Rio Tinto Group Diversified Mining, Australia/UK **Ticker:** RIO **Year ended:** 31 December 2021 **AGM date:** 8 April 2022	**Revenues:** US$63.5bn **Net loss:** US$22.6bn **Total assets:** US$102.9bn **PPE, net:** US$64.9bn **Intangible assets, net:** US$3.7bn
Accounting standards: IFRS **Auditing standards:** ISAs (UK) / AU Auditing Standards; PCAOB (US Form 20-F)	**Auditor:** KPMG UK & AU (from 2020); change in UK partner in 2021

This review is focused on one dimension of issuer preparedness for the energy transition--the audited financial statements. Current and ongoing actions to reduce emissions, whether by governments, society, or corporations themselves, can impact assets, liabilities and profitability as presented in today's accounts. This work analyses the extent to which companies and their auditors are addressing these items.

BACKGROUND

In 2022, the Climate Action100+ added a provisional Climate Accounting and Audit Alignment Assessment (CAAA) to its Net Zero Benchmark[1]. Rio Tinto's (Rio's) FY2020 and FY2021 financial statements and auditor's report were assessed under the CAAA. The 2020 assessment results were translated from a prior analysis to assessment results under the new CA100+ methodology[2].

SUMMARY OF ASSESSMENT

Overall, Rio's reporting has made some progress in 2021, and this is reflected in that two of the seven Metrics are assessed as 'Yes' (as their requirements were met). The overall assessment remains 'Partial',

CAAA	Overall	Sub-indicator 1: Financial statements			Sub-indicator 2: Audit report		Sub-indicator 3: Alignment with net zero by 2050	
		Metric 1a	Metric 1b	Metric 1c	Metric 2a	Metric 2b	Metric 3a	Metric 3b
		Incorporate climate	Disclose quantitative assumptions	Consistency with other reporting	Assesses climate matters	Consistency Check	Financial statements - aligned assumptions	Auditor check - aligned assumptions
2021 Overall and Sub-indicators	Partial	Partial			Partial		No	
2021 Metrics		Yes	No	No	Yes	No	No	No
2020 Overall and Sub-indicators	Partial	No			Partial		No	
2020 Metrics		No	No	No	No	Yes	No	No
Prior analysis - descriptions		Accounting Judgements	Visibility of assumptions in accounts	Consistency with other reporting	Visibility in Key/Critical Audit Matters	Consistency Check	Paris alignment of assumptions	Auditor comments on Paris alignment

With improved disclosure by both the company and auditor on how climate was considered in 2021, we have assessed Metrics 1a and 2a as having been met, but there remains significant concern over disclosure of key climate related assumptions (1b), and it remains unclear whether there is consistency between the financial numbers and in particular, the company's emissions targets (1c and 2b). Note that for 2020, the audit report received a 'Yes' for Metric 2b, having pointed out the ongoing consideration of climate. With the removal of this caveat in 2021, the score has become 'No'. Paris aligned accounting (or sensitivity analysis) has also not been provided.

COMPANY CONTEXT

Company activities and emissions profile: Rio Tinto has operations in 36 countries, including mines, smelters, refineries, and processing plants. Its major products are aluminium, copper, diamonds, gold, industrial minerals, iron ore and uranium. 2021 emissions in MtCO2e were: Scope 1: 22.7; Scope 2: 8.4; and Scope 3: 553.5, nearly

[1] Further information can be found in the CAAA methodology. The financial statement and audit report assessments are grounded in the existing requirements of the relevant accounting and audit standard setters, with Paris-alignment being requested by investor groups. The CAAA uses a binary Yes/No approach indicating whether requirements of the methodology for each Metric have been met. Metric scores are combined at the Sub-indicator and overall level, with a 'Partial' score indicated where there is a mixture of Yes/No assessments.

[2] The company's prior year reporting was initially assessed based on a four-level rating system (significant concerns, some concerns, few concerns and good practice), which in part used the IIGCC Investor Expectations for Paris-aligned Accounting as a framework. Under this approach, there was no attempt to aggregate the seven scores in any way.

95% of which is attributable to processing of goods sold (66% iron ore used in steel making, 26% bauxite & alumina). As a result, we consider its Iron ore and Aluminium, alumina and bauxite businesses to be most carbon-intensive, and therefore likely to be most exposed to the drive to net zero. Rio does not appear to separately identify either the carrying amounts of PPE assets or closure provisions for these sectors.

Strategic scenarios: Rio frames its strategic context through the lens of three scenarios. These are structured around analysis of the interplay of three global forces, and are characterised in terms of expected carbon prices and level of global warming by 2100. These are:

- Geopolitics-led scenario: strong nationalistic tendencies hold back global action on climate change, carbon prices remain low (in the range US$0-30/t CO_2e) and warming exceeds 3°C.
- Technology-led scenario: innovation boosts economic productivity and decarbonisation efforts; however, carbon prices remain modest (ranging US$10 to US$75/t CO_2e by 2030) and action to limit emissions is insufficient, so warming exceeds 2°C[3].
- Society-led scenario: strong global co-ordination of climate policies, supported by high and rising carbon prices (reaching US$130/t CO_2e in 2050), accelerates the energy transition and Rio believes achieves the goal of the Paris Agreement by limiting warming to well below 2°C.

Rio explains that in relation to its forecast commodity prices (including carbon prices), these are informed by a blend of the three climate scenarios into a 'central case' that is used pervasively in its financial processes from budgeting, forecasting, capital allocation and project evaluation to the determination of ore reserves, and across financial reporting. Specific pricing information for the central case does not appear to be disclosed.

Additionally, for internal approval purposes, a carbon price of US$75/t CO_2e is used to drive improvements in energy efficiency across assets, help to identify new abatement projects as well as incentivise and accelerate the delivery of capital investment. This price is described as being derived from Rio's analysis of carbon mitigation options across its assets; it is explicitly unrelated to prices in the scenarios.

Emissions Targets: In October 2021, Rio strengthened its Scope 1 and 2 targets. Its 15% reduction was brought forward to 2025 (from 2030) and the 2030 target more than tripled to a 50% reduction (all relative to Rio's 2018 equity baseline). These are said to be aligned with limiting global warming to 1.5°C, which is aligned with the Paris Agreement stretch goal. Rio continues to work on Scope 3. It has set a target for net zero emissions from shipping by 2050, a 40% reduction in intensity by 2025, and expects to introduce net-zero vessels by 2030. It also has an ambition for net zero by 2050.

Strategy to achieve emissions targets: Steps include switching to renewables (with a priority focus in the Pilbara) and accelerating the electrification of mobile equipment and processes. Rio expects to invest an incremental US$7.5bn in decarbonisation projects by 2030, and to incur incremental operating expenditure in the order of US$200m pa over the same period, including research and development. Its strategy is to focus growth capex on materials that enable the energy transition - up to $6bn over 2023/4, including investment in lithium, copper, and high-grade iron ore; it is still to develop green repowering solutions for its two coal fired smelters.

UPDATED ANALYSIS

Financial Statements (Sub-Indicator 1, result: 'PARTIAL')

The 2021 financial statements provide an expanded discussion of how climate change relates to accounting policy judgements, making it clear how climate change and carbon prices are considered across critical accounting estimates including inputs to impairment testing, estimation of remaining economic life for units of production depreciation, and discounting closure and rehabilitation provisions. This is done across what appear to be the most relevant financial statement items (PPE and to a lesser extent, goodwill and other intangibles). We consider this to be sufficient to achieve a 'Yes' on consideration of climate (Metric 1a), with emphasis appropriately placed on the lack of disclosed assumptions (Metric 1b), and concerns over consistency of the company's reporting (Metric 1c), both assessed as 'No'. The following are relevant to our analysis of the financial statements:

- **'In process' warnings removed, but no adjustments:** Rio was notable in flagging in its 2020 financial statements that its climate plans had not yet been included in the financial numbers. Rio has removed these statements in its 2021 report, which suggests the caveat was no longer needed, and by implication, that the 2021 accounts should now reflect its plans for transition to a low-carbon future and its ambition to achieve Net Zero by 2050. But this is not explicitly stated. In addition, accounting adjustments that might reasonably have been expected as a result of integrating the consideration of

[3] The most significant change in these scenarios vs the descriptions in 2020 appear to be for the Technology scenario, where CO2 prices had been described as ranging from US$15 to US$30/t CO_2e by 2030. It is not clear that this change had any impact at all on Rio's 'central case' assumptions that are said to result from a blend of the three scenarios.

climate targets in 2021, such as asset life reductions / additional or accelerated asset retirement obligations, potential impairments, etc. have not resulted. In a sense this has been explained within the general discussion of climate considerations, however it could have been made more clear how this was assessed by both the company and its auditor, and why it appears reasonable in light of Rio's updated targets, plans and ongoing risk assessment.

- **Additional disclosure and consideration (Metric 1a: Yes):** In general, the company has considered climate in its accounting, including impairments of PPE and intangibles, asset lives and associated closure provisions, is provided in the 2021 accounts. Disclosure has been expanded, for example in relation to consideration of commodity pricing and impairment indicators, and an indication that certain fossil fuel powered assets are not expected to be early-retired, as they are necessary for back-up. While some of these assertions could be questioned, it is clear they were considered, and they do appear to cover Rio's most carbon intensive assets. Additional details include:
    - **Central case:** The central case commodity/carbon prices that result from blending its three global/climate scenarios, are used by Rio to derive critical accounting estimates including as inputs to impairment testing, estimation of remaining economic life for units of production depreciation and discounting closure and rehabilitation provisions.
    - **Impairment:** Rio considered commodity prices in relation to potential impairment and obsolescence given its plans for decarbonisation (including its Pilbara operations involving 17 iron ore mines). While it considers iron ore pricing less certain than copper and aluminium, and dependant on development of low-emissions steel, it concluded that none of the three scenarios would result in impairment given high returns for this segment of the business; accordingly, no specific testing was performed. An impairment charge of $0.3bn was recognised for the aluminium smelter at Kitimat, Canada (attributed to a workforce strike).
    - **Useful lives and residual values, closure provisions:** Lives are reviewed annually, and Rio indicates that it has updated life-of-mine plan models with longer-term cash flow projections. However, it also states that the requirement for back-up means that early retirement of fossil fuel powered assets is not practical, and no significant changes to asset lives or closure provisions were made specific to climate. Regarding its fossil fuel-based power generation assets (carrying value of US$1bn), Rio warned that while its current generation assets were expected to remain an integral part of its portfolio for the foreseeable future, 'should pathways for eliminating fossil fuel power generation assets be identified' it may need to accelerate depreciation. (We add that impairment might also be possible.)
- **Assumptions lacking (Metric 1b: No):** Certain climate-related assumptions such as the specific carbon and commodity prices assumed in impairment analysis, remain undisclosed. While there has been progress on disclosure, including the expected incremental costs to support the Climate Action Plan (capex of US$7.5 billion over the period to 2030 and operating expenditure of around US$200m per year), and the carrying value of fossil fuel based power generation assets and their average remaining useful life of 14 years, it would also be helpful to understand similar value and life information for other assets that are powered by fossil fuels.
- **Consistency a concern (Metric 1c: No):** Rio states that its targets are consistent with a 1.5°C limit on global warming, and it also makes clear that the financial statements are not aligned with this. This suggests that the financial statements cannot yet be fully updated for consistency with its own targets. Additionally:
    - It is not explicit whether the estimated incremental costs of the Climate Action Plan has been considered for impact on the financial statements, or the extent to which this might have been appropriate in relation to various accounting judgements (i.e. asset lives and retirement obligations shortened for accelerated replacements, and/or impairment cash flow assumptions under the Fair value Less Costs of Disposal – FVLCD method applied by Rio, which may allow enhancements to the current condition of assets to be included in cash flow estimates of their recoverable amount). While the US$7.5bn is just over the total capex amount for 2021 and may therefore not be transformational, it should be considered. Note that the auditor did confirm that such incremental costs had been considered in the cash flows used in assessing the company as a going concern and its viability statement.
    - The lack of quantitative disclosure on assumptions also makes it somewhat difficult to assess whether there are direct inconsistencies between the financials and targets/risks. However, the absence of any adjustment to assumptions or accounting amounts in 2021 highlights the need for better explanation of this relative to the expectation of adjustment implied in 2020.
- **Going forward** Rio has indicated that in 2022, detailed assessments of climate-related physical risks will be made across product groups. This builds an expectation that in 2022, the financial statement consequences, even if none, will be reported and explained. Similarly, disclosure of whether the impact of targets and any wider aspect of climate-related risks have been fully considered, and the financial statements brought up to date, is reasonable to expect, in our view.

Audit Report (Sub-Indicator 2, result: ‘Partial’)

The auditor does not explain the gap between the expectation of climate still being considered in the 2020 audit report, and the outcome of no adjustments having been made in 2021. However, the 2021 audit report does demonstrate consideration of climate, taking account of discussion outside of the KAMs as well as within. While there is scope for the auditor to be more clear on how it went about challenging and corroborating Rio’s approach, for example which specific market reference points were used for forecast carbon and commodity prices, the auditor’s consideration of climate is considered sufficient to achieve a ‘Yes’ on Metric 2a. The same concerns on consistency noted for the financial statements, mean 2b is rated as ‘No’ for the auditor as attention is no longer drawn in its 2021 report, to the potential for inconsistency.

- **Climate section – Not a Key Audit Matter (KAM):** A section on climate is included in the 2021 report, under its own heading ‘The impact of climate change on our audit’. This sits outside of the ‘Overview of our Audits’ section, and follows the KAMs. Similar disclosure was in part contained in the overview section of the 2020 audit report. This separation could be viewed as helpful in giving prominence to climate, but it may also be potentially confusing that the section is not a KAM, but in 2021 is written in a format that is similar to a KAM. The auditor says it did not identify the impact of climate risk as a separate KAM given the nature of the Group’s operations and knowledge gained of its impact on critical accounting estimates and judgements during its risk assessment procedures and testing. This is itself a judgement, in our view, it remains somewhat unclear why the section is not considered to be worthy of coverage as a KAM. (See Audit Committee section below.)
- **KAMs - climate and impairment and closure provisions (Metric 2a: Yes):** The Audit Report lists the same 3 KAMs as for 2020 (impairment of PPE, closure provisions, and uncertain tax positions); the audit risk significance has increased for impairment in 2021and is flat for the other two. The KAM on impairment is narrowly focused on testing of two specific Cash Generating Units, and touches on the climate change. There is also use of the auditor’s own sustainability specialists on impairment and environmental specialists for the closure provisions. For impairment, the focus of this was to assist in understanding Rio's approach to incorporating the impacts of climate change into its pricing process (ie the central case assumptions used widely), and a new reference to their assistance in comparing carbon pricing assumptions to publicly available information. However, additional reference to how climate risk was more specifically taken into consideration for other aspects of accounting, including the life of related assets, are referenced in the section on climate (outside the KAMs).
- **Climate consideration outside the KAMs (Metric 2a: Yes):** The auditor confirms that it challenged management’s assessment that its stated climate change strategy did not result in any impairment trigger or reassessment of useful economic lives on carbon intensive assets in these financial statements, taking into account the remaining life of relevant assets, and headroom on CGUs that could be most impacted by climate change. On the basis of the more comprehensive disclosure, both within and outside of the KAMs, we consider the requirements of Metric 2a to have been met.
- **‘In process’ warning removed, consistency a renewed concern (Metric 2b: No):** Having said in 2020 that it would be ‘likely that the future carrying amounts of assets or liabilities will change for these other judgments and estimates as the Group responds to its climate change targets’, we consider it is reasonable to expect a description of why this has not resulted and how the auditor became satisfied with this result and with removing all cautionary text (given also Rio’s even more demanding targets set in 2021). This information was not given. Additionally, the concerns over consistency noted above for the financial statements, all sit within the Annual Report that is subject to the auditor’s review of other information, renewing concern over the auditor’s check for consistency.
- **US PCAOB Audit Report:** As in 2020, the auditor's 2021 US/PCAOB audit report includes the same topics as Critical Audit Matters as are disclosed as Key Audit Matters in the UK/Australian audit report. However, the discussion is generally shortened in the PCAOB version, with explicit climate-related references removed altogether. The CAM on closure did reference the use of environmental specialists in assessing the work planned and the associated changes in estimates in 2021, but these seem to be unrelated to climate. We have assessed the UK/Australian audit report only for the purpose of Sub-indicator 2, however, it is not clear why climate-related accounting topics are treated differently in the PCAOB version.

Alignment with net zero by 2050 (or sooner) (Sub-Indicator 3, result ‘No’)

Net zero by 2050 or sooner (also referred to as Paris-alignment with reference to limiting global warming to 1.5°C) is yet to be meaningfully addressed. The accounting is not aligned, and the sensitivity analysis provided is helpful in a limited sense, but is not a sensitivity to Paris-aligned assumptions, in our view.

- **Accounting not aligned (Metric 3a: No):** None of the three scenarios that Rio blends to form the ‘central case’ it uses in its accounting are 1.5°C Paris-aligned. The closest to this is the society-led scenario that achieves ‘well below 2 degrees C’. Additionally, targets have not been set for Scope 3 emissions (or their consequences reflected in the financial statements).

- **Sensitivity analysis not aligned (Metric 3a: No):** Rio provides sensitivity analysis for carbon pricing and commodity prices under the society-led scenario, but this appears to fall short of being aligned:
    - It narrowly focuses on impairment tests for Oyu Tolgoi and Kitimat, in the copper and aluminium segments respectively, tested for reasons unrelated to climate. Rio indicates that the sensitivity analysis results in higher recoverable amounts for these two specific units tested, but it does not address what would result for other assets.
    - Other accounting implications, for example asset lives and related asset retirement obligations across the portfolio, are not addressed.
    - The scenario used is not aligned with a 1.5°C pathway.
- **Auditor does not address alignment (Metric 3b: No)**: The Audit Report mentions the company's sensitivity analysis, but does not take this further, neither saying what the auditor believes would be Paris-aligned nor performing additional sensitivity analysis.

Audit Committee

We note above, significant reporting concerns over which the Audit Committee (AC) has responsibility on behalf of the Board – both the financial statements and the audit. The AC also explicitly confirms that the 'central case' assumptions used in the financial statements 'is not aligned with the goals of the Paris Agreement'. The AC demonstrates that it is engaged on climate issues; its report includes several references to climate consideration, including a special section on climate change-related financial reporting (expanded vs 2020 report). It says it focused on the potential implications for the financial statements, in particular on price scenarios, asset valuations, lifetime of resources and future costs of closure, and reiterates that there were no material changes to asset lives. However, it does not provide any further details on why it considered this appropriate.

We also note, regarding the auditor's decision not to identify its assessment of the financial reporting for climate as a KAM, that consideration of climate by the AC and in the AC's discussions with the auditor (given significant uncertainty and need for judgement) would also seem to support it being a topic eligible for coverage in a KAM by the auditor.

The Climate Accounting Project is an independent investor-led project to reinforce the statements of the IASB and IAASB that material climate change issues are incorporated within their standards. This analysis seeks to understand the extent to which companies and auditors are delivering against this aspect of these standards and similar local standards.

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