensitivities using Glencore models; and -assessed whether sensitivity and estimation uncertainty disclosures were adequate in the context of climate change risks/uncertainties. The auditor concluded that Glencore had given "reasonable consideration and weight…to the likely impacts of climate change in the valuation for impairment testing purposes of its thermal coal" and had provided reasonable disclosures of these issues.[71]
Company	**Royal Dutch Shell (Shell)**
Topic / Audit standards	**Auditor's assessment of the effects of climate risk and energy transition on assessment of audit matters / ISAs (and PCAOB-US)**
Auditor rating: few concerns	Shell's auditor identified several of the same (or similar) K/CAMs in both the Annual Report audit report and the 20-F (US audit report). These included: -The *estimation of oil and gas reserves, including reserves used in the calculation of depreciation, depletion and amortisation (dd&a).* Here the auditor considered consistency with Shell's net-zero emissions ambitions. -Impairment *testing to evaluate the recoverable amounts of exploration and of production assets and in the estimation of decommissioning and restoration (d&r) provisions.* For this matter the auditor considered climate change/IEA scenarios when assessing Shell's price assumptions. -*The estimation of future refining margins to evaluate the recoverability of refineries.* The auditor assessed how the energy transition would impact demand. -*The estimation of d&r provisions.* The auditor evaluated whether the assumptions that Shell used to estimate these provisions were aligned with assumptions used for the measurement of other items, such as in impairment testing, and challenged management's assessment of the useful lives of manufacturing assets.

[71] *Glencore, Annual Report 2020, p.123.*

	It also assessed Shell's use of carbon pricing/costs in testing these matters. Shell's auditor included further discussions about climate in the Annual Report audit report (in the overview of the audit approach) and included a KAM on *"The impact of climate risk and the energy transition on the financial statements."* It used internal experts to challenge Shell's key estimates and disclosure around material climate risk. It identified the accounting judgements and estimates that could be affected by climate risks/the energy transition, including reserves and resources, relevant provisions, asset lives, impairment testing, climate litigation and deferred tax assets. It included a page on *Investor expectations for "Paris-aligned Accounts"*[72]. The auditor also concluded that Shell could continue as a going concern based on the results of a stress test which assumed Brent prices of $20/bbl for 2021 and 2022. (We noted that this is not a 'Paris-aligned sensitivity' as it does not extend beyond 2022. See further discussion of auditor assessment of Paris-alignment in Section 5.3. and examples in Table 8.)

Source: Carbon Tracker and CAP team analyses

5.2.2 Auditors – consistency check

Expectation 5: The auditor checked for consistency between the narrative disclosures around climate risks (and commitments) and the information that the company used to prepare the financial statements.

For auditors, this reporting question was assessed by both reading the audit report and on an outcome basis – i.e., whether we considered the company's reporting to have been consistent, bearing in mind the more limited scope of the check for auditors than might be expected of a company, across its full breadth of information provided. For 59% of the audits, we had significant concerns that the financial statements were inconsistent with 'other information' that was the subject of the auditor's consistency check (either stated by the auditor or implied by the relevant standards).

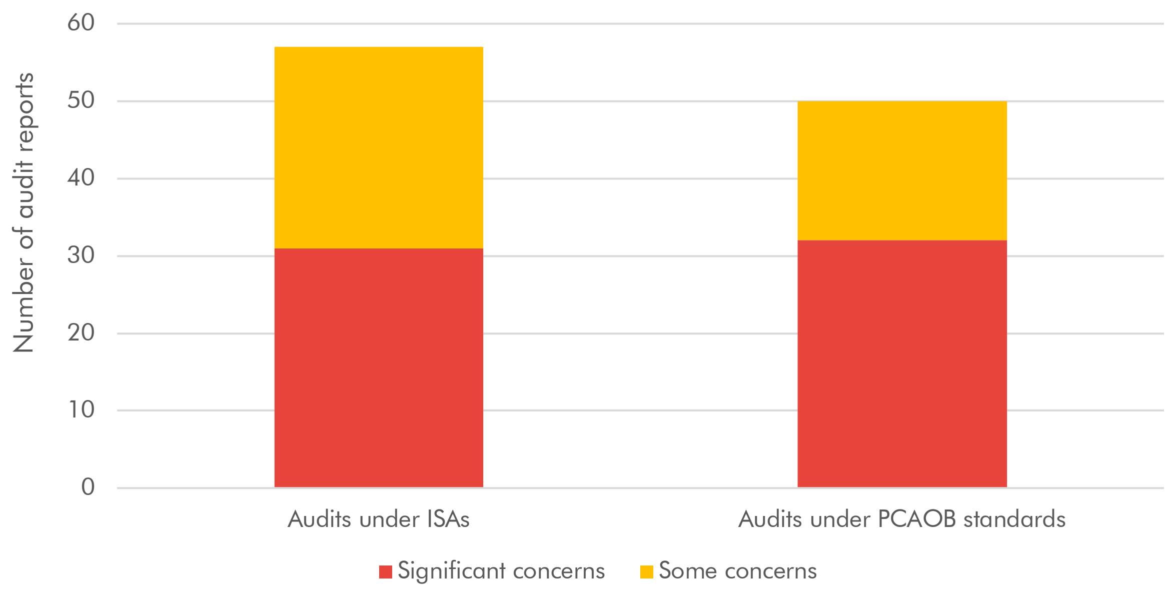
We noted some concerns for the other 41% of the reports that we reviewed. Roughly half of this rating, however, is attributable to there being limited disclosure of climate matters in the 'other information' that was the subject of the auditors' consistency check. Although only a few auditors, such as for Rio Tinto and Shell, appeared to point out a level of inconsistency (see Table 6), this demonstrates that auditors can make these assessments and disclose their conclusions.

In analysing results by auditing standards, 64% of the PCAOB audit reports were rated with significant concerns versus 54% of reports under ISAs. Additionally, we noted that PCAOB audit reports were generally silent on the outcome of their consistency review, which we have interpreted as implying that no material inconsistency was identified in the other information within the filing document. For checks performed under the ISAs, the auditors typically specified the scope of the 'other information' that was read for this purpose, and usually provided a conclusion – generally that they had nothing to report.

[72] *Shell Annual Report and Accounts 2020, p. 203.*

Overall, these results suggest that the auditor consistency check does not appear to be highlighting differences in treatment of climate matters.

FIGURE 14 – AUDITOR CONSISTENCY CHECKS FOR AUDITS UNDER ISAs VS. PCAOB STANDARDS



Source: Carbon Tracker and CAP analyses

TABLE 6 – EXAMPLES: AUDITOR CONSISTENCY CHECKS

Company:	**Air France–KLM (Air France)**
Topic / Audit standards	**Climate risks and actions / ISAs**
Auditor rating: significant concerns	In its annual report Air France acknowledged exposure to physical climate change risks and discussed key climate undertakings. However, it did not appear to consider these issues in the financial statements. In addition to the audit of the financials, one of Air France's joint statutory auditors provided independent assurance on the non-financial statements within the annual report[73] and included a comment about the consistency of this information based on its knowledge of Air France. Despite this additional layer of assurance on the 'other reporting', and the apparent inconsistencies that we noted in Air France's reporting, the auditor did not make any mention of any inconsistencies in the audit report.

[73] *As under the French audit regime.*

TABLE 6 CONT. – EXAMPLES: AUDITOR CONSISTENCY CHECKS

Company:	Rio Tinto
Topic / Audit standards	**Consequences of net zero targets / ISAs**
Auditor rating: some concerns	Rio Tinto's auditor indicated that it did not note any material misstatements or inconsistencies between the financial statements and other information included in the annual report, based on the knowledge obtained during their audit. Within the section that provides an overview of its audit, as part of its discussions about the impact of climate change on the audit, the auditor also noted that Rio Tinto is still determining the consequences of its 2050 net zero "targets" on its financial statements, and that it was likely that the future carrying amounts of assets/ liabilities will change as Rio Tinto responds to its climate change targets. (Note that Rio Tinto has also acknowledged this.) This differed from the audit report included in the 20-F, where the auditor made no mention of this difference.

Source: Carbon Tracker and CAP analyses

5.2.3 Auditors – overall results

Overall, for the two audit report assessments (consideration of climate and consistency checks), most auditors did not appear to follow requirements to consider climate in financial statements, or provide evidence of inconsistencies in company reporting, to any meaningful extent.

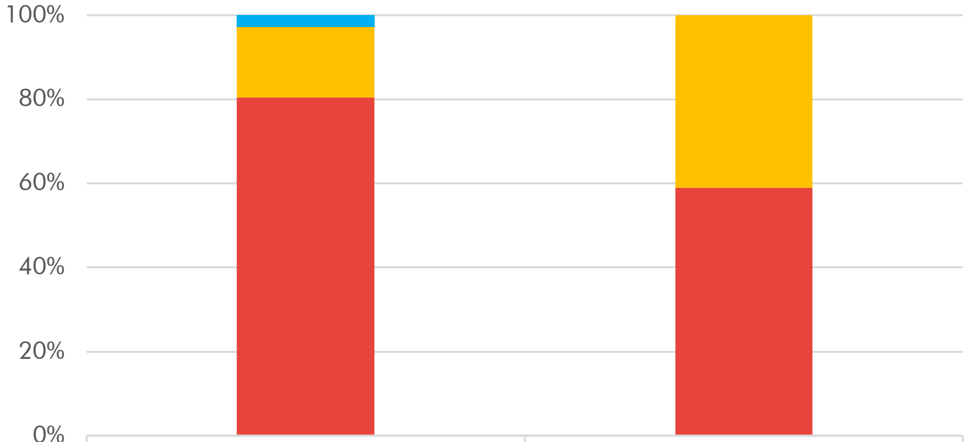
The majority of auditors did not provide evidence of consideration of climate in their audit work.

Based on existing audit requirements and the carbon-intensive nature of the companies that we reviewed, we expected to find reference to the auditor's consideration of material climate-related matters in the 2020 audit reports. For example, we expected that the auditors would have considered whether the assumptions and estimates that these companies used were reasonable in the light of the energy transition.

Despite the fact that we found inconsistencies to be prevalent across company reporting, very few auditors commented on differences between the company's other reporting and the financial statements.

Although our reviews of the auditor consistency check resulted in 41% of audit reports being rated with 'some concerns', this must be interpreted in context. Roughly half of these ratings are attributable to there being limited disclosure of climate matters in the company's 'other information' that was the subject of the auditors' consistency check, rather than the auditor indicating that it identified inconsistencies.

Figure 15 – Results of assessments of audit reports



	Auditors - consideration of climate	Auditors - consistency check
Good practice	0%	0%
Few concerns	3%	0%
Some concerns	17%	41%
Significant concerns	80%	59%

Source: Carbon Tracker and CAP team analyses.

5.3 Paris alignment of assumptions and estimates

Expectation 6: The company aligned its critical accounting assumptions and estimates with the goals of the Paris agreement. If it chose not to, it explained why and provided a sensitivity analysis to such inputs.

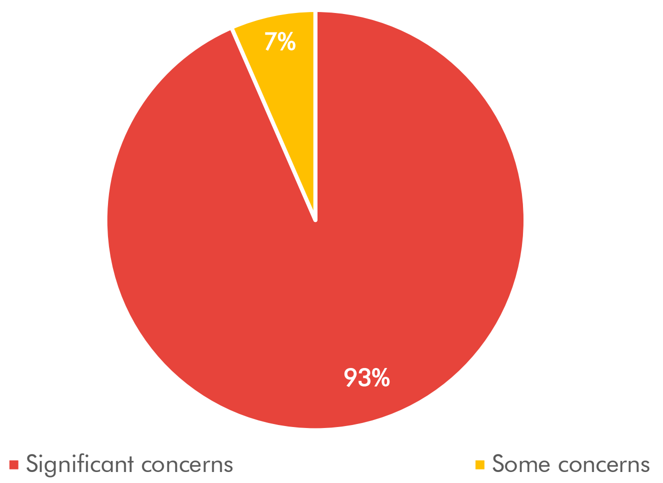
Although some referenced 'credible climate scenarios', none of the 107 companies that we reviewed used Paris-aligned assumptions, as defined for this review, in their financial statements or provided sensitivities to such assumptions.

Recall that only 25% of the companies that we reviewed disclosed at least some of the quantitative climate-related inputs that they used. This means that we were unable to quantitatively assess whether the remaining 75% of the companies used Paris-aligned inputs.

Of the 26 companies that disclosed at least some of the relevant quantitative information, only seven used inputs that they claimed were aligned with published climate scenarios, such as those issued by the IEA[74]. However, we did not consider any of the scenarios that companies referenced to be Paris-aligned.

[74] *Such as the International Energy Agency's Stated Policies Scenario (STEPS) or Sustainable Development Scenario (SDS).*

FIGURE 16 – PARIS-ALIGNMENT OF ASSUMPTIONS AND ESTIMATES



Source: Carbon Tracker and CAP analyses.

TABLE 7 – EXAMPLES: CONSIDERATION OF PARIS-ALIGNMENT OF ASSUMPTIONS AND ESTIMATES

Company:	**bp**
Rating: some concerns	bp indicated that the price assumptions it used for impairment testing were based on a range of energy transition scenarios, including those where the Paris goals "are not met." It contended that the resulting prices were "broadly in line with a range of transition paths consistent with the goals of the Paris climate change agreement"[75]. Given that these prices included scenarios that were not Paris-aligned, we deemed them insufficient--even if steps have been taken in that direction.
Company:	**Eni**
Rating: some concerns	Eni set a target to reach net zero by 2050 for its Scope 1, 2 and 3 emissions, along with interim emissions reduction targets. Due to declines in oil prices from COVID-19 and the energy transition, in 2020 Eni recorded impairment losses on PPE and other tangible assets. Eni aligned the commodity price assumptions that it used in impairment testing with the IEA Sustainable Development Scenario (SDS), which it believed was consistent with the goals of the Paris Agreement. However, the crude oil price levels used in the IEA's Net Zero by 2050 Report[76] are significantly lower from those in the IEA SDS and so we did not consider Eni's assumptions to be Paris-aligned (see definition in Section 4). Eni also acknowledged that the CO_2 price it used was lower than that indicated in the IEA SDS.

Source: Carbon Tracker analysis

[75] *bp Annual Report and Form 20-F 2020, pp.160, 166.*
[76] *International Energy Agency, "Net Zero by 2050: A Roadmap for the Global Energy Sector" (IEA NZE 2050),* https://www.iea.org/reports/net-zero-by-2050

Expectation 6a (Carbon Tracker only): The auditors of the 55 companies that Carbon Tracker reviewed indicated whether the assumptions and estimates that the companies used were 'Paris-aligned'.[77] Where Paris-aligned numbers were not provided, the auditor indicated what reasonable Paris-aligned assumptions would be and provided a sensitivity to those assumptions.

Carbon Tracker found that very few auditors appeared to consider this information in their audit reports, and none provided 'Paris-aligned' assessments. Furthermore, auditors only appeared to disclose an evaluation of company inputs against external climate scenarios if companies provided their own assessments against external climate scenarios.

In Table 8, the 'some concerns' examples indicate some of the work the auditor can do to assess the company's climate-related inputs. While none of the 'some concerns' examples used similar benchmarks to those that we used to assess Paris-alignment, they evidence a step in this direction and show a possible starting point for others.

By contrast, Shell's was only auditor to indicate that the request of investors for insight on Paris - aligned assumptions was outside of its remit. See below.

TABLE 8 – EXAMPLES: AUDITOR ASSESSMENT OF PARIS-ALIGNMENT

bp's auditor
Auditor rating: some concerns
bp's auditor compared bp's price assumptions against third-party forecasts including Paris 2°C scenarios. While bp's central price assumptions were at the higher end of estimates, overall, the auditor indicated that it was satisfied that the prices were "broadly in line with a range of transition paths consistent with the goals of the Paris climate change agreement [sic]". The auditor also concluded that the prices bp used in its sensitivity analyses were within "a range of third-party Paris 2°C Goal gas price forecasts. For oil, management's downside sensitivity is comfortably within a range of Paris 2°C Goal forecasts in the period to 2028, but towards the top end of that range by 2050."[78]
Glencore's auditor
Auditor rating: some concerns
Glencore's auditor noted that the thermal coal price assumptions that Glencore used in impairment testing are higher than those that Glencore used in scenarios to test against the resilience of its portfolio against the impacts of climate change (which assumed that Paris goals would be met). However, the auditor did not provide an indication of assumptions that would be Paris-aligned nor did it perform a sensitivity to Paris-aligned assumptions.[79]

[77] *This forms part of the IIGCC, November 2020, "Investor Expectations for Paris-aligned Accounts",* https://www.iigcc.org/download/investor-expectations-for-paris-aligned-accounts/?wpdmdl=4001&masterkey=5fabc4d15595d.
[78] *bp Annual Report and Form 20-F 2020, pp. 138, 160*
[79] *Glencore Annual Report 2020, p. 122.*

TABLE 8 CONT.– EXAMPLES: AUDITOR ASSESSMENT OF PARIS-ALIGNMENT

Shell's auditor
Auditor rating: significant concerns
Shell's auditor indicated its view that this assessment was outside of its remit, responsibility or expertise: "To fulfil the aspirations of the Paris Agreement, Shell's strategy will need continuously to evolve as the world economy transforms itself. For example, for Shell to reach net-zero emissions by 2050, it would also be necessary for Shell's customers to de-carbonise. Importantly also, Shell has reported in Note 2 to the Consolidated Financial Statements that their operating plan and pricing assumptions do not yet reflect Shell's 2050 net-zero emissions target. For these reasons, it is neither possible nor appropriate…as Shell's auditor, to attempt to provide in our audit opinion Paris-aligned assumptions that are not in our remit to determine, and the impact that any such assumptions might be expected to have on the financial statements. We are satisfied that the disclosure in relation to the Board's current view on the ways in which Shell's critical accounting judgements and estimates are impacted by climate risk and the energy transition are sufficient and appropriate. **However, it is not within our professional remit, responsibility or expertise to disclose in our audit opinion what we would consider to be reasonable assumptions taking the net-zero transition into account, and the impact such assumptions might have on Shell's financial statements [emphasis added]**."[80]

Source: Carbon Tracker and CAP analyses

Overall, none of the companies used Paris-aligned[81] assumptions or estimates in the preparation of their financial statements, or included a sensitivity to such inputs.

Only four of the 55 audit reports reviewed by Carbon Tracker indicated any level of assessment of the company's assumptions and estimates against external climate scenarios. While a fifth auditor did indicate a level of assessment, it also explicitly stated that it did not have the ability or obligation to assess Paris-alignment and so was rated with 'significant concerns' for this category.

[80] *Shell Annual Report and Accounts 2020, p. 203.*
[81] *As defined for the purposes of our review in Section 4. Scope, coverage and approach.*

6. Findings and recommendations

6.1 Findings

The companies that we reviewed operate in significant climate-exposed industries, and standard-setters have provided guidance on how these issues must be considered. Despite this, we saw little evidence that companies or their auditors considered climate-related matters in the 2020 financial statements. We did not consider any set of financial statements or audit report to represent good practice for any of the six categories that we assessed (See Figure 17). Accordingly, last year's financial statements failed to reflect the financial consequences of the energy transition. We found that:

1. There was little evidence that companies incorporated material climate-related matters into their financial statements. Of the 107 companies that we reviewed, over 70% did not indicate that they had considered climate matters when preparing their 2020 financial statements, leaving investors no way to know whether the companies had applied the relevant accounting requirements. This is despite the fact that significant institutional investors have identified these companies as highly carbon exposed, and most are included among the Climate Action 100+ investor focus list.

2. Most climate-related assumptions and estimates were not visible in the financial statements. Only 25% of the companies provided disclosure of at least some of the quantitative assumptions and estimates that they used in preparing the financial statements. This made it difficult to assess whether the companies accounted for climate risks (or related commitments, such as emissions reduction pledges).

3. Most companies did not tell a consistent story across their reporting. While nearly all of the companies mentioned transition and/or physical risks outside the financials, for 72% of the companies, the treatment of climate matters within their financial statements appeared to be inconsistent with their disclosures of climate-related risks (and commitments, when relevant) in their other reporting. This included instances where the company conceded that climate-related risks were financially material. Accordingly, there was often no clear through line from these discussions to their financial reporting.

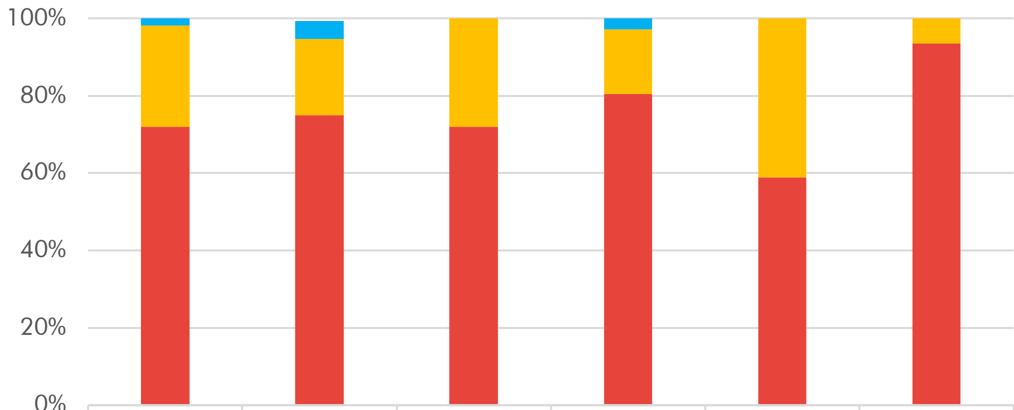
4. There was little evidence that auditors considered the effects of material climate-related financial risks or companies' announced climate strategies. 80% of auditors provided no indication of whether or how they had considered material climate-related matters, such as the impact of emissions reduction targets, changes to regulations, or declining demand for company products when auditing financial statements. This left no way to determine whether the auditors had applied the relevant auditing requirements. This is despite in many cases identifying audit matters such as impairment of tangible and intangible assets that had a dependency on future cash flows to support recovery of asset values, which could be adversely impacted from the energy transition.

5. Even with considerable observable inconsistencies across company reporting ('other information' and financial statements), auditors rarely commented on any differences. We had significant concerns for 59% of the consistency checks that the auditors were required to perform. For around half of the remaining 41%, companies' discussions of and responses to climate matters were consistently limited across their reporting.

6. Companies did not appear to use 'Paris-aligned' assumptions and estimates. While some of the companies used inputs from published climate scenarios,[82] none appeared to use assumptions and estimates that were aligned with meeting the goals of the Paris Agreement[83], when preparing their financial statements nor provided sensitivities to this. This was even when companies had aligned their strategies with the objectives of the Paris Agreement, and is despite the call from investors that companies consider the effects of these goals when preparing their financial statements.

These findings are in spite of the fact that the IASB, FASB and IAASB, the relevant regulators for global company reporting and audit, have set out their expectations that climate change issues should be considered in the creation and audit of financial statements.

Figure 17 – Overall results: climate matters in financial statements and audit reports[84]



	Financials - consideration of climate	Financials - visibility of assumptions	Financials - consistency w/ other reporting	Auditors - consideration of climate	Auditors - consistency check	Paris alignment of assumptions
Good practice	0%	0%	0%	0%	0%	0%
Few concerns	2%	5%	0%	3%	0%	0%
Some concerns	26%	20%	28%	17%	41%	7%
Significant concerns	72%	75%	72%	80%	59%	93%

Source: Carbon Tracker and CAP team analyses

[82] *Such as the International Energy Agency States Policies Scenario (STEPS) or Sustainable Development Scenario (SDS).*
[83] *See definition that was used for the purposes of our study in Section 4. Scope, coverage and approach.*
[84] *We applied a colour-coded, four-tiered rating system to facilitate comparison of the results of the six assessments across company financial statements (and the audit reports thereon). See description of rating system in Appendix 1-Approach to reviews and ratings. Note that there may be slight differences in the percentages due to rounding.*

6.2 Recommendations

By failing to provide transparency around both whether and how they have taken climate-related risks into account in the related assumptions and estimates used in their financials, companies, and their auditors, are leaving investors in the dark. As a result, this:

- raises concerns about whether companies and auditors are following the relevant requirements and whether investors are receiving the appropriate information related to climate matters in financial statements;
- limits the ability of investors to allocate capital in accordance with their objectives, including meeting the goals of the Paris Agreement[85];
- disregards that a significant coalition of investors have asked for this and need this information; and
- reduces an investor's ability to make investment, engagement and voting decisions.

Companies, auditors, regulators and investors all have important roles to play in improving the content and quality of financial reporting of climate matters.

Companies should increase both the consideration of and the transparency around the incorporation of climate matters in their financial statements[86].

In order to do so, companies need to:

- improve their climate governance (and financial reporting thereof) by establishing appropriate oversight, internal control and risk management systems, and ensuring that such issues are part of audit plans;
- clearly indicate whether and how they have incorporated material climate-related risks and/or commitments into their financial statements;
- disclose climate-related estimates and assumptions and describe how they are taking climate-related risks (and their own targets) into account; and
- explain why and provide Paris-aligned sensitivities to assumptions and estimates, if they are not using aligned inputs in their financial statements.

Auditors must provide better transparency around whether and how they addressed climate-related matters in their audits. This is particularly important in the light of the GPPC's December 2020 letter.

As part of this, auditors need to:

- provide evidence of the work they did to address climate-related issues, including how they

[85] *For example, as part of investors' own risk management policies, stakeholder expectations (such as demands from pension clients) and their own climate commitments.*
[86] *See also IFAC's "Corporate Reporting: Climate Change Information and the 2021 Reporting Cycle",* https://www.ifac.org/knowledge-gateway/contributing-global-economy/discussion/corporate-reporting-climate-change-information-and-2021-reporting-cycle

scrutinised and used professional scepticism in evaluating management's inputs;

- ensure that company financial statements are not inconsistent with other company disclosures which may extend beyond annual filings;
- ensure that companies consider climate-impacted assumptions and estimates and that these are transparently disclosed;
- develop firm-wide policies to consistently address these issues; and
- for the benefit of investors encourage that management meet investor demands for Paris-aligned assumptions and sensitivities, examine these inputs themselves and provide sensitivities thereon.

Regulators should identify whether companies have incorporated material climate-related matters in their financial statements, look for inconsistencies and identify audit failures[87].

Our findings suggest the need for enforcement of these issues. Regulators should:

- increase their focus on ensuring consistency between company narrative reporting and the financial statements;
- expand the definition of 'other information' for audit consistency checks to ensure the inclusion of climate related disclosures in documents such as sustainability or climate reports; and
- announce their inclusion of these issues in forthcoming supervisory and enforcement reviews.

Investors can use the results of this study to inform ongoing engagement, voting and investments decisions.

Investors are a key lever of change. Accordingly, they should:

- engage with companies and establish expectations of climate-related matters for the 2021 accounts and upcoming proxy season;
- help ensure proper governance of these issues through communication with audit committees or others in charge of oversight; and
- communicate their expectations to auditors, either directly or via proxy voting.

[87] *Current standards already set expectations beyond what companies (and auditors) are delivering. However additional steps by the SEC, such as a Staff Accounting Bulletin or the IASB such as in their Agenda Consultation and the PCAOB providing clarifications may help facilitate the requisite increase in transparency and consideration of climate matters in financial statements.*

Appendix 1 – Approach to reviews and ratings

In this Appendix we describe the approach to this study.

In performing our reviews, we considered the relevant accounting and auditing standards, guidance from the standard setters on applying those requirements in the context of climate matters, and investor concerns.

The companies that we reviewed followed either IFRS[88] or US GAAP when preparing their financial statements; many were also publicly listed in the US. The company audits were in accordance with ISAs[89] or PCAOB standards.

The IASB, FASB and IAASB have made it clear that, although the relevant standards do not specifically reference the word climate, there is no exception for consideration of material issues related to climate change or the energy transition, for example, when applying those standards. Investors have echoed this by requesting that companies and their auditors follow the relevant requirements and consider climate in the 2020 financial statements. As a result, we expected companies to incorporate the effects of climate matters into their financials (and auditors, into their audits).

Due to the material impact that the energy transition will have on companies, investors have also requested that companies align their central inputs with the goals of the Paris Agreement[90]; we therefore looked for this information as well.

Why are financial statement disclosures important?

Disclosures provide a window through which investors can look to understand the effects of material climate issues on a company's financial position and results. The questions that we asked when performing our reviews (see the six expectations in "Approach to reviews" below) were primarily focused on whether the company and its auditor provided evidence of the information that we were assessing via disclosures. Without disclosure, it is not possible for investors, regulators or other market actors to assess what a company and its auditor have considered, and done, in preparing and auditing the financial statements, respectively.

Accounting and auditing standards

Accounting standards and disclosure

Both the IASB and FASB guidance documents[91] include non-exhaustive lists of standards which could be relevant when considering the effects of material climate-related matters. Topics include, but are not limited to, the accounting for property plant and equipment, goodwill and other intangible assets, decommissioning obligations, inventory, deferred taxes, and provisions and loss contingencies. Accounting requirements often involve a need to make judgements, assumptions and estimates in their application[92].

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[88] *Or the local equivalent thereof.*
[89] *Or the local equivalent thereof.*
[90] *See definition for the purposes of our reviews in Section 4. Scope, coverage and approach.*
[91] *IASB guidance: in-brief-climate-change-nick-anderson.pdf (ifrs.org) (November 2019), effects of climate related matters on financial statements (ifrs.org) (November 2020) and FASB guidance: FASB Staff Educational Paper—Intersection of Environmental, Social, and Governance Matters with Financial Accounting Standards (March 2021)*
[92] *For example, see International Accounting Standard (IAS) 36 Impairment of assets, IAS 37 Provisions, Contingent Liabilities and Contingent Assets, SEC Staff Accounting Bulletin (SAB) Topic 5.CC.Impairments and Topic*

The concept of 'materiality' is central to determining the information to include in financials and to disclose. Materiality is based primarily on investor needs; information is material if it can reasonably be expected to influence investors' decisions. Materiality is generally entity and context specific and can have quantitative aspects (related to the amount of an item or transaction) and/or qualitative aspects (based on the nature of the item).

Investors have made it clear that climate is a material factor in their decision-making and so, along with the standard-setter clarifications, expect companies to incorporate the effects of material climate-related matters into their financials (and auditors, into their audits)[93]. Management and/or auditor consideration of climate-related matters is not apparent unless it is disclosed; our review therefore focused on whether there was evidence in the disclosures of companies (and auditors) that they considered relevant climate matters.

What is materiality?

IFRS: Information is material if "omitting, misstating or obscuring it could reasonably be expected to influence decisions that primary users of general financial statements" [e.g., investors] make on the basis of those financial statements, which provide financial information about a specific reporting entity."[94]

US GAAP: "The omission or misstatement of an item in a financial report is material if, in light of surrounding circumstances, the magnitude of the item is such that it is probable that the judgment of a reasonable person relying upon the report would have been changed or influenced by the inclusion or correction of the item."[95]

Both IFRS and US GAAP also have specific requirements and overarching considerations for the provision of disclosures.

For example, they require disclosure of assumptions that could result in a material change to assets and liabilities in the next year, and significant judgements or accounting policies that management have made in the preparation of the financial statements. They require, or recommend, disclosure of key assumptions (and estimates) for certain accounting items, such as for some impairment tests, changes in asset lives, residual values, the timing of expected payments as well as uncertainties about timing and amounts related to obligations.

IFRS also requires companies to disclose information that is necessary for an investor to understand the financial statements (even if not required by specific standards)[96], while the SEC highlights the importance of viewing "the facts in the context of the 'surrounding circumstances'."[97]

We recognise that certain of the requirements for using IFRS and US GAAP differ. The IASB has clarified that climate must be considered in drawing up accounts under existing standards. For US

5.Y.Accounting and Disclosures Relating to Loss Contingencies (Codification of Staff Accounting Bulletins - Topic 5: Miscellaneous Accounting (sec.gov).

[93] *The September 2020 Investor group letter and November 2020 IIGCC letters.*

[94] *IAS 1 Presentation of Financial Statements, paragraph 7. See also IFRS Practice Statement 2: Making Materiality Judgements.*

[95] *FASB Statement of Financial Accounting Concepts No. 8, As Amended, August 2018, QC11. Additionally: "… magnitude by itself, without regard to the nature of the item and the circumstances in which the judgment has to be made, generally is not a sufficient basis for a materiality judgment." QC11A. See also SAB Topic 1. M.*

[96] *IAS 1 Presentation of Financial Statements, paragraph 112 and* effects of climate related matters on financial statements (ifrs.org) *(November 2020) p.1.*

[97] *SEC SAB Topic 1.M.,* Codification of Staff Accounting Bulletins - Topic 1: Financial Statements (sec.gov)

GAAP, the FASB staff guidance is slightly less explicit, being set in a broader context of ESG (environmental, social and governance). However, both standard setters essentially confirm the application of existing standards as applying to climate-related matters in the same way.

Auditing standards and reporting

Both ISAs and PCAOB standards require auditors to assess financial statements for risks of material misstatement. This includes identifying and assessing items that require significant judgements and estimates (such as, for example, the effects of climate-change). Auditors must also assess whether misstatements in qualitative disclosures, or omissions of information, even if not required by the relevant accounting standards, would be material to investors given the importance of such information for their decision-making[98].

The IAASB sets ISAs. In the IAASB's 2020 clarification it noted that "[i]f climate change impacts the entity, the auditor needs to consider whether the financial statements appropriately reflect this in accordance with the applicable financial reporting framework (i.e., in the context of risks of material misstatement related to amounts and disclosures that may be affected depending on the fact and circumstances of the entity)."[99]

As of the date of publication of this report, the PCAOB has not published its own clarification about addressing climate risks in audits. However, the IAASB has previously noted that in certain respects, the two sets of standards are analogous.[100] Accordingly, there is no reason to think the PCAOB's existing auditing requirements are any different in this regard. In other words, they also apply without any exception being made for climate.

Materiality and audits

ISAs: "The auditor's determination of materiality is a matter of professional judgment and is affected by the auditor's perception of the financial information needs of users of the financial statements. Given that some investors have specifically identified climate-related risks as being used in their economic decision-making, auditors of entities that are affected by climate-related risks may need to take that into account when determining materiality."[101]

PCAOB standards: "To obtain reasonable assurance about whether the financial statements are free of material misstatement, the auditor should plan and perform audit procedures to detect misstatements that, individually or in combination with other misstatements, would result in material misstatement of the financial statements. This includes being alert while planning and performing audit procedures for misstatements that could be material due to quantitative or qualitative factors."[102]

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[98] *ISA 320: Materiality in Planning and Performing an Audit, ISA 450: Evaluation of Misstatements Identified during the Audit*, and *"The Consideration of Climate-Related Risks in an Audit of Financial Statement [sic]"*, *IAASB-Climate-Audit-Practice-Alert.pdf (ifac.org), pp. 6-7.

[99] *"The Consideration of Climate-Related Risks in an Audit of Financial Statement [sic]"*, *IAASB-Climate-Audit-Practice-Alert.pdf (ifac.org), *p. 4.*

[100] *The most notable difference between international and PCAOB standards is that, under the Sarbanes-Oxley Act of 2002, PCAOB standards provide for an integrated audit over internal control over financial reporting in addition to the financial statement audit. Both sets of standards require the auditor to obtain reasonable assurance that the financial statements are free of material misstatement, whether due to error or fraud, based on the auditor's judgment in planning and performing the audit to assess and address risks of material misstatement. For example, see AS 1101: Audit Risk.* AS 1101: Audit Risk | PCAOB (pcaobus.org).

[101] *ISA 320: Materiality in Planning and Performing an Audit, and "The Consideration of Climate-Related Risks in an Audit of Financial Statement [sic]",* *IAASB-Climate-Audit-Practice-Alert.pdf (ifac.org), *p. 6.*

[102] AS 2105: Consideration of Materiality in Planning and Performing an Audit | PCAOB (pcaobus.org).

Auditors could reference consideration of climate-related matters in various sections of their report, for example in providing an overview of the scope of the audit. However we found that evidence of an auditor's assessment of climate was most often in the discussion of key or critical audit matters.

- Key audit matters (KAMs) are identified in audits performed using ISAs. They are defined as those matters which were of most significance in the audit of the financial statements for that period[103]. KAMs are selected from the matters communicated with those charged with governance, taking account of areas that involve high risk of misstatement or significant risks, that require significant judgements (or involve high estimation uncertainty), and/or the effect on the audit of significant events or transactions occurring in the period.
- Critical audit matters (CAMs) are identified when using PCAOB standards. CAMs are defined as those matters which were material, communicated to the audit committee, and involved especially challenging, subjective, or complex auditor judgements[104]. The factors that an auditor considers in identifying CAMs are similar to those for KAMs. Additionally, they may include the degree of subjectivity in applying audit procedures, the nature and extent of audit effort (including the extent of specialised skill or knowledge), and/or the nature of audit evidence obtained.

Under both sets of standards, where expertise beyond accounting is necessary to obtain sufficient audit evidence, auditors are required to determine whether to use outside experts. For example, they may need to use an 'auditor's expert' (ISAs)[105] or 'auditor's specialist' (PCAOB standards)[106] to assess the effects of climate on the audit of key or critical matters.

Consistency in financial reporting

Accounting

To varying degrees, market regulators require consistency in reporting. Examples of requirements/ guidelines and relevant bodies include:

- **The UK Financial Reporting Council (FRC).** The FRC published its Climate Thematic in November 2020. As part of this, the FRC found it was generally unclear "how forward-looking assumptions and judgements applied in preparation of the financial statements were consistent with narrative discussion of climate change".[107]

- **The IASB's Management Commentary**. Coherence between the financial statements and the management commentary is one of the fundamental building blocks of the IASB's best practice guidance for narrative reporting that accompanies IFRS financial statements. The current draft of the guidance states that "an entity's management commentary provides information in a way that allows investors and

[103] *ISA 701: Communicating Key Audit Matters in the Independent Auditor's Report.*
[104] *AS 310: The Auditor's Report on an Audit of Financial Statements When the Auditor Expresses an Unqualified Opinion.*
[105] *ISA 620 Using the Work of an Auditor's Expert.*
[106] *PCAOB Staff Guidance: Supervising or Using the Work of an Auditor's Specialist.*
[107] *Financial Reporting Council, "Climate Thematic", November 2020, Summary-FINAL.pdf (frc.org.uk), p. 9.*

creditors to relate that information to information in the entity's financial statements"[108], making clear that inconsistencies between information in the narrative and financial sides of reporting is unhelpful and fails to deliver against the standard-setter's expectations.

- **The Securities and Exchange Commission (SEC).** The SEC indicates that "the judgments and assumptions made for purposes of [impairment testing] must be consistent with other [internal] financial statement calculations and disclosures and disclosures in MD&A" and other public disclosures.[109]

Auditing

Both ISAs and PCAOB standards require auditors to read the company's 'other information' for any material inconsistency between that information, the financial statements, and knowledge obtained during the audit.. However, the definition of 'other information' varies between the two sets of standards.

PCAOB standards generally limit the review to information in the same filing as the financials. By contrast, IAASB guidance states that if climate-related information is presented outside the annual report, "it may be important to determine whether the document containing the climate-related information nevertheless forms part of the annual report …. An example of a document which is not always part of the Annual Report is a Sustainability Report, which some jurisdictions are seeing an increase in entities issuing."[110]

ISAs also require auditors to make certain commentaries regarding their consistency check, including a "description of the auditor's responsibilities relating to reading, considering and reporting on other information…" and "…a statement that the auditor has nothing to report; or…a statement that describes the uncorrected material misstatement of the other information"[111]. If the auditor has determined that other information (in the same document as the financials) is materially inconsistent with the information in the financial statements, PCAOB standards may require an explanatory paragraph in the audit report[112].

Approach to reviews

Our approach was set in the context of each company's reporting (including any discussions about climate-related risks and any stated commitments) as well as the sector in which it operated. Based on the nature of the companies, with which many investors had already been engaging on such topics, we expected climate-related risks to be material (even if the company did not yet acknowledge them).

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[108] *IFRS Practice Statement Exposure Draft ED/2021/6 Management Commentary,* https://www.ifrs.org/content/dam/ifrs/project/management-commentary/ed-2021-6-management-commentary.pdf

[109] *The SEC staff also expect that "forecasts made for [impairment testing] purposes be consistent with other forward-looking information prepared by the company, such as that used for internal budgets, incentive compensation plans, discussions with lenders or third parties, and/or reporting to management or the board of directors." SAB Topic 5.CC,* Codification of Staff Accounting Bulletins - Topic 5: Miscellaneous Accounting (sec.gov)

[110] "The Consideration of Climate-Related Risks in an Audit of Financial Statement [sic]", *IAASB-Climate-Audit-Practice-Alert.pdf (ifac.org), *p. 13.*

[111] *ISA 720 (Revised): The Auditor's Responsibilities Relating to Other Information, p.10.*

[112] *AS 2701: Auditing Supplemental Information Accompanying Audited Financial Statements.*

We also considered the nature of the company's assets, liabilities and transactions that could be affected by climate-related matters, as well as the quantitative amounts of such items. For example, we looked at whether there was a potential that the values of material assets could be affected by climate-related issues (e.g., when considering impairment under accounting requirements). For assets that were depreciated or amortised, we considered whether climate matters would likely impact remaining useful lives, or for tangible assets, residual values. For some companies, the effects on the accounting for liabilities, such as asset retirement /decommissioning obligations or onerous contracts, appeared to be potentially relevant and so subject to possible understatement if climate was not considered. The above examples are not exhaustive.

Table 9 provides a heatmap of the financial statement items that would most likely be impacted by material climate-related matters for the sectors covered by our review. Note that this list of accounting topics has a strong correlation to topics included in the IASB and FASB publications clarifying treatment of such matters. Those documents also referenced topics that we found to be less sector-specific, such as the recovery of deferred tax assets.

TABLE 9 – FINANCIAL STATEMENTS ITEMS MOST RELEVANT TO OUR ANALYSES BY SECTOR

	Sectors					
Financial statement items	Cement	Consumer goods & services	Oil & gas	Other industrials	Transportation	Utilities & power producers
Property, plant and equipment	most relevant	moderately relevant	most relevant	most relevant	most relevant	most relevant
Goodwill /other intangibles	most relevant	most relevant	most relevant	moderately relevant	most relevant	most relevant
Sales financing receivables	least relevant or n/a	least relevant or n/a	least relevant or n/a	least relevant or n/a	most relevant	least relevant or n/a
Leased assets	moderately relevant	least relevant or n/a	most relevant	moderately relevant	most relevant	most relevant
Inventory	moderately relevant	least relevant or n/a	moderately relevant	moderately relevant	most relevant	least relevant or n/a
Equity investments	least relevant or n/a	least relevant or n/a	most relevant	least relevant or n/a	least relevant or n/a	most relevant
Decommissioning obligations	most relevant	least relevant or n/a	most relevant	moderately relevant	least relevant or n/a	most relevant
Other provisions/ contingencies	moderately relevant	moderately relevant	moderately relevant	moderately relevant	moderately relevant	moderately relevant

most relevant for this analysis — moderately relevant for this analysis — least relevant or n/a for this analysis

Source: Carbon Tracker graphic

In the following section, we describe why the information that we looked for is important, and how we approached each of the six assessments.

Financial statements[113]

Expectation 1: The company included the effects of material climate-related matters when preparing its financial statements.

Why is disclosure of this information necessary?
To assess their own risk and undertake their stewardship responsibilities, such as engagement and voting, investors need to know if a company has considered climate matters in preparing the financials. This includes understanding the extent to which companies consider climate when making significant judgements and estimation uncertainties.
Why is consideration of climate matters in financials important?
Excluding the impact of climate from accounts can result in overstated profits and asset values, and understated liabilities. **For a company,** this can lead to continued investment in assets or projects that will not deliver the expected returns. **For investors**, understanding the effects of these issues will help inform investment, engagement and voting decisions.
Approach
We looked for discussions, such as in the significant accounting policies or specific notes for relevant items, about whether and how the company incorporated the effects of material climate-related issues in its financial statements. Table 9 illustrates some of the relevant topics. These include, but were not limited to, whether companies indicated that they: ➢ considered climate matters, such as emissions reductions targets or projected declines in sales due to changes in product mix, to be indicators of impairment, or to have impacted the cash flow forecasts used in impairment testing; ➢ examined whether the effects of the energy transition, such as declining prices, would result in onerous contracts or inventory obsolescence; and/or ➢ reassessed residual values, useful lives of assets and, where applicable, the estimated timing of decommissioning obligations in the light of the energy transition and their emissions targets.

Expectation 2: The company disclosed the significant quantitative climate-related assumptions and estimates that it used in preparing its financial statements.

Why is disclosure of this information necessary?
Insight on the specific climate-sensitive inputs that the company used provides essential context to the reported financial statement amounts and a starting point for quantitively assessing risk associated with further developments relating to climate.
Why is visibility of quantitative climate-related inputs important?
Understanding the extent to which companies included the effects of climate matters on relevant quantitative inputs enables investors to better assess a company's resilience and make their own adjustments and sensitivities more accurately.

[113] *Carbon Tracker also examined audit committee reports, when available, to ascertain if the audit committees took steps to "ensure material climate risks are properly considered in the accounts and by the external auditor." See IIGCC, November 2020, "Investor Expectations for Paris-aligned Accounts",* https://www.iigcc.org/download/investor-expectations-for-paris-aligned-accounts/?wpdmdl=4001&masterkey=5fabc4d15595d.

Approach
We looked for disclosure of climate-related quantitative assumptions and estimates that were used in the company's accounts. We used a sector lens, when applicable, to identify these inputs. Examples include but are not limited to: ➢ the commodity or carbon prices used in forecasting revenue and costs for impairment testing; ➢ the remaining useful lives of assets that could be impacted by climate; ➢ the discount rates, estimated timelines and the undiscounted estimated costs used to calculate asset retirement obligations; and/or ➢ disclosure of how climate-related risks/targets are expected to affect future costs (e.g., amounts in the commitments and contingencies note). This could include the estimated costs of carbon capture, usage and storage or other potential mechanisms (e.g., carbon offsets, operational improvements) that companies intended to use to reduce emissions from planned activities.

Expectation 3: The company's financial statements were consistent with its discussions of climate-related matters in other reporting, or it explained any differences.

Why is disclosure of this information necessary?
Unexplained inconsistencies in reporting can raise a number of questions – such as whether there is an internal inconsistency leading to a misstatement in the financial statements, other reporting, or both.
Why is consistency in reporting important?
Topics that may be discussed in reporting outside of the financials, such as climate risks and strategies or targets to reduce emissions, all have the potential to drive accounting consequences. For example, they could have an impact on the values of assets and liabilities, through changes to productive asset lives assumed for depreciation, to cash flow projections used in asset impairments, and the timing of asset retirement obligations. A company that inconsistently addresses climate issues or fails to explain the differential treatment could also be: ➢ signalling that it does not understand the effects of climate on its business; ➢ indicating that it is ignoring the effects of changes to regulations, policies, or behaviours, or failing to integrate them into its planning and investment decisions; and/or ➢ suggesting that it has no clear plan for addressing climate-related matters and/or meeting stated goals or emissions reduction targets.
Approach
This was often a two-step process. We first looked at the company's other reporting to see if it discussed climate-related risks, climate strategies and /or commitments. We then looked at the results of the assessments of consideration of climate in the financials, including the visibility of such inputs, to see if the company appeared to consider these matters when preparing its financials, or provided an explanation as to why these were not considered (or not considered significant). For example, did the company appear to consider: ➢ the effects of climate-related risks that it identified in its risk-factors section, such as changes to regulation, reduced demand or changes to product mix, including the timing in relation to useful lives of relevant assets or assumptions used to value those assets; and/or

- the effects of its own emissions targets on the expected useful lives of its high emissions assets.

We also looked for interconnected impacts, such as between shortened lives, impairments and asset retirement obligations. For example, did the timeframe which the company used to calculate asset retirement obligations correspond with the useful lives of relevant assets, timing of transition risks or company targets?

Audit reports

Expectation 4: The auditor considered the effects of material climate-related risks and commitments as part of its audit.

Why is disclosure of this information necessary?

Without disclosure, investors have no insight as to whether the company's consideration of climate risks have been independently assessed within the audit, or in the auditor's risk assessment and testing.

Why is consideration of climate matters in audit reports important?

Auditors identify matters that are subject to significant judgement and uncertainty; this is also the nature of climate matters. A failure to consider the impact of climate risk in the audit may result in the effects of climate on the financial statements going unchecked. This would be a failure to deliver the quality of assurance that the audit is designed to provide to investors.

Approach

When looking for evidence of consideration of climate in audits, we generally found any discussions within the KAMs or CAMs. When reviewing the audit report we looked at whether the auditor assessed climate as part of its testing of relevant key or critical audit matters or in its overview of audit planning if included in the audit report. As part of this we looked at whether the auditor:

- clearly identified the climate-related matters (e.g. changes to regulations or the company's planning which included consideration of emissions targets) that it formed part of its assessment ; and
- discussed the work and testing performed, including the effects on inputs used in the company's accounting (such as cash flow estimates used in impairment testing or assessing the underlying commodity price assumptions against external climate scenarios).

We also looked for whether the auditor used independent experts in performing its assessments of material climate-related issues.

Expectation 5: The auditor checked for consistency between the narrative disclosures around climate risks (and commitments) and the information that the company used to prepare the financial statements.

Why is disclosure of this information necessary?
Auditors are required to check for inconsistencies with other information. They can disclose the results of these checks, providing investors with this independent view.
Why is the consistency check important?
Climate information is often included in a company's 'other reporting'. An inconsistency could mean a material misstatement of information in the financial statements, or in the other reporting.
Approach
We looked at the audit report to see if the auditor noted any material inconsistencies between the company's other reporting and the financial statements, particularly related to climate matters. We also compared our assessment of company consistencies with the auditor's assessment, keeping in mind the scope of the auditor's consistency check under the relevant auditing standards.

Paris-alignment of assumptions and estimates

Expectation 6: We examined whether the company aligned its critical accounting assumptions and estimates with the goals of the Paris agreement. If it did not, we looked at whether it explained the reasons why and provided a sensitivity to such inputs.

Why is disclosure of this information necessary?
For companies that have stated Paris-aligned climate-related commitments (or operate in a location with Paris-aligned regulations), without disclosure in the financials investors cannot know if the assumptions and estimates used to prepare the financial statements are consistent with these commitments or the effects of such relevant legislation. For companies that have not made such commitments, investors want to know if such companies have considered the financial effects of addressing climate change by meeting the goals of the Paris Agreement. A sensitivity analysis can provide this information.
Why is consideration of climate matters important?
Investors have requested that companies use 'Paris-aligned' assumptions when preparing their financials. The rationale behind management's decisions should be disclosed even if no adjustment has been made to their accounts; in this case a sensitivity analysis can help investors understand the quantitative effects of such risks on the financials. This will aid investors in determining whether a company business (and so the investor's capital) are resilient in the face of a low-carbon transition. If a company has not used Paris-aligned estimates and assumptions (or did not provide a sensitivity to such inputs), this suggests that it has not incorporated this risk exposure (and, when relevant, its own contribution to achieving such a scenario – one that is widely considered to be necessary to avoid the more extreme consequences of climate change), into its plans and investment programmes.

Investors may also use this scenario as a benchmark for comparison, for example, to assess whether companies will have to: ➢ impair or retire their productive assets early; ➢ lower their expected margins; and/or ➢ change their product mix or business focus. Impairment of productive assets can be a signal that investors may no longer earn the returns that they expected.
Approach
We looked at whether the company used assumptions and estimates that were consistent with achieving the goals of Paris Agreement[114] in its financials. For example, did the company: ➢ use projected prices or demand estimates based on the IEA NZE2050 or a similar credible-climate scenario? ➢ explain why, and provide sensitivities to Paris-aligned assumptions and estimates, if it did not use Paris-aligned inputs?

Expectation 6a (Carbon Tracker only): The auditors of the 55 companies that Carbon Tracker reviewed indicated whether the assumptions and estimates that the companies used were 'Paris aligned'. Where Paris-aligned numbers were not provided, the auditor indicated what reasonable Paris-aligned assumptions would be and provided a sensitivity to those assumptions. [115]

Why is disclosure of this information necessary?
Auditors provide independent verification that the information included in the accounts is free from material misstatement. They can also challenge "overly-optimistic assumptions", particularly in situations of significant change where "the past cannot be a guide to the future."[116]
Why is consideration of climate matters important?
As noted above, investors have requested that companies use Paris-aligned assumptions when preparing their financials. Ensuring that the auditors have assessed this, and how, helps investors understand whether, in the face of global decarbonisation, their portfolio companies are aligned with addressing, or at risk from, the effects of climate change.
Approach
We looked for evidence that the auditor assessed the effects of Paris-alignment on the inputs that the company used. This included comparing the quantitative information to credible climate

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[114] *Defined for the purpose of our reviews in Section 4. Scope, coverage and approach.*
[115] *This forms part of the IIGCC's "Investor Expectations for Paris-aligned Accounts",* https://www.iigcc.org/download/investor-expectations-for-paris-aligned-accounts/?wpdmdl=4001&masterkey=5fabc4d15595d
[116] *IIGCC, November 2020, "Investor Expectations for Paris-aligned Accounts",* https://www.iigcc.org/download/investor-expectations-for-paris-aligned-accounts/?wpdmdl=4001&masterkey=5fabc4d15595d*, p. 12.*

scenarios (such as the IEA NZE 2050), and any scenario disclosures made by the companies themselves.

If the auditor determined that the company did not use Paris-aligned inputs, we looked at whether the auditor:

- indicated what such assumptions would look like;
- performed a sensitivity to such assumptions; and
- provided the results of the sensitivity .

Rating system

We applied a colour-coded, four-tiered rating system in order to facilitate comparison of results of our assessments across companies and auditors. See Table 10. Reference to 'the information that investors sought' includes both evidence of application of the relevant accounting /auditing requirements, and the requests of investors in relation to the use of Paris-aligned assumptions.

TABLE 10 – RATING SYSTEM: FINANCIAL STATEMENTS AND AUDIT REPORTS

Rating	Description
Good practice*	The reporting appeared to provide the information that investors sought. We considered it to represent good practice relative to that of peers.
Few concerns	The reporting appeared to have largely provided the information that investors sought. We had relatively few concerns with respect to additional information needed.
Some concerns	The reporting appeared to provide the information that investors sought, at least in part. However, we still had some concerns relative to the comprehensiveness of this information and/or we considered that additional information may be needed.
Significant concerns	The reporting did not appear to provide the information that investors sought, to any meaningful extent.

*Note: We did not score any company financial statements or audit reports as showing evidence of good practice for 2020. Reporting rated as raising 'few concerns' provide examples of being on the way to good practice.

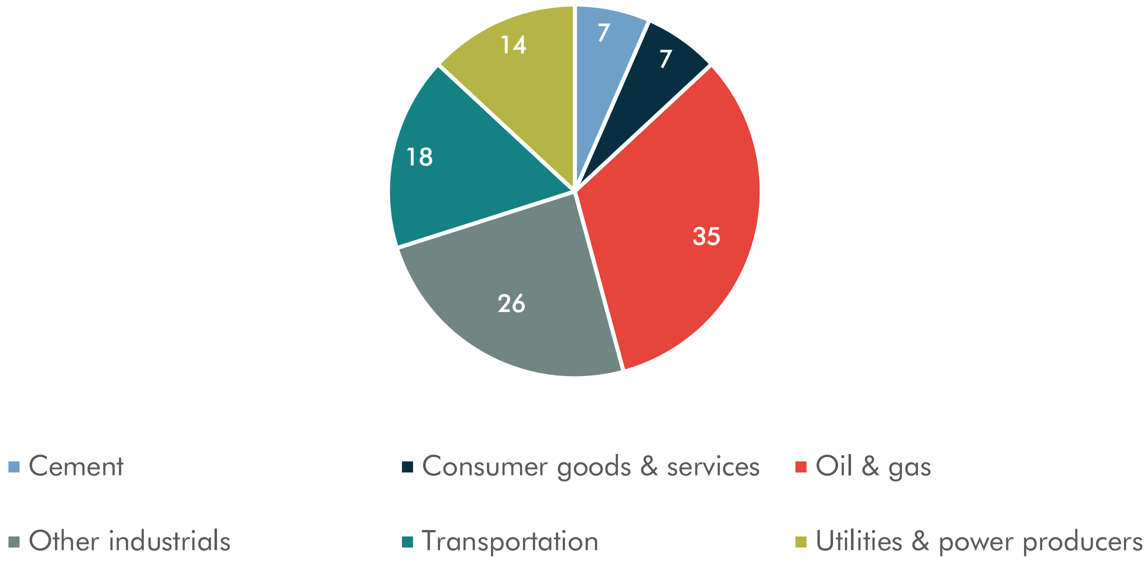
Appendix 2 – Findings by sector and geography

In this Appendix we provide an overview of results across sectors and geographies with some additional detail for companies operating in the oil and gas sector.

See discussion of colour rating system in *Appendix 1 – Approach to reviews and ratings*.

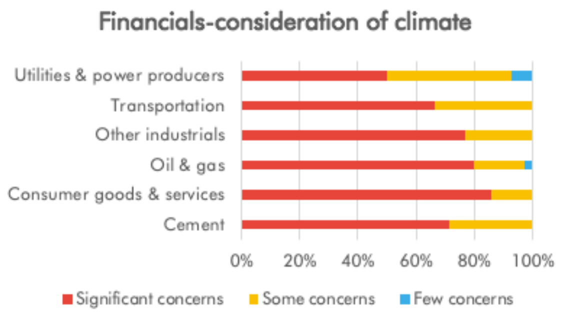
Sector

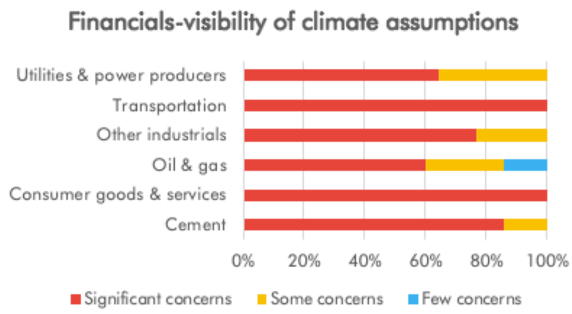
FIGURE 18 – NUMBER OF COMPANIES BY SECTOR OF THE 107 THAT WERE REVIEWED

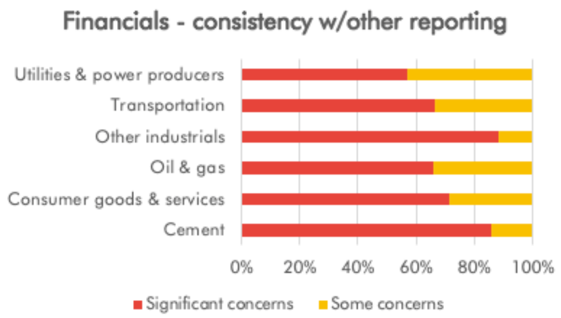


Source: Carbon Tracker and CAP analyses

Figure 19 – Overall results of financial statements by sector

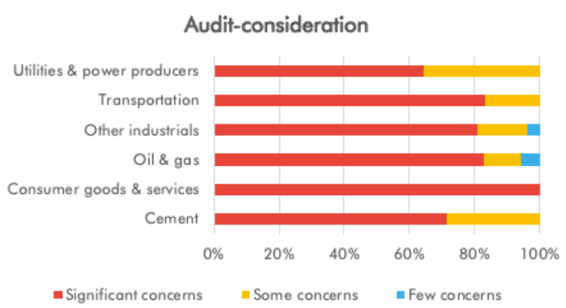


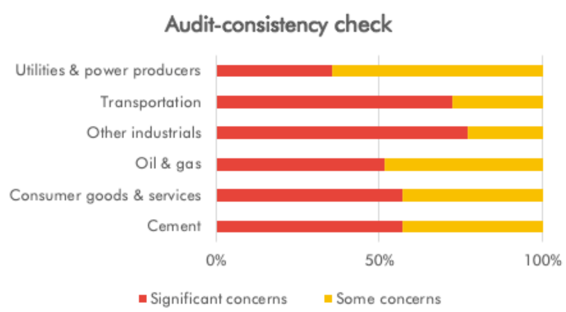




Source: Carbon Tracker and CAP analyses.

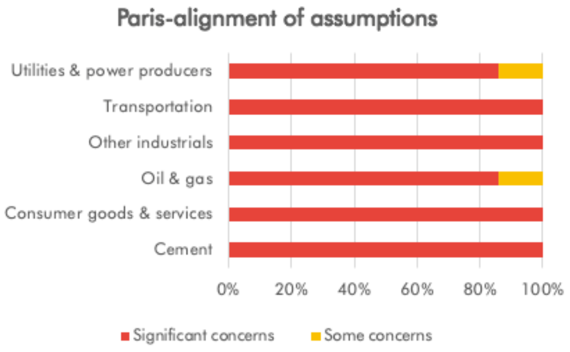
Figure 20 – Overall results of audit reports by sector

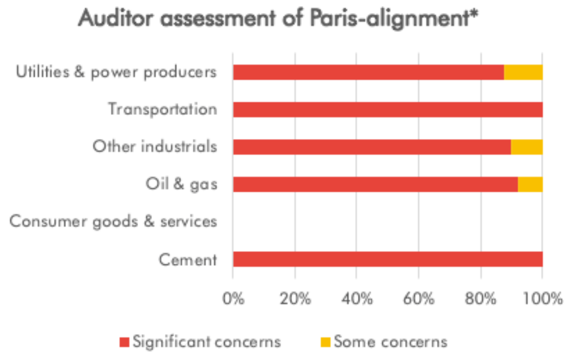




Source: Carbon Tracker and CAP analyses.

FIGURE 21 – OVERALL RESULTS OF PARIS-ALIGNMENT BY SECTOR

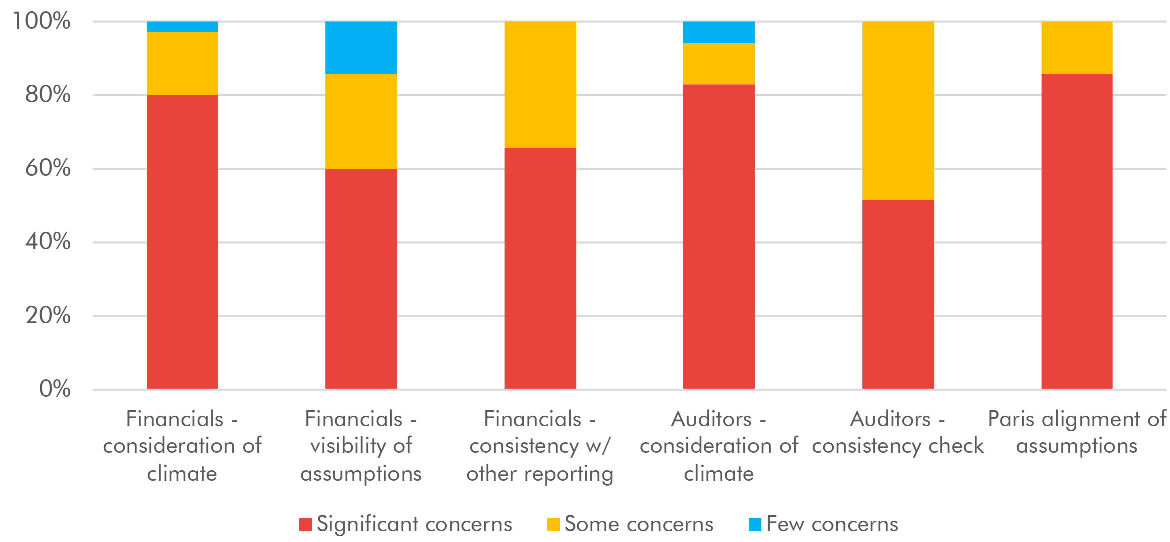




*Source: Carbon Tracker and CAP analyses (*only Carbon Tracker examined auditor assessment of Paris-alignment)*

Observations: Oil and gas companies

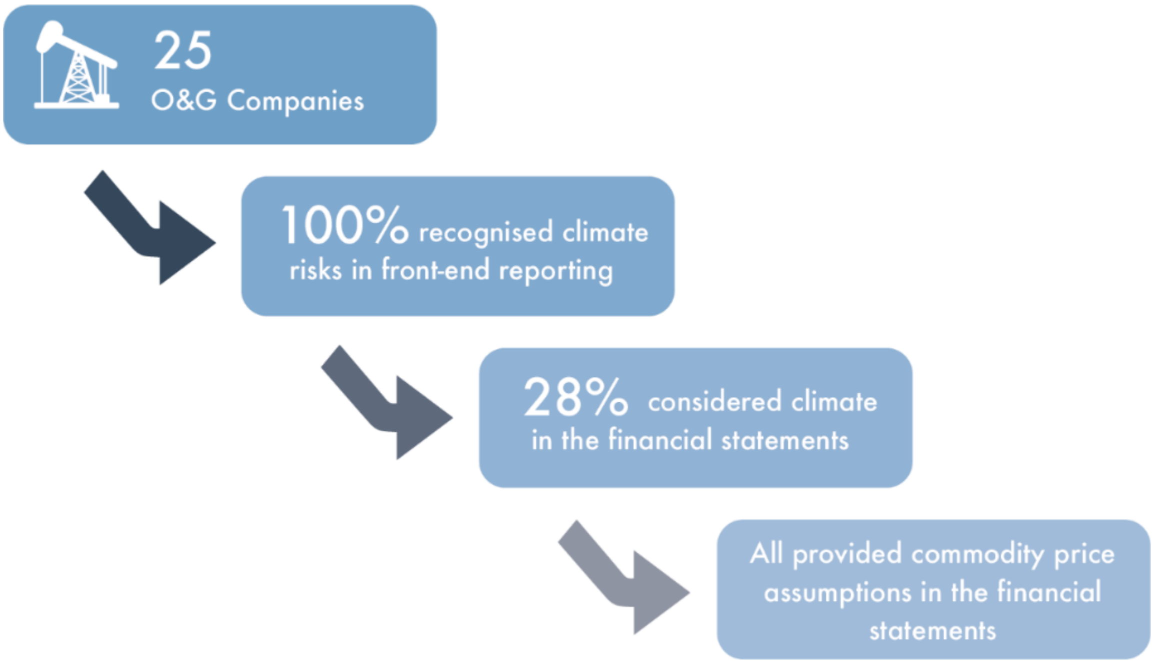
FIGURE 22 – OIL & GAS COMPANY FINANCIALS: OVERALL RESULTS



Source: Carbon Tracker and CAP analyses

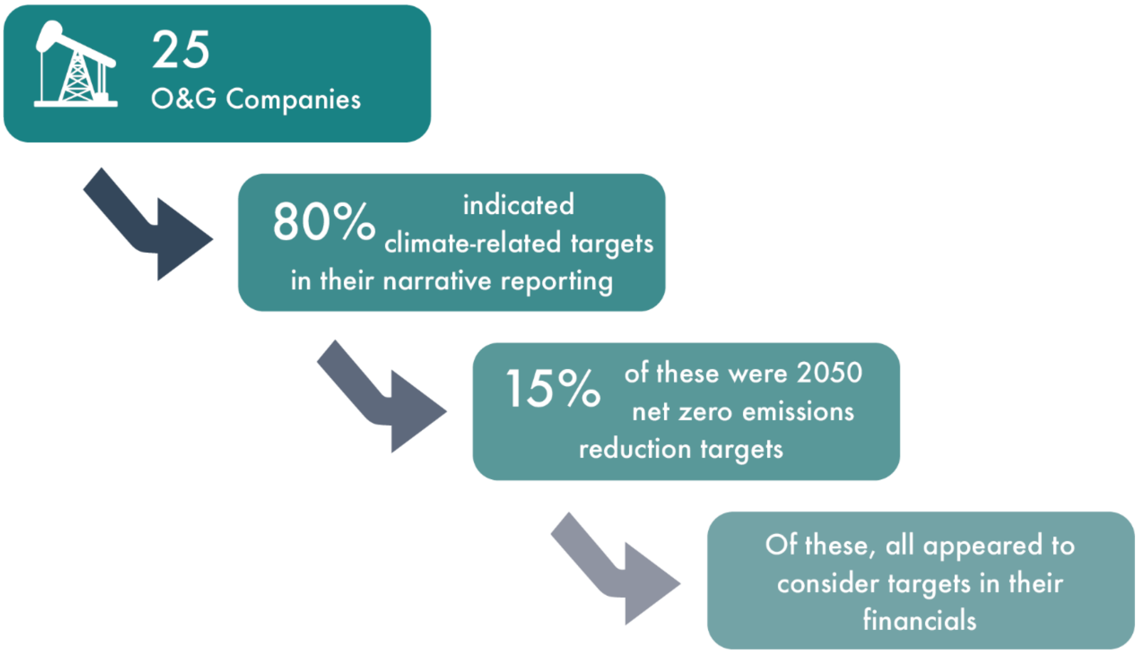
Consistency in reporting O&G companies

FIGURE 23 – CONSISTENCY IN REPORTING CLIMATE RISKS-O&G COMPANIES[117]



Source: Carbon Tracker analysis and graphic

FIGURE 24 – CONSISTENCY IN CONSIDERING CLIMATE TARGETS-O&G COMPANIES[118]

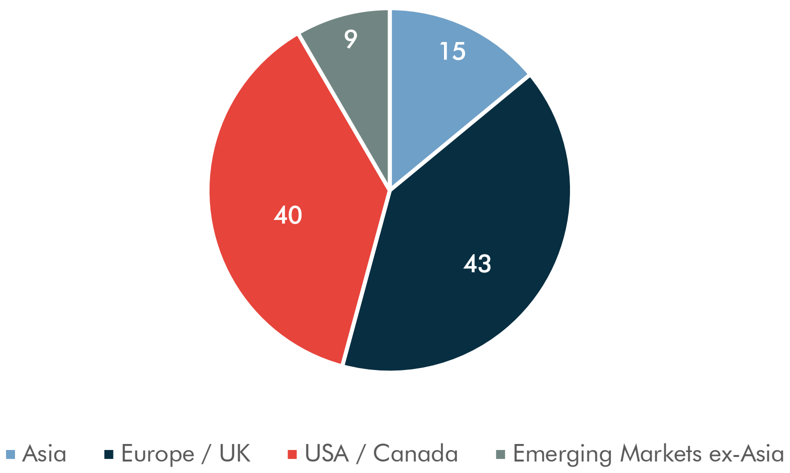


Source: Carbon Tracker analysis and graphic

[117] *The 25 O&G companies were part of the 55 companies reviewed by Carbon Tracker.*
[118] *Ibid.*

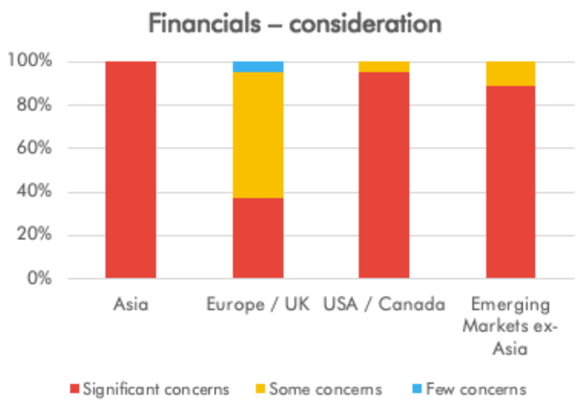
Geography

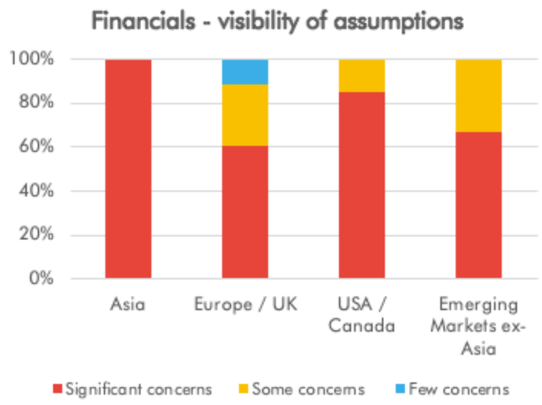
FIGURE 25 - NUMBER OF COMPANIES BY GEOGRAPHY OF THE 107 THAT WERE REVIEWED

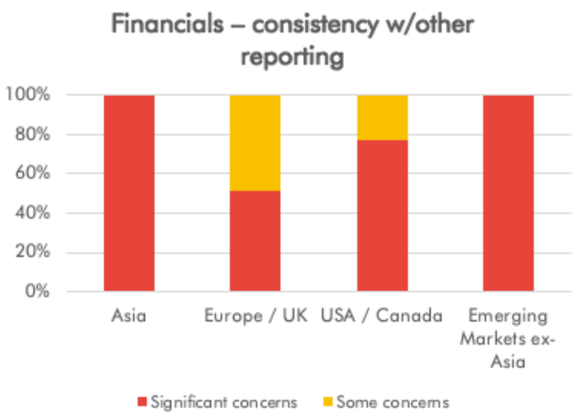


Source: Carbon Tracker and CAP analyses

FIGURE 26 – OVERALL RESULTS OF FINANCIAL STATEMENTS BY GEOGRAPHY

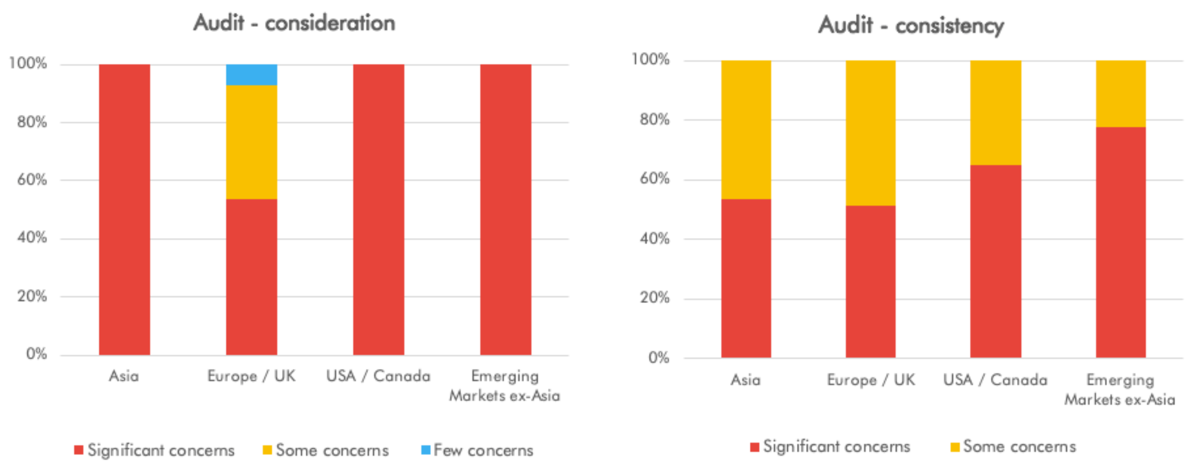






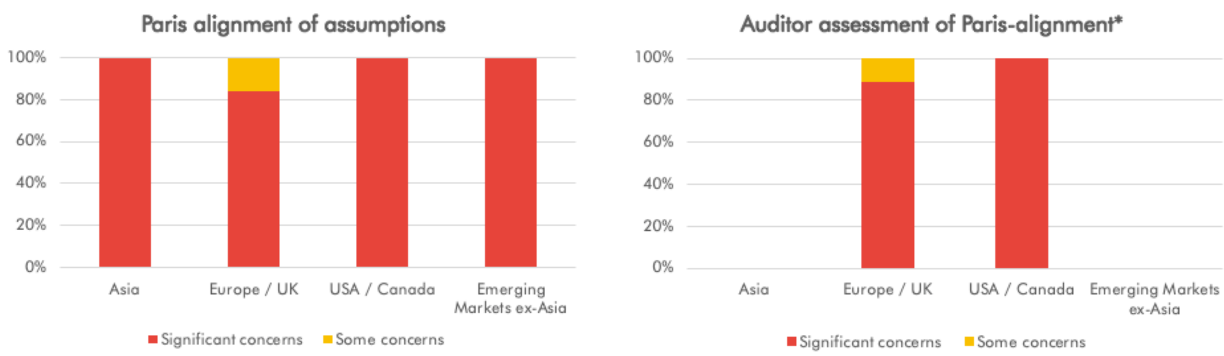
Source: Carbon Tracker and CAP analyses

FIGURE 27 – OVERALL RESULTS OF AUDIT REPORTS BY GEOGRAPHY



Source: Carbon Tracker and CAP analyses. Note: consideration of climate (USA/Canada) excludes NextEra.

FIGURE 28 – OVERALL RESULTS OF PARIS-ALIGNMENT BY GEOGRAPHY



*Source: Carbon Tracker and CAP analyses (*only Carbon Tracker examined auditor assessment of Paris-alignment)*

Appendix 3 – List of companies reviewed

Due to the timing of our review work (March -July 2021) we primarily examined companies that had financial years ending 31 December 2020. There were four exceptions: Walmart (year ended 31 January 2021), BHP (year ended 30 June 2020), Siemens Energy and Thyssenkrupp (both for the years ended 30 September 2020).

Notes to the table:

1. The sector clusters are based on the Climate Action 100+ sector and sector cluster classification[119]. The oil & gas sector comprises upstream (exploration and production) and midstream companies. Transportation includes airlines, automobiles and other transportation. Other industrials comprises other industrials, diversified mining, chemicals, steel, coal mining, and paper.

2. Location is generally based on domicile. However Trane Technologies plc and Linde are classified as US domestic companies (e.g. USA/Canada) for their US SEC filings. Emerging Markets ex-Asia comprises Brazil, Colombia, Mexico, Nigeria, and Saudi Arabia while Asia includes China, Indonesia, South Korea and Taiwan.

3. Reference to IFRS accounting standards includes IFRS as issued by the IASB and local versions of IFRS, including IFRS as adopted by the European Union (IFRS-EU).

4. Reference to ISAs includes national or local jurisdictions which may have adopted limited modifications of these standards.

Table legend[120]
Good practice*
Few concerns
Some concerns
Significant concerns

**No companies or auditors were rated as good practice.*

[119] *See at* Companies | Climate Action 100+

[120] *See Appendix 1 -Approach to reviews and ratings for descriptions of ratings.*

Table 11 – Companies and ratings

						Financial statements			Audit reports		
Company	Team	Location	Sector	Acctg stds[121]	Audit stds[122]	Consideration of climate	Visibility of assumptions & estimates	Consistency w/other reporting	Consideration of climate	Consistency check	Paris alignment of assumptions (*)
A.P. Møller - Mærsk	CTI	Europe / UK	Transport[123]	IFRS	ISAs						
Air France–KLM SA	CAP	Europe / UK	Transport	IFRS	ISAs						
Air Liquide SA	CTI	Europe / UK	Other industrials	IFRS	ISAs						
Airbus SE	CTI	Europe / UK	Transport	IFRS	ISAs						
American Airlines Group, Inc	CAP	USA / Canada	Transport	US GAAP	PCAOB						
Aneka Tambang Tbk (ANTAM)	CAP	Asia	Other industrials	IFRS	ISAs						
Anglo American plc	CTI	Europe / UK	Other industrials	IFRS	ISAs						
Anhui Conch Cement	CAP	Asia	Cement	IFRS	ISAs						
Apache Corporation[124]	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
ArcelorMittal	CTI	Europe / UK	Other industrials	IFRS	ISAs						

[121] *Accounting standards*
[122] *Auditing standards*
[123] *Transportation*
[124] *Now APA Corporation.*

						Financial statements			Audit reports		
Company	**Team**	**Location**	**Sector**	**Acctg stds**[121]	**Audit stds**[122]	**Consideration of climate**	**Visibility of assumptions & estimates**	**Consistency w/other reporting**	**Consideration of climate**	**Consistency check**	**Paris alignment of assumptions (*)**
BASF SE	CTI	Europe / UK	Other industrials	IFRS	ISAs						
BHP Group	CTI	Europe / UK	Other industrials	IFRS	ISAs						
BMW Group	CTI	Europe / UK	Transport	IFRS	ISAs						
Boeing Company	CAP	USA / Canada	Transport	US GAAP	PCAOB						
bp plc	CTI	Europe / UK	Oil & gas	IFRS	ISAs						
Bumi Resources	CAP	Asia	Other industrials	IFRS	ISAs						
Bunge Limited	CAP	USA / Canada	CGS[125]	US GAAP	PCAOB						
Cabot Oil & Gas Corporation	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Caterpillar Inc	CAP	USA / Canada	Other industrials	US GAAP	PCAOB						
Cemex SAB de CV	CAP	EM[126] ex-Asia	Cement	IFRS	ISAs						
Chevron Corporation	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						

[125] *Consumer goods & services*
[126] *Emerging markets*

						Financial statements			Audit reports		
Company	**Team**	**Location**	**Sector**	**Acctg stds**[121]	**Audit stds**[122]	**Consideration of climate**	**Visibility of assumptions & estimates**	**Consistency w/other reporting**	**Consideration of climate**	**Consistency check**	**Paris alignment of assumptions (*)**
CNOOC Limited[127]	CAP	Asia	Oil & gas	IFRS	PCAOB						
Sinopec[128]	CAP	Asia	Oil & gas	IFRS	PCAOB						
China Shenhua Energy	CAP	Asia	Other industrials	IFRS	ISAs						
China Steel Corporation	CAP	Asia	Other industrials	IFRS	ISAs						
Colgate-Palmolive Company	CAP	USA / Canada	CGS	US GAAP	PCAOB						
Compagnie de Saint-Gobain SA	CTI	Europe / UK	Other industrials	IFRS	ISAs						
ConocoPhillips	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Continental AG	CTI	Europe / UK	Transport	IFRS	ISAs						
Continental Resources Inc	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
CRH plc	CTI	Europe / UK	Cement	IFRS	ISAs						
Cummins Inc	CAP	USA / Canada	Other industrials	US GAAP	PCAOB						
Daimler AG	CTI	Europe / UK	Transport	IFRS	ISAs						

[127] *China National Offshore Oil Corporation (CNOOC) Limited*
[128] *China Petroleum & Chemical Corporation (Sinopec)*

						Financial statements			Audit reports		
Company	**Team**	**Location**	**Sector**	**Acctg stds**[121]	**Audit stds**[122]	**Consideration of climate**	**Visibility of assumptions & estimates**	**Consistency w/other reporting**	**Consideration of climate**	**Consistency check**	**Paris alignment of assumptions (*)**
Dangote Cement plc	CAP	EM ex-Asia	Cement	IFRS	ISAs						
Danone SA	CAP	Europe / UK	CGS	IFRS	ISAs						
Delta Air Lines, Inc	CAP	USA / Canada	Transport	US GAAP	PCAOB						
Deutsche Lufthansa AG	CTI	Europe / UK	Transport	IFRS	ISAs						
Devon Energy Corporation	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Diamondback Energy	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Dow Inc	CAP	USA / Canada	Other industrials	US GAAP	PCAOB						
E.ON SE	CTI	Europe / UK	UPP[129]	IFRS	ISAs						
Ecopetrol SA	CAP	EM ex-Asia	Oil & gas	IFRS	PCAOB						
Électricité de France SA ("EDF")	CTI	Europe / UK	UPP	IFRS	ISAs						
Endesa SA	CTI	Europe / UK	UPP	IFRS	ISAs						
Enel SpA	CTI	Europe / UK	UPP	IFRS	ISAs						

[129] *Utilities & power producers.*

						Financial statements			Audit reports		
Company	Team	Location	Sector	Acctg stds[121]	Audit stds[122]	Consideration of climate	Visibility of assumptions & estimates	Consistency w/other reporting	Consideration of climate	Consistency check	Paris alignment of assumptions (*)
Engie SA	CTI	Europe / UK	UPP	IFRS	ISAs						
Eni SpA	CTI	Europe / UK	Oil & gas	IFRS	ISAs						
EOG Resources Inc	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Equinor ASA	CTI	Europe / UK	Oil & gas	IFRS	ISAs						
Exxon Mobil Corporation	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Fiat Chrysler Automobiles NV[130]	CTI	Europe / UK	Transport	IFRS	ISAs						
FirstEnergy Corporation	CAP	USA / Canada	UPP	US GAAP	PCAOB						
Formosa Petrochemical	CAP	Asia	Oil & gas	IFRS	ISAs						
Glencore plc	CTI	Europe / UK	Other industrials	IFRS	ISAs						
Grupo Argos SA	CAP	EM ex-Asia	Cement	IFRS	ISAs						
Hess Corporation	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Iberdrola SA	CTI	Europe / UK	UPP	IFRS	ISAs						

[130] *Now Stellantis NV.*

						Financial statements			Audit reports		
Company	**Team**	**Location**	**Sector**	**Acctg stds**[121]	**Audit stds**[122]	**Consideration of climate**	**Visibility of assumptions & estimates**	**Consistency w/other reporting**	**Consideration of climate**	**Consistency check**	**Paris alignment of assumptions (*)**
International Paper Company	CAP	USA / Canada	Other industrials	US GAAP	PCAOB						
Kinder Morgan Inc	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Koninklijke Philips NV	CAP	Europe / UK	Other industrials	IFRS	ISAs						
Korea Electric Power Corp	CAP	Asia	UPP	IFRS	PCAOB						
LafargeHolcim[131]	CTI	Europe / UK	Cement	IFRS	ISAs						
Linde plc	CTI	USA / Canada	Other industrials	US GAAP	PCAOB						
Lockheed Martin Corporation	CAP	USA / Canada	Transport	US GAAP	PCAOB						
Marathon Oil Corporation	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Marathon Petroleum Corporation	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Martin Marietta Materials Inc	CAP	USA / Canada	Cement	US GAAP	PCAOB						
Nestlé SA	CAP	Europe / UK	CGS	IFRS	ISAs						

[131] *Now Holcim Group.*

						Financial statements			Audit reports		
Company	**Team**	**Location**	**Sector**	**Acctg stds[121]**	**Audit stds[122]**	**Consideration of climate**	**Visibility of assumptions & estimates**	**Consistency w/other reporting**	**Consideration of climate**	**Consistency check**	**Paris alignment of assumptions (*)**
NextEra Energy, Inc	CTI	USA / Canada	UPP	US GAAP	PCAOB						
Occidental Petroleum	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
OMV	CTI	Europe / UK	Oil & gas	IFRS	ISAs						
Petrobras (Petróleo Brasileiro SA)	CAP	EM ex-Asia	Oil & gas	IFRS	PCAOB						
PetroChina Company Limited	CAP	Asia	Oil & gas	IFRS	PCAOB						
PEMEX[132]	CAP	EM ex-Asia	Oil & gas	IFRS	PCAOB						
PGE[133]	CAP	Europe / UK	UPP	IFRS	ISAs						
Phillips 66 Company	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
Pioneer Natural Resources Company	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
POSCO	CAP	Asia	Other industrials	IFRS	PCAOB						
Power Assets Holdings Limited	CAP	Asia	UPP	IFRS	ISAs						

[132] *Petróleos Mexicanos – PEMEX.*
[133] *PGE - Polska Grupa Energetyczna SA.*

						Financial statements			Audit reports		
Company	**Team**	**Location**	**Sector**	**Acctg stds**[121]	**Audit stds**[122]	**Consideration of climate**	**Visibility of assumptions & estimates**	**Consistency w/other reporting**	**Consideration of climate**	**Consistency check**	**Paris alignment of assumptions (*)**
PPL Corporation	CAP	USA / Canada	UPP	US GAAP	PCAOB						
PSA Peugeot (Group PSA)[134]	CTI	Europe / UK	Transport	IFRS	PCAOB						
PTT Public Co Ltd	CAP	Asia	Oil & gas	IFRS	ISAs						
Raytheon Technologies	CAP	USA / Canada	Transport	US GAAP	PCAOB						
Renault Group	CTI	Europe / UK	Transport	IFRS	ISAs						
Repsol SA	CTI	Europe / UK	Oil & gas	IFRS	ISAs						
Rio Tinto Group	CTI	Europe / UK	Other industrials	IFRS	ISAs						
Rolls-Royce	CAP	Europe / UK	Transport	IFRS	ISAs						
Royal Dutch Shell plc	CTI	Europe / UK	Oil & gas	IFRS	ISAs						
Saudi Aramco	CAP	EM ex-Asia	Oil & gas	IFRS	ISAs						
Siemens Energy[135]	CAP	Europe / UK	Other industrials	IFRS	ISAs						
SK Innovation Co Ltd	CAP	Asia	Oil & gas	IFRS	ISAs						

[134] *Now Stellantis NV.*
[135] *Formerly Siemens AG.*

						Financial statements			Audit reports		
Company	**Team**	**Location**	**Sector**	**Acctg stds**[121]	**Audit stds**[122]	**Consideration of climate**	**Visibility of assumptions & estimates**	**Consistency w/other reporting**	**Consideration of climate**	**Consistency check**	**Paris alignment of assumptions (*)**
Suzano SA	CAP	EM ex-Asia	Other industrials	IFRS	PCAOB						
Teck Resources Limited	CAP	USA / Canada	Other industrials	IFRS	PCAOB						
The Williams Companies, Inc	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						
thyssenkrupp AG	CTI	Europe / UK	Other industrials	IFRS	ISAs						
TOTAL SE[136]	CTI	Europe / UK	Oil & gas	IFRS	ISAs						
Trane Technologies plc	CAP	USA / Canada	Other industrials	US GAAP	PCAOB						
Unilever plc	CAP	Europe / UK	CGS	IFRS	ISAs						
Uniper	CTI	Europe / UK	UPP	IFRS	ISAs						
United Airlines, Inc	CAP	USA / Canada	Transport	US GAAP	PCAOB						
United Tractors	CAP	Asia	Other industrials	IFRS	ISAs						
Vale SA	CAP	EM ex-Asia	Other industrials	IFRS	PCAOB						
Valero Energy Corporation	CTI	USA / Canada	Oil & gas	US GAAP	PCAOB						

[136] *Now TotalEnergies SE.*

						Financial statements			Audit reports		
Company	**Team**	**Location**	**Sector**	**Acctg stds**[121]	**Audit stds**[122]	**Consideration of climate**	**Visibility of assumptions & estimates**	**Consistency w/other reporting**	**Consideration of climate**	**Consistency check**	**Paris alignment of assumptions (*)**
Vistra Corporation	CAP	USA / Canada	UPP	US GAAP	PCAOB						
Volkswagen AG	CTI	Europe / UK	Transport	IFRS	ISAs						
WalMart Inc	CAP	USA / Canada	CGS	US GAAP	PCAOB						
Weyerhaeuser Company	CAP	USA / Canada	CGS	US GAAP	PCAOB						

Source: Carbon Tracker and CAP Team analyses

*As noted in Section 5.3 "Paris-alignment of assumptions and estimates", Carbon Tracker also examined whether auditors provided an indication that they assessed the company's assumptions and estimates for Paris-alignment, and performed a sensitivity analysis of the relevant items to those inputs if they were not Paris-aligned. Only four of the 55 audit reports reviewed by Carbon Tracker indicated any level of assessment of the company's assumptions and estimates against external climate scenarios and so were rated with 'some concerns'. These were the auditors of bp, Enel, Eni and Glencore. We scored the remaining 51 with 'significant concerns' due to the lack of evidence of any assessment against climate-scenarios as part of their audits. This included Shell's audit report. While Shell's auditor did indicate a level of assessment, it also explicitly stated that it did not have the ability or obligation to assess Paris-alignment and so was rated with 'significant concerns' for this category.

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