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Research Article

Effects of climate change on financial statements of entities listed in the Netherlands

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Abstract

A survey of 88 companies listed on the Amsterdam Stock Exchange shows that the number of financial statements referencing climate change has increased significantly (from 9% in 2020 to 39% in 2021) and that the reported financial impact of climate change was not material. However, significant improvements in the disclosures can be achieved by disclosing assumptions used, sensitivity analyses made and comparisons against benchmarks such as Paris-aligned climate change scenarios. We also found a very significant increase in the references to climate change in the auditor reports (from 2% in 2020 to 70% in 2021). We conclude that the increase in references to climate change has most likely been caused by increased pressure from institutional investors, environmental lobby organisations and regulators upon preparers and auditors for more transparency.

Practical relevance

The results of this research provide insight into the effect of climate change on financial statements and the related auditor reports which can be used by preparers, users, auditors, governments and regulators to improve the transparency around the impact of climate change on the financial position and performance of companies.

Keywords

Climate, sustainability, financial statements, auditor report, annual report, IFRS

1. Introduction

Over the past couple of years the consequences of climate change for financial reporting have increasingly become a priority for investors and other users, policy makers, preparers, standards setters, regulators and auditors. Some believe increased transparency around the effects of climate change on the financial position and performance of entities is important for a proper functioning of capital markets in the sense that full disclosure is provided to investors, helping them assess future expected cash flows. Others believe increased transparency is not so much a goal, but a means to drive the behaviour of the entities, the assumption being that if management is required to disclose the impact of climate change on future cash flows and actions taken to reduce the negative effects and stimulate the positive effects of climate change, it will drive human, financial and other resource allocations as well as management attention.

This increased attention for the effects of climate change on financial statements takes place against the backdrop of the broader recognition of the importance of sustainability reporting in general covering not just climate-related risks, but all Environmental, Social and Governance (ESG) aspects of enterprises. The need for more transparency has led to many initiatives[1] to standardise sustainability (including climate-related) disclosures, ranging from mandatory disclosure requirements to national and international non-mandatory standards, metrics and targets recommended by industry groups.

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The IFRS Foundation Trustees in their 2020 Consultation Paper concluded "Outreach with stakeholders and research by the Task Force has revealed that a wide range of voluntary frameworks and standards are in use." It also stated "Diverse approaches and objectives pose the threat of increasing fragmentation globally."[2] This has resulted in the establishment of the International Sustainability Standards Board (ISSB) by the IFRS Foundation in November 2021.

The myriad of initiatives in the area of sustainability reporting does not find its equivalent in the area of accounting standards for climate-related financial risks. Neither in the Netherlands, nor at the level of the International Accounting Standards Board (IASB) specific standards have been developed to guide entities in accounting for climate change and other climate-related risks. However, as we will address in section 2, this does not mean there is no guidance at-all, generic accounting standards may provide some guidance on specific aspects of climate change. There is also a growing recognition that investors need a holistic view of the performance of entities, covering both financial and non-financial information. The fact that the ISSB was established as a sister Board to the IASB, both under the umbrella of the IFRS Foundation Trustees, evidences the importance the Foundation attaches to the connectivity between financial and non-financial reporting.

1.1. Research population

We surveyed the 2021 and 2020 financial statements and auditor's reports for entities listed on the Euronext Amsterdam stock exchange. We included all entities that are part of the AEX, AMX, AScX indexes plus a random selection of entities not included in one of the three indexes. In total 88 entities were included, a list of entities surveyed can be found in the Appendix 1.

1.2. Definition of climate-related risks

Since companies did not always attach the same meaning to climate or climate change, we applied a broad notion, consistent with the definition used by the Taskforce for Climate-related Financial Disclosures (TCFD) of the Financial Stability Board (FSB), i.e. "the potential negative impacts of climate change on an organization".[3] These may consist of physical risks that are event-driven (acute) such as increased severity of extreme weather events or relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather patterns (e.g., sea level rise). Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations. This means we included all references to climate, climate change, climate-related risks, carbon footprint, carbon emissions and will refer to this as 'climate-related' risks. As explained in more detail in 2.2 we focused on the impact of climate-related risks on the financial statements as referred to in publications of the IASB. This means we include any signs of a negative impact of climate on financial statements such as impairments, shorter economic lives of assets and higher liabilities, but we do not include information about any investments in lower emitting assets, acquisitions of other companies with the aim to gain know-how that is climate-related etc.

1.3. Overview of extent and location of information about climate-related risks

Information from management about the impact of climate on an entity can be found in multiple places within the annual report. Typically an entity would explain the climate-related risks and opportunities, its strategy, actions taken and targets and metrics in the management report or in a separate sustainability report. In the financial statements one would expect disclosures explaining the impact of climate-related risks on the financial performance and position of the entity, such as potential impairments of financial and non-financial assets, including goodwill, shortening of economic lives of intangibles and factories, recognition of decommissioning liabilities, etc. Finally, the auditor may report on procedures followed and resulting findings during the audit of the impact of climate-related risks on the financial statements and the consistency between any information disclosed in the management report and the financial statements. This article focuses on the financial statements and the related auditor report.

The information disclosed in the management report and sustainability reports is the subject of the article authored by Kamp-Roelands and Looijenga (2022). The findings in the two articles should therefore be read in conjunction. Our article does not cover any climate-related information outside the financial statements and auditor report and therefore also does not cover assurance provided on sustainability information outside the financial statements. Where the auditor issued a combined report, the findings in this article are confined to the part of the auditor report that relates to the financial statements. Further information about the assurance provided on the sustainability information provided outside the financial statements by entities listed in the Netherlands can be found in Kamp-Roelands (2022). However, for this article we did look at any information about climate-related risks and opportunities in the rest of the annual reports when necessary to put the findings on the financial statements into perspective.

Table 1 provides an overview of the extent to which we found references to climate-related risks in the financial statements, the auditor report and the rest of the annual report, respectively. The rest of the annual report may comprise the management report, the sustainability report, the CEO letter, the report of the supervisory board, section with other information, etc.

Table 1. Location of disclosures about climate-related risks.

Section within annual report	2020		2021	
	#	%	#	%
Financial statements	8	9%	34	39%
Auditor report	2*	2%*	61*	70%*
Annual report as a whole	74	84%	84	95%
No reference to climate-related risks in the annual report	14	16%	4	5%
Total # of financial statements	**88**	**100%**	**88**	**100%**

* One entity did not include an auditor report in its annual report 2020 and 2021, so the total number of auditor reports is 87 in both years.

From this table it immediately becomes apparent that climate-related risks received more attention in 2021 compared to 2020. This is most visible in the auditor reports with a spectacular increase from 2% in 2020 to 70% in 2021, and also in the references in the financial statements itself which increased from 9% in 2020 to 39% in 2021. Ultimately 'only' 5% of the entities made no reference to climate-related risks in their 2021 annual reports (so including the management report) compared to 16% in 2020. However, it is important to analyse the data in more detail to assess the usefulness of that additional information as we will discuss in sections 2 and 3.

1.4. Do size and sector matter?

Figure 1 depicts an analysis of the overall findings split between the three indexes and the other entities. This can serve as a proxy for the impact of the entity and the relevance for investors. Entities that are part of the AEX have a higher market capitalisation than those that are part of the AMX and the AScX, etc. The numbers show that larger entities tend to disclosure more information about climate-related risks. Larger entities tend to have a larger impact on climate and may be impacted more by climate, which may also explain the fact that they disclose more.

Figure 1. Percentage of entities referring to climate-related risks in their financial statements (by index).

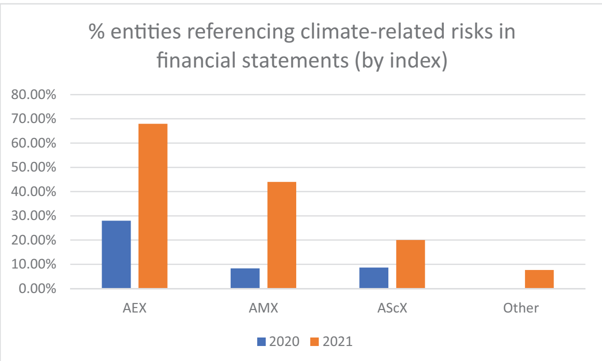
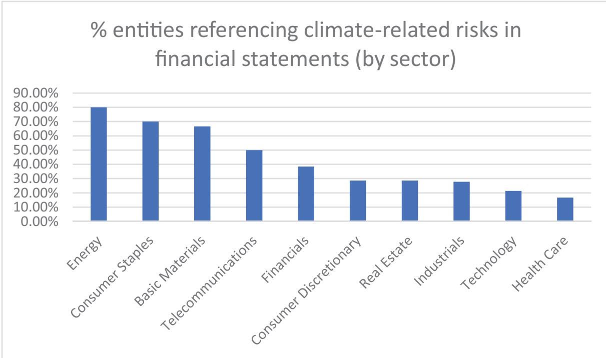


Figure 2 provides an overview of the extent to which entities in various sectors reference climate-related risks in their financial statements. The analysis is performed by using the Industrial Classification Benchmark (ICB)[4] to classify each entity. Not surprisingly, the energy sector ranks highest with 80%. It is noteworthy that the range is very high with Health Care (primarily entities in the pharmaceutical industry) ranking lowest with only 17%. We performed a similar analysis with the auditor reports. Also there the energy sector ranks highest with 100% of the auditor reports referencing climate-related risks. However, there is less variability between sectors (ranging between 50% and 100%) indicating that in a number of cases climate was referenced by default.

Figure 2. Percentage of entities referring to climate-related risks in their financial statements (by sector).



In the next sections we will analyse the findings and their background. In particular we will try to research the effect of the increased attention for climate-related risks. In section 2 we will discuss the relevant literature and findings in respect of climate-related risks in the financial statements while section 3 focuses on the relevant literature and findings in respect of the audit and auditor report. Section 4 contains conclusions and recommendations.

2. Financial statements

2.1. Overview of literature

Reference has already been made to the many initiatives to set standards or metrics on sustainability including climate-related risks. Some explicitly require that information to be included in a particular document or section of a document. An example is the Corporate Sustainability Reporting Directive[5] which requires the sustainability information to be included in the management report. Other initiatives leave it to the entity to find the most appropriate place to disclose the information. Examples include the TCFD recommendations and the proposed IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information by the ISSB. Both only refer to the information having to be disclosed as one package together with the annual financial statements and the ISSB suggests the management report is a logical place, but neither specify the location of the information, provided there is clear cross-referencing.[6]

So far little guidance has been provided on the impact of climate-related risks on the financial statements themselves. The most relevant guidance for entities listed on the Amsterdam Stock Exchange[7] would come from Dutch and EU laws and regulations, the Guidelines of the Dutch Council for Annual Reporting (CAR) and IFRS Accounting Standards. The CAR has not issued any guidance, although it has set up a new CAR Working Group Sustainability Reporting in 2021[8], so this may change in the future. There are no specific Dutch or EU legal requirements. However, the IASB has issued some documents that may help entities reflect the consequences of climate-related risks in the financial statements, discussed below.

Representatives of large institutional investors had asked the IASB to address climate-related risks in IFRS thereby forcing companies to be more transparent on the impact of climate on financial performance and position. In November 2019 Nick Anderson, one of the IASB Board members, published an article on the IASB website (Anderson 2019) explaining that although climate is not specifically mentioned in the IFRS standards, that does not mean there is no guidance in IFRS on how to account for climate-related risks. It references various standards to illustrate that the general guidance already forces entities to consider the effects of climate. Examples include IAS 36 Impairment of Assets, on testing of goodwill and other assets for impairment, IAS 16 Property Plant and Equipment on the residual economic life of assets and decommissioning liabilities and IAS 37 Provisions, Contingent Liabilities and Contingent Assets on any onerous contracts and potential litigation.

Investors did not consider the article to have sufficient effect on practice in 2019. Representatives from international institutional investors[9] issued an open letter in September 2020 calling upon companies to reflect the effects of climate change in their results. The IASB itself was reluctant to issue or amend standards, but in November 2020 the IASB staff published educational material (IASB Staff 2020) expanding on the article of Nick Anderson. It references more standards and provides more detail. According to the IFRS Foundation Due Process Handbook[10], educational guidance is not authoritative literature in itself and shall not amend or add to standards issued. However, it is reviewed by Board members and can be seen as helpful guidance in the application of mandatory standards.[11]

Groups of large investors such as the Institutional Investor Group on Climate Change (IIGCC) and Principles of Responsible Investment (PRI) continued to express concerns about the lack of information about the effects of climate on the financial position and performance of entities. IIGCC sent a letter to 36 of Europe's largest companies calling for more transparency, including the effects of Paris-aligned assumptions and called upon preparers and auditors to step up efforts. This is accompanied by a report issued by the IIGCC explaining investor expectations. It calls upon entities to perform the following five steps (IIGCC 2020, p. 11):

- Affirm that the goals of the Paris agreement have been considered in drawing up the accounts;
- Adjust critical assumptions and estimates;
- Disclose sensitivity analysis;
- Disclose implications of Paris-alignment for dividend paying capacity;
- Confirm consistency between narrative reporting on climate risks and the accounting assumptions, or an explanation for any divergence.

PRI instigated the report issued by Carbon Tracker and PRI in September 2021 surveying the 2020 annual reports and auditor reports of 107 publicly listed carbon-intensive firms. Just like IIGCC, their expectations go beyond or are at least much more granular than the guidance in the educational material of the IASB staff. For example, PRI calls for disclosing sensitivity analysis as well as the effect of Paris-aligned assumptions on impairment testing and liability recognition. On the 2020 financial statements it concludes that "70% did not indicate that they had considered climate matters when preparing their 2020 financial statements" and "none appeared to use assumptions and estimates that were 'Paris-aligned' or provided sensitivities to this". On the 2020 auditor reports it states "80% of auditors provided no indication of whether or how they had considered material climate-related matters". The survey was repeated in 2022 for the 2021 annual reports and auditor reports of 134 highly carbon-exposed companies (Carbon Tracker 2022). Carbon Tracker is disappointed in the progress made and reports "98% of these companies did not provide sufficient information to demonstrate how their financial statements include consideration of the financial impacts of material climate matters" and "No company used assumptions and estimates that were aligned with achieving net zero by 2050 or sooner".

In April 2022 the IASB decided, as part of its Third Agenda Consultation, to add to its workplan a maintenance and consistent application project on climate-related risks (IASB Update, April 2022).

Pressure on preparers to increase the transparency around climate-related risks did not just come from the IASB and institutional investors. Also securities regulators called upon registrants to improve the disclosures around climate. Since 2018 the European Securities and Markets Authority (ESMA) has mentioned climate risks in the annual documents describing the European Common Enforcement Priorities (ECEP). From 2018 till 2020 climate is mentioned but not as a core enforcement priority. ESMA focuses on non-financial disclosures in the management report and references the European Commission's (voluntary) Guidelines on non-financial reporting: Supplement on reporting climate-related information (European Commission 2019). However, in 2021 climate-related risks became a core enforcement priority covering both the IFRS financial statements as well as non-financial statements. In respect of financial statements mention is made of the need for consistency between the IFRS financial statements and non-financial information. Also, specific IFRS guidance such as on materiality, judgements and estimates, as well as impairments and provisions, is mentioned as relevant in assessing the financial impact of climate-related risks.

Finally, it should be mentioned that pressure also came from environmental lobby-organisations. On 13 January 2022 Milieudefensie sent a letter[12] to the CEOs of 29 companies and pension funds. It calls upon these companies to have an action plan aligned with the Paris agreement. This was followed by a letter[13] to the large audit networks of 26 September 2022 which calls upon auditors to also have a similar action plan, but in particular help achieve the goals through the audit activities.

2.2. Scope of our research

When analysing financial statements, climate may impact the numbers and the disclosures in various ways. We have focused our analysis on the topics addressed by IASB staff, such as potential impairments, impact on residual value or residual economic life of tangible and intangible assets, additional climate-related provisions such as decommissioning liabilities, etc. Of course the effects of climate-related risks and opportunities go beyond those referenced so far. For example, many entities reported to have invested in energy efficient assets, changed their products or services, acquired other businesses to become more sustainable and performed research with climate-related goals. This will have its effect on the amounts of property plant and equipment, intangibles and research expenses, etc. Those investments are addressed in the management report or sustainability report and are partly covered in the article of Kamp-Roelands and Looijenga (2022) in this edition of 'Het jaar verslagen'. In addition, entities make reference to any climate-related compensation of management (in cash or share-based) which means there may have been an effect on the amounts in the financial statements. We found seven companies (2020: five) that referred to share-based compensation linked to ESG goals including carbon emission reductions. We did not include this in our research as this is commonly addressed in the remuneration report outside the financial statements and the management report and there is no separate disclosure of the effect of meeting climate-related targets on compensation or share-based payment expenses.

2.3. Overview of content and location of climate-related risks in financial statements

Focusing on the financial statements (rather than the complete annual report), Table 2 provides an overview of references to climate-related risks found within the financial statements and to what extent it had an impact on the numbers in the financial statements. Of the 19 entities (2020: 3) that provide a generic disclosure about climate risk in the basis of preparation, 13 (2020: 1) explicitly state that climate had no material impact on the financial statements, 6 (2020: 2) do not make such an explicit statement but explain that climate-related risks have been considered. We presume this means management implicitly made such a statement by signing off the financial statements. However, one of those entities (2020: 0) states a full analysis will be made in the next year. Another 10 (2020: 2) companies state that climate has been considered when discussing specific items such as the goodwill impairment test or contingent liabilities and stated that there was no impact. 'Only' five companies (2020: three) linked a specific effect on financial performance to climate-related risks. We will discuss these in section 2.3. However, the overview in Table 2 already provides a more nuanced picture as most companies that refer to climate-related risks confine their disclosure to stating that climate-related risks have been considered without going into more detail.

Table 2. Overview of disclosed impact of climate-related risks on financial statements.

Explanation of consideration and impact	2020 #	2020 %	2021 #	2021 %
General statement that climate has been considered and had no material impact on financial statements	1	1%	13	15%
General statement that climate has been considered but no disclosure of whether and to what extent it had any impact	2	2%	6	7%
Statement on a specific item in the financial statements with the statement that climate had no material impact	2	2%	10	11%
Statement that climate had a financial impact on the financial statements	3	3%	5	6%
No reference to climate in the financial statements	80	91%	54	61%
Total # of financial statements	**88**	**100%**	**88**	**100%**

Table 3. Location of reference to climate-related risks within financial statements.

	2020 #	2020 %	2021 #	2021 %
General note in basis of preparation referencing climate risk	3	0%	19	20%
Going concern paragraph	0	0%	2	2%
Paragraph explaining estimates and judgements	2	2%	13	15%
Note on Inventories	0	0%	2	2%
Note on Income taxes	0	0%	2	2%
Note on Property, Plant and Equipment	1	1%	11	13%
Note on Intangible assets	2	2%	9	10%
Note on Provisions and contingent liabilities	1	1%	6	7%
Note on Financial Instruments	6	7%	13	15%
Note on Leasing	2	2%	3	3%
Note on Insurance Liabilities	1	1%	1	1%
Note on Investment Properties	0	0%	2	2%
Note on Agricultural assets	0	0%	1	1%
Note on Exploration and Evaluation of Mineral Resources	0	0%	1	1%
Note on Joint Arrangements	0	0%	2	2%
Total # of financial statements referencing climate-related risks (excluding double-counting)	**8**	**9%**	**34**	**39%**
No reference to climate-related risks in financial statements	80	91%	54	61%
Total	**88**	**100%**	**88**	**100%**

Table 3 provides an overview of the location where the climate-related risk disclosure was included. A number of entities include references in more than one place, which explains the double-counting in the table. The balance sheet items companies consider most likely to be affected by climate-related risks are property plant and equipment, intangibles (mainly goodwill), financial assets and provisions.

2.4. Evaluation of overall findings and their causes

It is clear from the data that the references to climate-related risks in the financial statements of this population of entities increased significantly from 9% in 2020 to 39% in 2021. There has been no change in regulation mandating entities to do so. The educational material from the IASB staff might have had an impact, although that was already published in November 2020, so before entities issued their 2020 financial statements, and therefore it seems less likely that these materials had such a major effect only in 2021. So the increase has most likely been caused by the call from investors, environmental lobbying organisations and regulators for more information.

2.5. Detailed analysis of potential impact climate-related risks on financial statements

2.5.1. Non-financial assets

Physical risks of climate change may lead to loss of or damage to non-financial assets and therefore an impairment or derecognition of those assets or their cash-generating units (CGUs). Physical risks comprise floods, droughts, heavy wind, etc. But climate change also leads to transition risk, i.e. the longer term consequences of rising temperatures and the need to reduce greenhouse gases. The consequences for financial statements may include the need to replace or decommission assets sooner than expected, leading to re-estimating residual economic life and residual value of assets, as well as potential impairments of these assets. Indirectly this may also lead to higher decommissioning liabilities of those assets (see 2.5.3 below).

Although some entities recognise that climate may have an effect on the entity and its future, almost all entities either report there is no material effect on the financial statements or are silent about any impact on the financial statements. We found only one entity reporting accelerated depreciation of its non-financial assets due to climate-related risks (see Figure 3). The impact on 2021 was an additional depreciation of € 17 million. Two more entities reported a climate-related impairment of an interest in a joint-venture, with an impact of € 5 and € 6 million respectively. One entity reported a € 1 million impairment of a right of use that it linked to climate considerations. Those that stated the impact on the financial statements is not material did not provide further information in the financial statements on the assumptions used to reach that conclusion. This means the financial statements are silent on whether or not using Paris-aligned assumptions would have led to further consequences for the financial statements such as additional impairments. However, one entity that stated the impact of climate could be material (Shell), did not only disclose what assumptions/scenarios had been, but also disclosed a sensitivity analysis in the financial statements indicating what the amount of impairment (reversal) would have been under alternative climate-related assumptions (see Figure 4).

Figure 3. Good practice of accelerated depreciation linked to climate change: KPN, integrated annual report 2021, p. 104 and 121, https://ir.kpn.com/download/companies/koninkpnnv/Results/KPN_Integrated_Annual_Report_2021.pdf.

Sustainability and climate change
KPN is continuously enhancing, improving and modernizing its network to realize its sustainability goals which include: providing internet access for everyone and everything and stimulate social inclusion, while building the most efficient network using technology to reduce energy consumption despite higher data usage. Through its sustainability efforts, KPN not
…
KPN has analysed whether the above has had any impact on the valuation of KPN's assets, liabilities and financial results and concluded the impact is limited. The migration to new generation network equipment has resulted in an acceleration of depreciation charges for the assets to be replaced. KPN is
…
In early 2020, KPN announced its plans to phase out its copper network after three years starting in early 2023 for existing addresses where fiber service delivery is available as per early 2020 and for the addresses in every then already announced fiber roll-out project under construction. Together with the current fiber roll-out these overlay addresses receive an announcement that copper will be phased out after three years. The depreciation of this part of the copper network was accelerated for an additional amount of EUR 17m in 2021 (2020: EUR 13m).

Figure 4. Good practice of sensitivity analysis impairment for alternative climate-related scenarios: Shell PLC, Annual Report 2021, p. 242. https://reports.shell.com/annual-report/2021/.

Property, plant and equipment and joint ventures and associates
Price sensitivities using climate pricelines
As noted, in accordance with IFRS, Shell's financial statements are based on reasonable and supportable assumptions that represent management's current best estimate of the range of economic conditions that may exist in the foreseeable future. The mid-price outlook informed by Shell's scenario planning represents management's best estimate. Impairment sensitivities of -10% or +10% to the mid-price outlook, as an average percentage over the full period are provided in Note 9 Property, plant and equipment. They would result in around $12-15 billion impairment or of some $6-9 billion impairment reversal respectively in Integrated Gas and Upstream.

2.5.2. Financial assets and liabilities

Credit risk

When a financial asset or financial liability is measured at fair value and a level 1 fair value is available, the carrying amount automatically reflects market perception of the effect of climate-related risks on fair value, so there is no need for management to make further adjustments. However, for level 2 and 3 fair values, management may have to assess how a market participant would assess climate-related risks in relation to the asset.

When a financial asset is measured at amortised cost, management will need to consider the effect of climate-related risks on the credit risk of the asset. This risk is most prevalent with financial services companies, in particular banks. ING explains how it has included climate-related risks in assessing expected credit losses (ECL), see Figure 5. Particularly interesting is that ING explains the applied mean reversion approach does not take into account long term effects of climate change. ABN AMRO in its 2021 annual report does not address the impact of climate on credit risk within the financial statements, but in the sustainability section outside the financial statements (p. 171–175) and explains that it analysed four high-priority sectors (residential and commercial real estate, shipping and energy) for climate-related risks and concluded: “Based on the chosen scenarios, climate risk drivers and time horizons (2030 and 2050), the outcome of the climate scenario analyses of the four priority portfolios indicates that it is unlikely that climate risk will have a material impact on credit risk in the priority portfolios.”

Figure 5. Good practice of explanation of how climate-related risks were incorporated in the expected credit loss modelling: ING, Annual Report 2021, p. 138. https://www.ing.com/Investor-relations/Financial-performance/Annual-reports.htm.

Climate and environmental risks in IFRS 9 models (*)

ING is evolving in its credit risk management framework to develop a better understanding of emerging climate and environmental risks. Banks, including ING, are in the process of collecting and analysing empirical historical data and moving towards embedding these emerging risks into their credit risk management processes and eventually into their IFRS 9 ECL models.

At this point in time it is not yet possible to incorporate climate risk separately into IFRS 9 ECL models given the lack of sufficient empirical historical data. The impact of climate risk is however currently implicitly embedded in ING’s ECL models through the macroeconomic forecasts used for both the baseline and two alternative scenarios (downside and upside). In particular, where climate and environmental factors have impacted the economy in the recent past or present, these impacts are reflected in projected macro-economic indicators (e.g. GDP growth and unemployment rates).

We note that ING’s ECL models are primarily sensitive to the short-term economic outlook (we use a 3 year time horizon for macroeconomic outlook after which a mean reversion approach is applied), and therefore the longer-term environmental/climate risk is not yet incorporated.

With regard to our evaluation of climate-related matters, where such events have already occurred (e.g. floods), the impact of such events are individually assessed in the calculation of stage 3 Individual provisions and factored into ING’s normal credit monitoring and identification processes. For example, we consider whether the affected assets have suffered a significant increase in credit risk (or are credit impaired) and whether the ECL is appropriate.

ESG loans

Some loans provide an incentive for the borrower to meet certain sustainability related targets, such as carbon emission reductions. The incentive often consists of a discount on the interest rate if those targets are met. For the borrower the question rises whether such a loan contains an embedded derivative that needs to be separated from the host loan. For the lender the question is whether such loans meet the so-called ‘Solely Payment for Principal and Interest’ (SPPI) test in order to be able to be measured at amortised cost. If not, these loans need to be measured at fair value through profit and loss. There is no specific IFRS guidance, but the IASB has been asked as part of the Post-Implementation Review of IFRS 9 to address these issues. We found 11 borrowers (2020: 7) that reported ESG-loans with interest rates linked to achieving ESG goals. We found 2 lenders (2020: 2) that reported ESG-loans or ESG leases with interest/rent rates linked to achieving ESG goals. One borrower stated it accounted for the loan at amortised cost using the actual interest rate paid, the other entities did not disclose the accounting policy used.

2.5.3. Provisions and contingent liabilities

Climate change may not only affect the useful economic life of assets, but also any decommissioning liabilities in relation to those assets. For example, the costs of decommissioning oil rigs, rehabilitate mine areas, etc. may cost more and come earlier than originally planned. There was one entity reporting an effect on decommissioning liabilities due to an acceleration of decommissioning (Figure 6). The addition to the decommissioning liability for that activity amounts to $ 823 million, although it is not made explicit whether this is solely due to the effect of climate-related risks.

Figure 6. Good practice of impact climate change on decommissioning liability: Shell PLC, Annual Report 2021, p. 245. https://reports.shell.com/annual-report/2021.

Decommissioning and other provisions

The energy transition may result in decommissioning and restoration occurring earlier than expected. The risk on the timing of decommissioning and restoration activities for Integrated Gas and Upstream fields is limited, supported by production plans in the foreseeable future (see “Impact on remaining life of assets” above). Acceleration of decommissioning and restoration activities has also been reflected in the assessment of the appropriate discount rate. In 2021, the discount rate has been revised from a 30-year to a 20-year term in line with the average remaining life of Integrated Gas and Upstream assets.

One entity in 2021 disclosed climate-related risks as a general contingency in the note on commitments and contingencies. Two entities (2020: nil) explicitly stated that they considered climate-related risks when assessing provisions and contingent liabilities. Eight entities (2020: seven) reported environmental liabilities, but these were related to historical contamination, so could not be linked to climate change.

2.6. Findings and recommendations

The above findings show that the disclosed quantitative effect of climate on financial statements assets is minimal. This is to a certain extent driven by the business models of the entities surveyed. There is a growing number of entities that actually benefit from climate transition by offering goods and services that help other entities or consumers transition to a low carbon society. Other entities are affected, but refer to the long-term nature of climate transition, extending beyond the remaining useful lives of the current asset base, which explains why there is no immediate effect on residual useful lives of assets and the recoverability of their carrying-amounts. Still others refer to significant headroom in the impairment test, making it unlikely that climate-related risks lead to impairment in the short term. Another reason could be the way the impairment test under IAS 36 Impairment of Assets works. Assumptions to be used to assess the value in use of a cash-generating unit must be based upon the current use of assets and must be consistent with management's best estimate of future cash flows. Management expectations may not necessarily be in line with 'Paris-aligned' assumptions. Moreover, when assessing fair value less cost of disposal, a market participant perspective needs to be taken. In assessing fair value, market data of the potential effect of climate on energy demand and prices as well as emission rights and other regulations differ significantly from one source to the other.[14]

It should be borne in mind, that our analysis excludes the effects of additional investments and expenditures incurred that are related to climate, nor does it include any additional revenues and income generated from climate-related activities.

Overall, entities can significantly improve the usefulness of financial statements by explaining the link between the commitments expressed in the management report and the assumptions used in the financial statements. This can be done by describing scenarios and/or disclosing price (ranges) and expected volumes and/or including sensitivity analyses. We also noticed that there is hardly any reference made to whether assumptions and estimates are 'Paris-aligned', as requested by investors.

3. Audit and auditor report

3.1. Overview of literature

There is no specific guidance in Dutch or international auditing standards on how to audit climate risks in financial statements. However, in January 2020 the Dutch Institute NBA issued a public management letter about climate risk. It reports various warning 'signals' and calls upon auditors to insist that significant climate risks are included in annual reporting. The report does not specify whether disclosures are included in the financial statements or the management report, even though the responsibility of the auditor for these two documents differs (as explained below). The NBA public management letter does, however, say that the auditor needs to consider climate risks in the assessment of continuity (going-concern). Finally the report mentions that the auditor will have to express an opinion on the reporting system used and the choices made for reporting, valuation and disclosure.

Staff of the International Auditing and Assurance Standards Board (IAASB) issued a Staff Audit Practice Alert in October 2020 following the calls on the auditing profession from institutional investors, regulators and other organisations to step up efforts. The IAASB staff explains: "While the phrase 'climate change' does not feature in the ISAs, the ISAs require that the auditor identifies and assesses the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for the auditor's opinion. Depending on the facts and circumstances of an entity, climate-related events or conditions may contribute to the susceptibility to misstatement of certain amounts and disclosures in an entity's financial statements." The Alert refers to ISA 315 on identifying and assessing risks of material misstatements, ISA 320 on materiality, ISA 330 on the auditor's responses to assessed risks, ISA 250 consideration of laws and regulations, etc. Within the context of this article which focuses on the auditor's report on financial statements, the most relevant reminders are those of ISA 700, 701 and 720. The Alert reminds the auditor that climate-related risks could give rise to material misstatements (if uncorrected) in relation to:

- Appropriateness or adequacy of disclosures;
- Application of the entity's accounting policies, for example if impairment calculations do not appropriately account for the effect of climate-related risks.

The Alert also reminds the auditor that climate-related risks may require the inclusion of a Key Audit Matter (matter that, in the auditor's professional judgement, is of most significance in the audit of the financial statements of the current period) in the auditor report. Such a decision would be affected by significant audit judgements, such as the potential impact of climate change and the transition to renewable energy sources on an entity in the energy sector, and specific events or transactions, for example changes to laws and regulations with respect to the use of fossil fuels.

The Alert also reminds the auditors of the responsibilities relating to other information included in an entity's annual report, which requires the auditor to consider any material inconsistency between the management report, including any climate-related information contained therein, and the financial statements or between the management report, including any climate-related information contained therein, and the auditor's knowledge obtained in the audit (ISA 720 par. 11).

As already briefly mentioned in 2.1. the call from institutional investors for improved transparency around the impact of climate on the financial performance of entities was not just directed to reporting entities, but also to their auditors. The November 2020 IIGCC report on expectations of investors referred to above also contained the four steps they expect auditors to take (p. 12):

- Consider material climate risks and confirm that critical accounting estimates or judgements reflect material climate risks, in line with accounting standards;
- Confirm as to whether or not these critical assumptions and estimates can be considered consistent with a 2050 net zero emissions pathway and, if not, whether Paris-aligned assumptions have been adequately considered in the notes to the financial statements. If not, the auditor should indicate what reasonable Paris-aligned assumptions would be;
- Alert shareholders to any inconsistency between the narrative disclosures around climate risks, the company's strategy and the financial statements;
- Confirm that capital maintenance/solvency tests have appropriately considered climate risks.

The first and third bullet points are consistent with the IAASB Staff Alert, but the second and fourth bullet go beyond what Staff's view is on the auditor's responsibilities.

In October 2021 Eumedion issued their Focus Letter 2022.[15] Just like earlier years climate was mentioned as one of the focus points, for which Eumedion expects disclosures in the management report. This year, though, it contained an appendix directed at the auditors of listed entities, calling upon them "to review the company's climate-related disclosures and to report in the auditor's opinion on the climate risk assessment and the auditor's response to the risks identified. Furthermore we request the external auditors of companies that are expected to be materially impacted by climate change to assign the impact of climate risk and the energy transition as a key audit matter." In November 2021 Sarasin & Partners sent an open letter[16] to the large four audit firms in the UK reiterating the expectations laid out in the IIGCC report, but going even further and stating: "From next voting season, you should increasingly expect to see investors vote against […'s] reappointment as auditor where you fail to meet the expectations we have clearly set out in our previous correspondence, the November 2020 IIGCC paper and underlined again here." This is geared to a United Kingdom (UK) environment, but some entities listed on the Amsterdam Stock Exchange are headquartered in or audited out of the UK.

3.2. Findings

The results of our survey show that the reference auditors make to climate-related risks in their auditor reports on the 2021 financial statements has increased dramatically compared with 2020. Where in 2020 only two of the 87 auditor reports (2%) surveyed refers to climate-related risks, this number jumps to 61 of 87 (70%) in 2021. Since the impact of climate change on companies has not changed that much from 2020 to 2021, the question is what has caused this change in behaviour. There has been no change in Dutch or international auditing standards. The IAASB staff Audit Alert was already issued in October 2020, so before the 2020 financial statements audits were completed. That makes it most likely the increase has been the result of an increased call from investors, environmentalists and regulators upon auditors to step up their efforts to address climate-related risks and report on the results. The increased number of references in itself, though, does not necessarily mean users get more information, so we need to take a closer look at what exactly the auditors report on.

3.2.1. Location within the auditor report

Table 4 provides an overview of the location of climate references in the auditor reports. Two auditor reports (2020: 1) refer to climate in the going-concern section, indicating climate-related risks were considered in the going-concern analysis. Noteworthy is that one of those two companies did not state explicitly that it considered climate risk in assessing the appropriateness of the going-concern assumption. Also, we found two companies that referred to climate in the going-concern section of the financial statements but no reference was made to climate risks in the going-concern section of the auditor report. In one of those cases the company referred to climate as an opportunity, in the other case climate was mentioned within the context of access to sustainable finance, which the auditor may have captured in addressing liquidity risk more generally. Eight (2020: two) auditor reports included climate-related KAMs. Most of the auditors, however, included a separate paragraph within the auditor report (outside the KAM and going-concern sections) explaining how climate-related risks were considered during the audit. They did not consider climate-related risks to warrant a KAM, but apparently found climate-related risks important enough to be addressed alongside fraud risk and going-concern. In 2021, 57 auditor reports contained such a separate paragraph whereas in 2020 there were none. One audit network used almost the same climate text in all the auditor reports. Other audit networks were more selective and adjusted the wording to the specifics of the audit and the audit findings. In a KAM the auditor reports on matters that were of most significance in the audit of the financial statements of the current period (ISA 701 par. 10).[17] The fact that there are few KAMs in comparison with separate paragraphs outside the KAM and going-concern sections, may seem surprising given the attention investors are giving to the topic. However, it seems consistent with the findings in the financial statements themselves which show that most entities do not consider climate risk to have a significant impact on the financial statements, so one would not expect many references to climate risks in KAMs or going-concern sections of the auditor report. Auditors apparently want to signal that nevertheless they did consider climate-related risks in the audit, which is what institutional investors called upon the auditors to do. Four auditor reports (2020: one) contain references to climate in multiple places, which explains the double counting in Table 4. In all these cases they were issued by the same audit network. Of those four, two auditor reports (2020: zero) referred to climate in a KAM and in a separate paragraph. Two auditor reports (2020: zero) referred to climate in the going-concern section, a KAM and in a separate paragraph. And in 2020 one auditor report referred to climate in the going-concern section and a KAM.

Table 4. Reference to climate-related risks in auditor report (section within report).

Section within auditor report	2020		2021	
	#	%	#	%
Key Audit Matter (KAM)	2	2%	8	9%
Going concern section	1	1%	2	2%
Separate paragraph outside the KAM or going-concern sections	0	0%	57	65%
Total # of references to climate-related risks	*3*		*67*	
Total # of references in auditor reports excluding double-counting	**2**	**2%**	**61**	**69%**
No reference to climate-related risks	85	97%	26	30%
No auditor report	1	1%	1	1%
Total	**88**	**100%**	**88**	**100%**

3.2.2. Content of the auditor report

In Table 5 the KAMs found are analysed in more detail. One (2020: one) KAM was entirely devoted to the impact of climate risks. This is the auditor report on the financial statements of Shell PLC which covers three pages and references management disclosures about the impact of climate-risks and explains the additional procedures the auditor has gone through during the audit. There is no explicit statement that Shell's assumptions used are Paris-aligned, as requested by IIGCC and Sarasin, but the auditor does acknowledge having considered the expectations of investors as laid down in the IIGCC report and Sarasin letter. The KAMs in other auditor reports mention climate risk as a material consideration in the audit of certain elements of the financial statements. Not surprisingly, of the seven remaining KAMs five KAMs (2020: one) reference climate-related risks in relation to impairment testing of non-financial assets. The remaining two are on the assessment of the fair value of investment properties and the incorporation of climate risks in the expected credit loss model for loan portfolios.

As mentioned above, most auditor reports that reference climate-related risks do so in a separate paragraph explaining how the auditor considered climate risks.

Table 5. Content KAMs in auditor report.

Nature KAM	2020		2021	
	#	%	#	%
KAM dedicated to climate-related risks	1	1%	1	1%
KAM on valuation of investment property containing climate-related risks	0	0%	1	1%
KAM on expected credit losses containing climate-related risks	0	0%	1	1%
KAM on impairment of other assets such as PPE, goodwill and other intangibles, deferred tax assets and investments in joint-ventures, associates and subsidiaries	1	1%	5	6%
Total	**2**	**2%**	**8**	**9%**
No reference to climate-related risks in KAMs	85	97%	79	90%
No auditor report	1	1%	1	1%
Total	**88**	**100%**	**88**	**100%**

Table 6 provides an overview of the content of those paragraphs. Most common features in that paragraph are:

- a reference to management's assessment of climate-risks (48 times);
- a confirmation of the absence of inconsistencies between the financial statements and other information disclosed in the annual report about climate-related risks (21 times);
- an overview of additional procedures the auditor went through in addressing climate-related risks, discussed in more detail below (55 times);
- a confirmation that the need to include a KAM on climate-related risks was considered (29 times);
- an explicit statement that climate-related risks had no material effect on the financial statements (3 times).

Table 6. Content separate paragraph on climate-related risks in auditor reports 2021.

	2021	
	#	%
General reference to management assessment in management report or financial statements	33	38%
Reference to assessment management that there is no material impact on the company	3	3%
Reference to assessment management that there is no material impact on the financial statements	11	13%
Reference to assessment management that there is no material impact on the financial statements, but there may be a very material effect on the company itself	1	1%
Auditor explicitly assesses impact climate-related risks on financial statements is not material	3	3%
Auditor confirms absence of inconsistencies between information about climate-related risks in management report and financial statements	21	24%
Auditor reports on own audit procedures in relation to impact of climate on financial statements	55	63%
Auditor references assessment of need for a KAM to address climate-related risks	29	33%
Total # of references	*156*	
Total # of references in auditor reports excluding double-counting	**57**	**65%**
No reference to climate-related risks in general paragraphs of auditor report	30	34%
No auditor report	1	1%
Total	**88**	**100%**

Interestingly, in those last three cases where the auditor explicitly stated that climate-related risks had no material effect on the financial statements, the auditor went further than management as we could not find a similar statement from management (either in the financial statements or the management report). One of those three entities did not discuss climate-related risks at all. One other entity of the three just stated in its management report that it was in the process of analysing the impact of climate-related risks. The third entity explains its strategy and risk management in relation to climate risk. Of course, by signing off the financial statements management implicitly confirms that climate-related risks have been taken into consideration and would not require material adjustments to the financial statements, but that is not the same as explicitly stating climate-related risks had no effect on the financial statements.

The additional procedures referred to in the auditor reports in relation to climate-related risks have been assessed in more detail. An overview can be found in Table 7. Overall, the additional attention climate-related risks received from the auditors and the additional procedures performed by auditors are encouraging. Still a significant number of auditor reports do not reference climate-related risks at all and only 12 (13%) auditor reports reference the use of climate or sustainability specialists by the audit team. A good example illustrating the various additional procedures reported by auditor is the auditor report on the annual report of Just Eat Takeaway.com 2021 by Deloitte (see Figure 7).

When comparing the findings to the requests from investors as described in section 3.1, it shows that auditors have responded by increasing the references to climate-related risks in their auditor reports. However, the investors also requested auditors to report on the alignment of assumptions used in the financial statements with the Paris Agreement, in other words, assumptions necessary to limit global warming to 1.5C. In particular, if a company does not use Paris-aligned assumptions, the auditor should indicate what reasonable Paris-aligned assumptions would be. We have found only one auditor report (2020: one) explicitly referring to the Paris Agreement. In that auditor report the auditor did not confirm whether the assumptions used were Paris-aligned (same in 2020). However, in the absence of any accounting or auditing standard requiring the company or the auditor to do so it would be difficult for the auditor to express such an opinion and indicate what reasonable assumptions would be, if financial statements themselves do not reference assumptions being aligned with the Paris agreement.

4. Conclusion

The overwhelming increase in attention the world is showing for climate change and climate risks has led to significant changes in the disclosures about climate and climate change in the financial statements and auditor reports of companies listed on the Amsterdam Stock Exchange. The results of this research show a significant increase from 9% in 2020 to 39% in 2021 in the number of financial statements referencing the impact of climate change on the financial performance and position. It also revealed a spectacular increase from 2% in 2020 to 70% in 2021 in the number of auditor reports referencing the impact of climate on the audit. The magnitude of the increase normally comes with a change in legislation or standards. However, since neither the accounting standards nor the auditing standards changed in 2021, we looked for alternative causes for such a profound change. We concluded that the increase was primarily the result of a very strong pressure from (institutional) investors, environmental lobbying organisation and regulators to improve the transparency around the impact of climate change in the financial statements and auditor reports.

Table 7. Additional procedures on climate-related risks reported in auditor reports 2021.

	2021	
	#	%
Assessment of climate-related risks	55	63%
Discussions with management and those charged with management, challenging management's assessment	36	41%
Reading the management report and any other materials that might include information about management's intentions and commitments	33	38%
Involvement of specialists to assess risks and management's risk management	12	14%
Seeking assistance from component auditors	1	1%
Total # of references to additional procedures in auditor reports excluding double-counting	**55**	**65%**
No reference to additional procedures in the auditor report	32	34%
No auditor report	1	1%
Total	**88**	**100%**

Figure 7. Good practice of description of additional procedures on climate risks in general paragraph of auditor report: Just Eat Takeaway.com NV, Annual report 2021, p. 257. https://www.justeattakeaway.com/annual-reports.

The impact of climate change on our audit

In planning our audit, we have considered the Company's analysis of the impact of climate change on the Group's operations and subsequent impact on its financial statements. The Group sets out its assessment of the potential impact of climate change in the 'Our Responsible business and Sustainability approach' section on pages 52 to 60 of the Report of the Management Board.

In conjunction with our climate risk specialists, we have held discussions with the Company to understand their:

- process for identifying affected operations, including the governance and controls over this process, and the subsequent effect on the financial reporting of the Group; and
- strategy to respond to climate change risks as they evolve including the effect on the Group's forecasts.

Our work has involved:

- challenging the completeness of the risks identified and considered in the Group's climate risk assessment and the conclusion that there is no material impact of climate change risk on current year's financial reporting; and
- assessing information included in the annual report, and challenging the consistency between the financial statements and the remainder of the annual report.

We have not been engaged to provide assurance over the accuracy of climate change information set out at pages 58 to 60 in the Annual Report. As part of our audit procedures, we are required to read and consider this information to consider whether it is materially inconsistent with the financial statements or knowledge obtained in the audit and we did not identify any material inconsistencies as a result of these procedures.

That pressure was most notable in the (open) letters to individual listed entities and the large audit networks, as well as public reports, focus letters, and enforcement priorities such as those of ESMA. The results show that for those companies that explicitly addressed the impact of climate-related risks, the financial effect on the financial statements was not material.

However, the results also show that there is still a lot of room for improvement and that not all the requests from investors were honoured. More than 60% of the financial statements contain no reference to climate-related risks. Those companies that do reference climate-related risks in the financial statements hardly explain the assumptions or scenario analyses used to assess the impact on the financial statements, even if they contain an explicit statement that management does not believe there is a material impact. Finally, we have found no explicit statements within the financial statements that they are based upon Paris-aligned assumptions, despite the explicit request from investors to do so. It should be noted though that there is no explicit requirement in either IFRS or Dutch law to do so and in this article we have referred to accounting guidance that may prohibit a company to apply Paris-aligned assumptions.

Some companies indicated to have started a detailed analysis of the impact of climate and would report on that and incorporate the results in the financial statements 2022. Also, from 2022 companies subject to the European Union Taxonomy Regulation will have to report not only on the eligibility of their activities, but also on the alignment of their activities with the goals of the European Union's Green Deal. This will require companies to collect more data, which can be used to improve the analysis of the impact of climate on the financial statements including the disclosures. Finally, the IASB decided in April 2022 as part of its Agenda Consultation to add a maintenance project to its agenda to research and consider whether any narrow-scope actions might be needed on the accounting for climate-related risks in the financial statements. So there is hope that further improvement will be achieved.

Auditor reports have improved considerably in 2021 when it comes to transparency around the impact of climate-related risks on the audit. It is made more explicit that the auditor has incorporated in the audit any climate risks and climate-related commitments of management and their effects on the financial statements and checked for any inconsistency between the financial statements and the management report or knowledge gained during the audit. However, most auditor reports are confined to boilerplate language stating that climate-related risks have been incorporated; one audit network uses almost the exact same language in all auditor reports. Overall we may conclude that also in respect of the auditor report improvements can be made, for example by making the language used more specific to the audit and the audit findings. Finally, returning to the request from investors to auditors to confirm whether the assumptions used in the financial statements are Paris-aligned, we have found only one auditor reports explicitly referring to Paris. In that auditor report the auditor did not confirm whether the assumptions used were Paris-aligned (same in 2020). However, in the absence of any accounting or auditing standard requiring the company or the auditor to do so it would be difficult for the auditor to express such an opinion if financial statements themselves do not reference assumptions being aligned with the Paris agreement. Proposed European Union legislation will require companies to disclose in the management report their plans to ensure that their business model and strategy are compatible with the limiting of global warming to 1.5 degrees Celsius in line with the Paris Agreement[18]. This will require auditors to check, amongst others, the consistency with the assumptions used in the financial statements.

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Notes

1. Initiatives date back to the previous century, for example with the establishment of the Global Reporting Initiative (GRI) in 1997 and the Sustainability Accounting Standards Board (SASB) in 2011, setting standards for sustainability reporting. However, more recent initiatives include the Taskforce for Climate-related Financial Disclosures (TCFD), set up by the Financial Stability Board in 2016 and the World Economic Forum International Business Community releasing proposed targets and metrics in 2020.
2. IFRS Foundation (2020), p. 6.
3. TCFD, 2017, p. 62. Note text.
4. The ICB classification benchmark can be found at Industry Classification Benchmark (ICB) | FTSE Russell (https://www.ftserussell.com/data/industry-classification-benchmark-icb) and consists of 11 Industries, 20 Supersectors, 45 Sectors and 173 Subsectors. Given the limited number of entities we used the Industries to classify each entity.

5. The CSRD amends art. 19a of Directive 2013/34/EU stating that the sustainability information has to be included in the management report.
6. See par. 72–78 of the draft S1 issued in March 2022 by the ISSB.
7. Please note that seven companies are headquartered outside the European Union and therefore not subject to EU regulations like the EU taxonomy and the CSRD. However, all companies scoped within the population apply (EU-)IFRS.
8. Raad voor de Jaarverslaggeving, mededeling: Duurzaamheidsverslaggeving / Sustainability Reporting - RJNet (https://www.rjnet.nl/duurzaamheidsverslaggeving/).
9. The letter was signed by Principles for Responsible Investment (PRI), the Asia Investor Group on Climate Change (AIGCC), UNEP Finance Initiative, IIGCC, the Pensions and Lifetime Savings Association and the Investor Group on Climate Change (IGCC): Investor groups call on companies to reflect climate-related risks in financial reporting | https://www.unpri.org/accounting-for-climate-change/investor-groups-call-on-companies-to-reflect-climate-related-risks-in-financial-reporting/6432.article | PRI (unpri.org).
10. See par. 8.8–8.11 of the Due Process Handbook of the IFRS Foundation.
11. It should be mentioned that the IFRS Interpretations Committee of the IASB (IFRIC) issued an Interpretation on how to account for Emission Rights (IFRIC Interpretation 3) in 2004 but that was subsequently withdrawn, as well as an Agenda Decision on Negative Low Emission Vehicle Credits in July 2022, but that was issued after the issuance of the 2021 financial statements of the population researched.
12. Milieudefensie, letter to CEOs, 13 January 2022. https://milieudefensie.nl/actueel/foe-letter-to-ceos-13-january-2022-1.pdf
13. Milieudefensie, letter to auditors, 26 september 2022, Dringende brief aan accountants over klimaatverplichtingen en risico's. https://milieudefensie.nl/actueel/brief-aan-accountantskantoren-betreft-de-klimaatverplichtingen-en-risico2019s-van-ondernemingen-die-u-controleert-26-09-2022.pdf
14. Shell PLC in its annual report 2021 (p. 242) references four different sources of market data indicating very different scenarios about oil prices.
15. The Focus Letter 2022 can be found at https://www.eumedion.nl/clientdata/215/media/clientimages/Focus-Letter-2022.pdf?v=220909183349 and the appendix: https://www.eumedion.nl/clientdata/215/media/clientimages/Audit-Firm-Letter-2022.pdf?v=220909183349.
16. Investor expectations: net-zero audits - Sarasin & Partners UK (sarasinandpartners.com): https://sarasinandpartners.com/stewardship-post/investor-expectations-net-zero-audits/.
17. When assessing what matters were of most significance to the audit, the auditor considers (ISA 701 par. 9): (a) Areas of higher assessed risk of material misstatement, or significant risks; (b) Significant auditor judgments relating to areas in the financial statements that involved significant management judgment, including accounting estimates that are subject to a high degree of estimation uncertainty; (c) The effect on the audit of significant events or transactions that occurred during the period.
18. The Corporate Sustainability Reporting Directive contains an amendment to the Accounting Directive 2013/34/EU, art. 19a requiring companies within the scope of the CSRD to disclose in the management report the plans of the undertaking to ensure that its business model and strategy are compatible with the transition to a sustainable economy and with the limiting of global warming to 1.5 degrees Celsius in line with the Paris Agreement.

References

- Anderson N (2019) In Brief: IFRS Standards and climate-related disclosures, IFRS Foundation, London, November 2019. https://www.ifrs.org/content/dam/ifrs/news/2019/november/in-brief-climate-change-nick-anderson.pdf
- Carbon Tracker and PRI (2021) Flying Blind – The glaring absence of climate risks in financial reporting, September 2021. https://www.unpri.org/download?ac=14597
- Carbon Tracker (2022) Still Flying Blind – The absence of climate risk in financial reporting. https://carbontracker.org/wp-content/uploads/2022/10/Still-Flying-Blind-2.pdf
- ESMA (2018) European Common Enforcement Priorities for 2018 annual financial reports, Paris, 2018. https://www.esma.europa.eu/sites/default/files/library/esma32-63-503_esma_european_common_enforcement_priorities_2018.pdf
- ESMA (2019) European Common Enforcement Priorities for 2019 annual financial reports, Paris, 2019. https://www.esma.europa.eu/sites/default/files/library/esma32-63-791_esma_european_common_enforcement_priorities_2019.pdf
- ESMA (2020) European Common Enforcement Priorities for 2020 annual financial reports, Paris, 2020. https://www.esma.europa.eu/sites/default/files/library/esma32-63-1041_public_statement_on_the_european_common_enforcement_priorities_2020.pdf
- ESMA (2021) European Common Enforcement Priorities for 2021 annual financial reports, Paris, 2021. https://www.esma.europa.eu/sites/default/files/library/esma32-63-1186_public_statement_on_the_european_common_enforcement_priorities_2021.pdf
- European Commission (2019) Communication – Guidelines on non-financial reporting: Supplement on reporting climate-related information, 2019/C 209/01, Official Journal C 209 of 20 June 2019. https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019XC0620(01)&from=EN
- IAASB (2020) Staff Audit Practice Alert: The consideration of Climate-Related Risks in an Audit of Financial Statement, October 2020. https://www.ifac.org/system/files/publications/files/IAASB-Climate-Audit-Practice-Alert.pdf
- IASB (2022) IASB Update April 2022. https://www.ifrs.org/news-and-events/updates/iasb/2022/iasb-update-april-2022/#11
- IASB Staff (2020) Effects of climate-related matters on financial statements, IFRS Foundation, London, November 2020. https://www.ifrs.org/content/dam/ifrs/supporting-implementation/documents/effects-of-climate-related-matters-on-financial-statements.pdf
- IFRS Foundation (2020) Consultation Paper on Sustainability Reporting, London, September 2020. https://www.ifrs.org/content/dam/ifrs/project/sustainability-reporting/consultation-paper-on-sustainability-reporting.pdf
- IIGCC (2020) Investor Expectations for Paris-aligned Accounts, November 2020. https://www.iigcc.org/download/investor-expectations-for-paris-aligned-accounts/?wpdmdl=4001&masterkey=5fabc4d15595d

- Kamp-Roelands N (2022) Assurance bij duurzaamheidsinformatie: wat is de status bij Nederlandse beursfondsen? Maandblad voor Accountancy en Bedrijfseconomie 96(3/4): 89–100. https://doi.org/10.5117/mab.96.83110
- Kamp-Roelands N, Looijenga M (2022) Klimaatgerelateerde informatie in het bestuursverslag. Maandblad voor Accountancy en Bedrijfseconomie 96(11/12): 377–390. https://doi.org/10.5117/mab.96.94532
- NBA (2020) Climate is a financial concern – Key issues on climate change, Amsterdam, 2020. https://www.nba.nl/globalassets/over-de-nba/english/publications/pml-english-climate-is-a-financial-concern-2020.pdf
- NBA (2021) Handleiding Duurzaamheid: Klimaat – Handvatten voor accountants, Amsterdam 2021. https://www.accountant.nl/globalassets/nba/diversen/handleiding-duurzaamheid-klimaat-nba-september-2021.pdf
- TCFD (2017) Final Report – Recommendations of the Final Report, Recommendations of the Task Force for Climate-related Financial Disclosures, 2017. https://assets.bbhub.io/company/sites/60/2021/10/FINAL-2017-TCFD-Report.pdf
- World Economic Forum International Business Community [WEF-IBC] (2020) Measuring Stakeholder Capitalism – Towards Common Metrics and Consistent Reporting of Sustainable Value Creation, September 2020. https://www3.weforum.org/docs/WEF_IBC_Measuring_Stakeholder_Capitalism_Report_2020.pdf

Appendix 1. Population of entities surveyed

Table A1. The 2020 and 2021 financial statements and auditor reports of the following 88 entities have been included in this research.

AEX	AMX	AScX	Local
Adyen	Aalberts	Accell	BeterBed
AEGON	ABN AMRO	Accsys	Brill
Ahold Delhaize	Air France-KLM	Acomo	CocaCola Europacific Partners
Akzo Nobel	Alfen	Avantium	Ctac
Arcelor Mittal	AMG	BAM	Eurocastle
ASM International	Aperam	B&S Group	Euronext
ASML	Arcadis	Brunel	HAL Trust
BE Semiconductor	ASR	CM.com	Hunter Douglas
DSM	Basic-Fit	CTP	Hydratec
Heineken NV	Boskalis	ForFarmers	Neways
IMCD	Corbion	Heijmans	RoodMicrotec
ING	Eurocommercial Property	Kendrion	Value8
Just Eat Takeaway.com	Fagron	Lucas Bols	Veon
KPN	Flow Traders	Nedap	
NN Group	Fugro	NSI	
Philips	Galapagos	NX Filtration	
Prosus	InPost	Ordina	
Randstad	Intertrust	Pharming	
RELX	JDE Peet's	SIF Holding	
Shell	OCI	Sligro	
Signify	PostNL	TomTom	
UMG	SBM Offshore	Van Lanschot Kempen	
Unibail Rodamco Westfield	TKH	VastNed	
Unilever	Vopak	Vivoryon	
Wolters Kluwer	WDP	Wereldhave	