From No Materiality to Double Materiality: A Long-run Analysis and Its Implications for Standard-setting and Research

ABSTRACT

This paper first examines the concept of materiality in regulations on corporate reporting. The focus is on Europe, including international standards as endorsed in Europe. The paper traces the concept of materiality from its first appearances in the 1970s (in EU Directives and UK accounting standards) through to the recent international and EU sustainability standards. The texts of these documents are analysed to reveal the varying importance and definitions of materiality over time. In some documents, materiality is absent but in others it is one of only three or four key concepts. The scope of materiality had been gradually narrowed in recent years in IFRS, but that was reversed by the concept of impact materiality in GRI standards and then the double materiality of the EU's sustainability standards. The ambiguity of the concept is illustrated by examining the changing signifiers used for it in several European languages. This paper then assesses whether researchers have taken sufficient account of materiality when scoring corporate compliance with disclosure requirements. Policy recommendations for regulators and researchers follow.

1. Introduction

The recent publication of requirements for companies to make sustainability disclosures is the greatest change to regulated corporate reporting since the widespread adoption of IFRS in 2005. It has led to debate about the differences between the demands of competing sets of guidelines and regulations, such as those of the International Sustainability Standards Board (ISSB), the Global Reporting Initiative (GRI) and the EU's European Sustainability Reporting Standards (ESRS). A key difference concerns the approach to defining the materiality threshold for disclosure. The ISSB standards require disclosure when an item has "financial materiality", the GRI threshold is "impact materiality", and the ESRS require disclosure if either threshold is reached (commonly called "double materiality"). However, whether this difference will be of practical importance is open to question. Because some companies have to comply with more than one set of these standards at the level of the group or of a subsidiary, a major area of debate is "interoperability".

¹ This question was debated in a preliminary way during the on-line meeting on the matter organised by the European Accounting Association (EAA) on 26 September 2024. At the time of writing, no reports had been published which were required to apply the ISSB or the EU standards, although a few companies signalled voluntary compliance with the EU standards in 2023 reports (Donau *et al.*, 2024).

² For example, the UK companies subject to the EU's CSRD are explained here: https://normative.io/insight/csrd-reporting-uk-non-eu-companies/ (accessed 13 October 2024).

³ This is a key issue in the discussion of sustainability standards in a publication by the ICAEW (2024, Section 4.8) and it featured in the EAA meeting mentioned in footnote 1.

These recent developments were the spur to conducting this paper's long-run analysis of the place of materiality in corporate reporting. The paper first investigates the development of materiality across a 55-year period. The focus is Europe, but that includes the international standards as endorsed for application in the EU and in the UK, and it includes the influence of US documents. To understand the development of the EU's sustainability standards, it is also necessary to examine the GRI's standards even though they are not generally required to be applied in Europe. Because different language versions of the regulations are the legal ones in various jurisdictions, the next logical step is to examine the translations to see if meaning has been lost. These investigations should be of interest to standard-setters, translators, preparers, auditors, users and monitoring/enforcement agencies. Working after all those interested parties, researchers have studied corporate reports to assess compliance with regulations. This has mostly concerned disclosure requirements, for which taking proper account of materiality has been the central problem.

A summary of the paper's findings (which are all explained in later sections) is as follows. In Europe, the concept of materiality was first included in Directives and accounting standards in the mid-1970s, drawing on US precedents. In some regulations, materiality was merely an undefined term related to disclosures. In others, it became a defined central principle for all aspects of accounting, written in terms of effects on the economic decisions of users. Over the decades, the definition gradually restricted the users being considered, and it moved from being a threshold for requiring disclosure to a threshold for prohibiting disclosure. From 1999, running in parallel with this compulsory financial reporting, guidelines for voluntary disclosures on sustainability were published. The difference in approach to materiality (financial, impact or both) dominates public and academic discussion of competing sets of sustainability standards (Wang et al., 2025). The application, auditing, monitoring and enforcement of the newly compulsory sustainability standards will rest on their exact words about materiality. However, whereas in financial reporting the principle of materiality and the related purpose of the reporting are clear, this is not true for impact materiality, as will be shown. Also, in non-English versions of ESRS, the signifiers for "material" have a range of different meanings. Key instructions relating to materiality have become garbled in translation. For researchers into compliance with regulations, materiality should also be central. However, many previous studies seem to have over-stated non-compliance by not considering (or not fully considering) materiality. The investigations outlined in this paragraph can be expressed as the following four related research questions:

RQ1: How has the definition and meaning of materiality in financial reporting changed over the decades?

RQ2: Is the definition of impact materiality clear, and does double materiality really require more disclosure than financial materiality?

RQ3: Do the translations (in laws and standards) of the signifiers related to materiality lead to extra problems in interpreting the concept?

RQ4: Has compliance research properly taken account of materiality, and what lessons does this provide for a new field of research into compliance with sustainability disclosure requirements?

The paper contributes in the following ways. First, there is a surprising gap in the literature: there are dozens of recent papers on materiality in the context of sustainability reporting, but a dearth of papers on materiality relating to the much longer-run topic of the preparation (as opposed to the audit) of financial reports under European regulations or IFRS. Therefore, this paper (Section 2) provides a detailed analysis of the appearances and meaning of the signifier "material" in regulations on financial reporting, from its earliest appearances in laws and accounting standards in Europe, including international standards. Secondly (in Section 3), this analysis is extended to the current sustainability standards of the GRI, the ISSB and the EU, which are so recent that they have not been examined in this way before. The conclusion is that there is no clear definition of the central concept of impact materiality which determines what and how much to disclose. The paper proposes an answer (positive) to the disputed matter of whether double materiality really requires more disclosure than financial materiality. These are important issues because sustainability disclosures are no longer voluntary, so will become the subject of dispute between preparers, auditors, user groups and regulators. A third contribution (in Section 4) is a new analysis of the signifiers used for "material" (and the related term "significant") in accounting regulations in six European languages other than English. This reveals great variety in attempts to convey equivalent meaning, and major changes over time. This analysis includes ESRS, for which the non-English versions appear even more difficult to apply than the English version. Lastly (in Section 5), I synthesise the literature about whether immateriality of information was properly considered by previous research into compliance with disclosure requirements; and I then add to the literature by newly analysing many papers to assess whether non-disclosure was mistaken for noncompliance. On all the above topics, I draw out policy implications (in Section 6). I discuss the relevant prior research at the beginning of each of section.

2. Financial reporting

2.1 Prior research on the place of materiality in accounting regulations

In the context of modern financial reporting, many academic papers study materiality, but they are nearly all about auditing procedures.⁴ For example, Iskander and Iselin (1999) provide "A review of materiality research", but it is an auditing paper. Later, Messier *et al.* (2005) provide another review of materiality, but it is also about audit. A review by Brennan and Gray (2005) also largely focuses on audit and on US documents. Edgley (2014) provides "a genealogy of accounting materiality", which also mostly refers to audit and to US documents.

There is an International Standard on Auditing in this area, the current version being: *Materiality in Planning and Performing an Audit* (ISA 320). However, as its title suggests, the document is not addressed to preparers or to users. Also, it is not set in any particular reporting framework, such as IFRS. For establishing the meaning of "material", the auditor is sent to the applicable reporting framework (para. 3). I, therefore, conclude that the ISA does not directly affect the interpretation of "material" for financial reporting, though it is possible that audit procedures might affect the materiality judgements of some preparers.

I conclude from the above that research on the appearances and meaning of materiality in European regulations or IFRS (before sustainability standards) concentrates on audit rather than directly on financial reporting. This section addresses that gap. By contrast, the literature about materiality in the context of sustainability reporting is extensive and is discussed below in Section 3.

2.2 Precedents to the introduction of financial materiality requirements in Europe

Given that enterprises may conduct thousands of transactions each day, a version of materiality must always have been important to the accountant. In Pacioli's *Summa* of 1494, there are several instances where a merchant is advised not to bother with very small items, even at the stage of recording, let alone when later preparing financial statements (Rainero *et al.* 2020). Pacioli's context was largely accounting by the merchant to the merchant, although the bookkeeping records were also sometimes relevant in law cases. A long-standing part of the background to regulation in any field is the legal maxim: *de minimis non curat lex.*⁵

Before the arrival of the concept of materiality in European accounting standards in the 1970s, it had for decades been included in many US documents, 6 most recently in 1970 in the

⁴ There are papers set in an older context and under US regulations (e.g. Bernstein 1967). A more recent paper examines the materiality of errors discovered by US auditors or management (Acito *et al.* 2019).

⁵ This could be translated as "about small things the law does not care". See, for example, Veech and Moon (1947).

⁶ For example, materiality is referred to in *Regulation S-X* of the Securities and Exchange Commission (SEC), and in *Accounting Research Bulletin No. 43* (see these and further examples in Bernstein 1967). The SEC's *Accounting Series Release No. 4* (of 1938) referred to "material" as did ARB No. 1 (of 1939).

Accounting Principles Board (APB)'s Statement 4 on *Basic Concepts and Accounting Principles*. In that, materiality was the last of 13 "basic features of financial accounting" (para. 25). Like other concept statements of the various standard setters discussed below, Statement 4 was guidance for the standard setters and others, rather than being an accounting standard.

APB Statement 4 defined "material" as "significant enough to affect evaluations or decisions" (para. 128). This idea had a long US history, and it was retained in the FASB's Statement of Financial Accounting Concepts No. 2 of 1980: "large enough for users of the information to be influenced by it" (para. 123). Another potential approach to providing decision-useful information would be to disclose ranges of values rather than a single point. This idea also has a long US history, and some echoes in current IFRS on complex topics. Developments based in Europe in the 1970s

In the 1970s, there were many developments of relevance to this paper. In 1970, Europe's first¹⁰ private-sector accounting standard setter was created by the Institute of Chartered Accountants in England and Wales (ICAEW) (see Rutherford 2007, ch.2). This was the Accounting Standards Committee (ASC) of the UK and Ireland.¹¹ That body's second Statement of Standard Accounting Practice (*Disclosure of Accounting Policies*, SSAP 2) of 1971 contained four "fundamental concepts" (going concern, accruals, consistency and prudence) but not materiality.¹²

Also in 1971, the institution which eventually became the EU¹³ published the first draft of its legal requirements on accounting: the Fourth Directive on company law. This drew heavily on the German law relating to public companies, the *Aktiengesetz* of 1965 (*AktG*). The 1971 draft contained three "principles" drawn from the *AktG*: consistency, prudence and separate valuation.¹⁴ Again, there was no mention of materiality.

In 1973, Denmark, Ireland and the UK joined the EU, bringing disruption which never abated. The Fourth Directive was re-drafted and re-published in 1974, adding the principles of

⁷ For example, see AAA (1957, p.8).

⁸ For instance, the US "Trueblood Report" (AICPA, 1973) recommended it. pages 39 and 40. For an analysis of the report, see Zeff (2016).

⁹ As examples: IAS 19 (*Employee Benefits*, para. 145) requires a sensitivity analysis for actuarial assumptions, and IFRS 7 (*Financial Instruments: Disclosures*, para. 40) requires a sensitivity analysis of each type of market risk.

¹⁰ The ICAEW had published "Recommendations" from the 1940s. In 1971, the Dutch "Tripartite" committee was founded

¹¹ Originally, this was the "Accounting Standards Steering Committee" of the ICAEW.

¹² Materiality was mentioned in passing in paragraphs 17 and 18.

¹³ Then the "European Communities". In this paper, I refer to "EU" to include institutions such as the European Communities which became the EU.

¹⁴ That is, the components of an asset or liability item on a balance sheet should be measured one by one before being added together, so as not to hide any fall in value of an asset.

going concern and accruals.¹⁵ These two extra principles had come from the UK's SSAP 2. Materiality was still not included as a principle in the draft Directive, though "material" was now mentioned several times (undefined) in the context of disclosure.¹⁶ The final (1978) version of the Directive (containing the five general principles in Article 31) made its way into the laws of all the EU member states, where it largely still is. The revision of the Directive in 2013 did not affect these matters.

2.4 The IASC until 1997

In 1973, again led by the ICAEW, the International Accounting Standards Committee (IASC) was founded (Camfferman and Zeff 2007, ch. 3). This was partly an attempt by the accountancy profession to retain control of accounting, in the context of the UK joining the EU that year (Hopwood 1994, p.243). Naturally, the IASC was controlled by professional accountancy bodies, was based in London and operated in English only. Also in 1973, in the USA, the profession-led Accounting Principles Board (APB) was replaced by an independent body, the Financial Accounting Standards Board (FASB), which later served as the model for the UK's Accounting Standards Board (ASB), then for the International Accounting Standards Board (IASB) and then for the ISSB.

Under the IASC's first standard (IAS 1, *Disclosure of Accounting Policies*, of 1975), policy choice was governed by just three "considerations": prudence, substance over form and materiality (para. 5). This was a fusion of US and European ideas.

Rather surprisingly, the IASC operated for its first 16 years from 1973 without a conceptual framework, but this was because it was cataloguing existing international practices rather than working from first principles. In the IASC's first *Framework*, published in 1989, materiality was included as part of "relevance" which was one of the four "qualitative characteristics" of useful information (para. 24). Materiality was also referred to as part of "reliability" (paras. 31 and 38). Information was said to be material if its "omission or misstatement could influence the economic decisions of users" (para. 30). The phrase "could influence" is wider than the above US references to users actually being influenced. The term "users" is also a wide and open-ended category. These broad terms persisted in IASC and then in IASB literature until 2018, as will be explained in Sub-section 2.6.

In 1997, there was a major revision of IAS 1 (*Presentation of Financial Statements*) in which materiality became one of five principles for good presentation. A new twist was

¹⁵ It also introduced the UK requirement to "give a true and fair view" as the overriding principle.

¹⁶ In the final version of 1978, these were in Articles 4(3), 18, 21, 29, 38, 40, 42 and 43. Some of the equivalent paragraphs to these in the English version of the first draft (e.g. Art.s 26(2) and 35) had used words such as "of no importance" or "appreciable".

introduced: if information is not material, it should be aggregated and *need not be* presented separately (para. 29). The reason for this change was not discussed, but later documents explain that immaterial information can confuse users (see next sub-section).

2.5 1999 and 2000

In the 1990s, UK standard setting was still relevant to our international story, as now explained. In the UK in1990, the ASB took over from the ASC. It had a larger staff than the ASC or the IASC, and (unlike both) its governance was independent of the accountancy profession and it had some full-time Board members. All this enabled the ASB to generate new ideas; and the 1990s was the last decade in which the direction of flow of ideas was from any European national standard setter towards the international standard setter.¹⁷

Nevertheless, the ASC and then the ASB did not have their own conceptual framework for their first 30 years, but they referred to US concepts and later to the IASC's *Framework* when necessary. The ASB eventually published its own *Statement of Principles* in 1999. In that, materiality was one of five qualitative characteristics (along with relevance, reliability, comparability and understandability). Materiality was seen as a "threshold quality" (para. 3.29) without which information *should not be* shown. This went beyond IAS 1's "need not be" shown.

The Statement of Principles also included a major change in the definition of materiality. That is, an item is material "if its misstatement or omission might reasonably be expected to influence the economic decisions of users" (para. 3.30; emphasis added). This should be contrasted to: (i) the earlier US documents, in which users were actually influenced, and (ii) the IASC documents, in which users could be influenced.

Let us put ourselves in the position of a director (or an auditor) of a company who is assessing materiality. It may be hard to know what *does* influence users, and almost anything *could* conceivably influence some users. By contrast, we can more easily assess what might reasonably influence our decisions if we were users. If a law case were held on such a matter, the court would also find it easier to deal with "might reasonably be expected". This phrase fits into the long tradition of English law, which relies on such concepts as "the reasonable man" (Nourse 2008) and "a true and fair view" (Hoffmann and Arden 1983, Arden 1993).

Throughout three decades, SSAP 2 of 1971 was still the UK standard which dealt with concepts. However, in 2000, it was replaced by FRS 18 (*Accounting Policies*), whose first line stated that it applied to "all material items" (para. 1). Materiality then appeared as part of the "concept" of going concern (para. 24) and as part of the "objective" of reliability (para. 35). There

¹⁷ For example, the ASB invented the second income statement (now called 'other comprehensive income') in the early 1990s, and it was then the main source of ideas for the standards on impairment (IAS 36), provisions (IAS 37) and investment property (IAS 40). See Chapter 11 of Camfferman and Zeff (2007).

was no definition of materiality in FRS 18, so readers could use the above definition from the recent *Statement of Principles*.

Table 1 shows, for the many documents discussed so far, whether the concept of materiality was included and with what status. In its right-hand column, the table shows the definitions used in the documents.

2.6 Further changes to financial materiality from 2001

The UK's Statement of Principles and FRS 18 were published by the ASB near the end of the chairmanship of Sir David Tweedie. In 2001, he became the first chairman of the IASB, whose early agenda involved revising IAS 1. The resulting 2003 version retained the IASC's "could influence" definition of materiality in bold type (para. 11), but it added a British-style explanation that the context was whether users with "reasonable knowledge" "could reasonably be expected to be influenced" (para. 12).

The IASB issued its own *Conceptual Framework* for the first time in 2010. This retained materiality as part of relevance, and it retained the "could influence decisions that users make" wording (para. QC11). The document was prepared jointly with the FASB, so the same paragraph (with the same number) became part of the FASB's Concepts Statement No. 8.

Later, a 2014 version of IAS 1 made the direction of materiality clearer, again with a British precedent: "An entity shall not reduce the understandability of its financial statements by obscuring material information with immaterial information" (para. 30A). The number of general principles in IAS 1 (including materiality) gradually increased in the 2003 and 2014 versions, reaching eight.

In 2017, all the latest IFRS conclusions about materiality were included in *Practice Statement 2: Making Materiality Judgements*. However, in March 2018, the IASB issued a further revision of its *Conceptual Framework*. In that, materiality is defined in terms of "could influence decisions that the *primary* users" make (para. 2.11). This is a major narrowing of the concept compared to the earlier "users" because the primary users are restricted to "existing and potential investors, lenders and other creditors" (para. 1.5).

In August 2018, the FASB narrowed the wording of its QC11 from "could influence" to "the magnitude of the item is such that it is probable that the judgement of a reasonable person … would have been changed or influenced". The "person" remains wide, though: "an investor or other decision maker". Then, in October 2018, another revision of IAS 1 approximately followed documents of the FASB and the ASB by replacing the previous definition's "could influence" with the "could reasonably be expected to influence" of the former guidance (now para. 7). The IASB

¹⁸ From the 1999 Statement of Principles (as discussed in 2.5 above).

explained that "could influence" was too broad (para. BC 13H). This led to a similar amendment to the *Conceptual Framework* which had only just been issued earlier in the year. The recently-issued *Practice Statement 2* was also amended for the changes of March and October 2018. *IFRS for SMEs* was eventually also aligned in 2025 (para. 2.13).

In 2024, the IASB published IFRS 18 (*Presentation and Disclosure in Financial Statements*) which is in the process of replacing IAS 1.¹⁹ IFRS 18 (paras. B1 to B5) contains similar ideas and wording about materiality as in the latest version of IAS 1 discussed above. However, materiality is no longer treated as a main principle but as part of others, such as "aggregation". Also, in 2024, the IASB published an exposure draft²⁰ containing two proposed examples on materiality judgements in the context of climate change, to be added as guidance into IAS 1 and IFRS 18. These examples conclude that, if an entity's climate-related transition plan will have no effect on its accounting numbers, the entity should disclose that fact because users might otherwise reasonably expect that it would have an effect. So, things that have no effect can apparently still be material.

3. Materiality in the context of sustainability standards

3.1 Outline of regulatory context

Until recently, many corporate sustainability reports were prepared voluntarily, often applying GRI documents, such as its guidelines of 2013 or its standards of 2021. However, there are now other sets of standards which are being incorporated into compulsory requirements, particularly the two as follows.

The ISSB issued IFRS S1 (*General Requirements for Disclosure*) in 2023. This will not be imposed in the USA or in the EU, as explained below. In the UK, the government is considering whether and how to implement it. In Australia, a very similar standard (AASB S1) was published in September 2024 but is voluntary, though the parts of IFRS S1 relating to materiality are included in AASB S2 which is based on IFRS S2 (*Climate-related Disclosures*) and is mandatory for some companies. Similarly, the EU's European Sustainability Reporting Standards (ESRS) contain requirements like those of S1 and S2. The ESRS are being gradually imposed²¹ on companies by laws implementing the Corporate Sustainability Reporting Directive (CSRD) of 2022, which amends the 2013 accounting Directive to require disclosures on sustainability. The Directive does not itself contain the ESRS, but it requires companies to apply them. The ESRS

¹⁹ According to the IASB, this standard should be applied in periods beginning on or after 1 January 2027, but earlier application is permitted. In jurisdictions which endorse standards, the application date is set as part of endorsement.

²⁰ Climate-related and Other Uncertainties in the Financial Statements. Proposed Illustrative Examples, July 2024.

²¹ See, for example: https://www.pwc.com/gx/en/services/tax/tax-esg/eu-member-state-status-update-oct-2024.pdf (accessed 22 November 2024). The scope was narrowed by further amendments to the Directives in February 2025.

were drafted by EFRAG (formerly known as the European Financial Reporting Advisory Group), which sends the drafts to the Commission. The ESRS were published by the Commission in 2023 under delegated powers provided by Directive.

As noted earlier, the materiality concept in S1 can be called "financial materiality", which is the same as the concept in IAS 1, relating to the economic decisions of the primary users. Instead, GRI standards focus on "impact materiality", which concerns reporting to a wide range of users on the effects of the entity on the environment (broadly defined). The ESRS require entities to apply both types of materiality ("double materiality"). This will be investigated in detail below.

The auditing standard on materiality (ISA 320), mentioned in Section 2.1, is not well suited to giving assurance on the new sustainability impact disclosures. This is because, like IFRS, it is expressed in terms of the effects of information on economic decisions of primary users (ISA 320, para. 2) rather than the effects of the entity on the environment.²² By contrast, the US auditing standard has been up-dated to refer to the effects on "the judgment made by a reasonable user";²³ and that more easily encompasses impact disclosures.

3.2 Academic literature in the context of voluntary sustainability reporting

Unerman and Zappettini (2014) explain that, as in financial reporting, materiality is "the threshold at which an issue [...] becomes sufficiently important that it should be reported" (p.176, quoting from GRI guidelines of the period). Unerman and Zappettini discuss how to assess whether a company has reported on all material environmental topics. They suggest that the existence of press reports on a topic does not necessarily mean that a disclosure threshold has been reached. They warn that the absence of disclosures on certain matters should be assessed in the light of materiality. However, Unerman and Zappettini (in common with other researchers) cannot provide a technique for determining when the threshold for disclosure is reached.

Stakeholder engagement, as a way of identifying what should be disclosed, is discussed by many authors. For example, Bellucci *et al.* (2019) studied the sustainability reports of 299 companies who used the GRI guidelines of 2013. They examined how companies chose the stakeholders with whom to engage, and how engagement can lead to conclusions about what to disclose but can be manipulated by a company which has a preferred outcome in mind.

²² This is in the latest IFAC version (of 2009) and in the latest UK version (of 2022).

²³ See SAS 138 (of 2019), paragraph .02.

Puroila and Mäkelä (2019) studied the stakeholder engagement involved in 44 sustainability reports, also in the era of the 2013 GRI guidelines. They conclude that understandings of the concept of materiality are "ambiguous" and "varied" (pp. 1060, 1064). Jones et al. (2016) show that early use of the GRI guidelines focused on the continuity of the business rather than on environmental issues. Beske et al. (2020) suggest that companies disclose little about their materiality analyses or the methods used to identify stakeholders and the topics to disclose, and thus that materiality analysis can be misused when choosing what to report. Machado et al. (2020) examine 140 reports prepared under the 2016 GRI standards, concluding that there was a lack of detailed information from companies about the identification of material topics. Dragomir et al. (2024) examine how 20 Romanian companies created materiality assessment processes before the implementation of the CSRD. Among other findings, they show that companies engage more with employees than with investors, and that positive impacts are more discussed than negative ones.

Khan et al. (2016), in the context of guidance from the Sustainability Accounting Standards Board (SASB) rather than GRI, found that companies with good ratings on sustainability topics regarded as material for their industry outperformed other companies.

Jørgensen et al. (2022) compare financial materiality with impact materiality in the context of SASB standards. They do this by surveying and interviewing market professionals rather than by textual analysis of the standards.

Lai et al. (2017) study materiality in the context of early attempts at integrated reporting, finding that materiality was still assessed in terms of the perceived needs of capital providers. Cerbone and Maroun (2020) examine sustainability in the context of South African companies which published integrated reports. They suggest that research into integrated reporting seldom considers the definition of materiality. Based on interviews with preparers, Cerbone and Maroun conclude that determination of materiality is inherently subjective and varies among companies from finance-driven to sustainability-driven. Bakarich et al. (2023) surveyed US accountants about sustainability reporting, finding that younger respondents have more enthusiasm for it. Given their US context, there was no discussion of double materiality. Indeed, materiality was not mentioned, except in an appendix which outlined the standards. Huq and Mohammadrezaei (2024) review 39 papers about how materiality, in the context of sustainability reporting, has been measured and evaluated by preparers, auditors and stakeholders. They note a lack of robust empirical investigation of double materiality, which is not surprising, given that most of the studies looked at reporting before 2020.

Moroney and Trotman (2016) study the assessment of materiality by auditors, contrasting the audit of financial statements with assurance reviews of voluntary sustainability reports, using an experiment involving numbers rather than qualitative disclosures for both types of audit/assurance. Moroney and Trotman found that a fixed percentage difference was viewed as more material for the financial audit than for the assurance review, and that the variance among participants was greater for the latter, as expected in the context of vaguer official guidance. Boiral *et al.* (2019, p. 710) found that materiality was the most frequently assessed aspect of assurance on GRI-based disclosures but generally that it was not clear how this was verified.

3.3 Academic literature on compulsory sustainability reporting

I now turn to literature which focuses on, or leads up to, the moves towards compulsory requirements for sustainability disclosures, particularly the imposition of ESRS. Hummel and Jobst (2024) examine the development of the EU's sustainability regulations, starting with the non-financial information required from large companies by a Directive of 2014. Comparisons between the recent ESRS and ISSB standards are made, including the types of materiality. Giner and Luque (2022) give an insider's account of the history of setting sustainability standards in the EU. They explain that, when drafting the ESRS, EFRAG collaborated with GRI and drew on its ideas about impact materiality. Giner and Luque then discuss the key differences between the ESRS and IFRS approaches, including (i) different target audiences of the reporting, (ii) related differences in scope of disclosures, (iii) double materiality as opposed to single, and (iv) the ESRS's larger boundary of reporting. All these could be seen as aspects of the same thing: ESRS designed for a wider group of stakeholders.

Dinh *et al.* (2023) provide another outline of the EU legislative framework for sustainability reporting. They also review 57 recent academic studies about sustainability reporting, with a European focus, but they do not mention materiality. Stolowy and Paugam (2023) examine the many bodies involved world-wide in the creation of standards on sustainability reporting. The paper includes a brief discussion of financial materiality, though it is not up-to-date for the changes of late 2018 onwards (as in Sub-section 2.6 above) such as the move from "could affect decisions". There is also a brief mention of the double materiality approach required by ESRS (p.159) but not an analysis of what this will entail for reporters. Krasodomska *et al.* (2024) examine the attitudes of accountants in Poland to the introduction of

²⁴ Page 157 of Stolowy and Paugam (2023) defines materiality in terms of "could affect".

a requirement to apply ESRS and thus to increase the scope of reporting. However, they also do not mention materiality.

Other papers focus on materiality. Abhayawansa (2022) provides an extensive literature review of materiality, especially in the context of sustainability. He criticises the IFRS financial materiality as too narrow even for investors let alone for the planet, though this seems to be definitionally wrong: if something is material for investors, then IFRS S1 requires disclosure. Of course, it is possible for an investor also to be an employee or a climate activist. However, I assume that, like IFRS, when Abhayawansa refers to "investors" he means "investors in their capacity as investors". Abhayawansa then argues in favour of harmonised standards which would contain a new version of single materiality, based on accountability rather than on decision-usefulness.

Wang *et al.* (2025) provide a long-run study of sustainability standards from the first GRI documents of 1999. They divide the history into four periods, noting (p. 15) that the focus on impact materiality did not become clear until the 2021 standards. They suggest that the different approaches to materiality have recently caused an "adversarial" relationship between the main standard-setters. However, Wang *et al.* (2025, p. 20) record doubts that double materiality requires more disclosure than single. Baumüller and Sopp (2023) examine the development of the materiality concept in the context of the EU's sustainability documents from 2003 to 2021. They identify the clear emergence of double materiality to documents as recent as 2019 (p.18). They suggest an implication of more disclosure (and higher costs) and the consequent risk of too much information for users to process (p.20). Donau *et al.* (2024, p.11) report that interviewees also predicted an increase in disclosure, though they commented on the inherent flexibility of the concept of impact materiality.

Barker (2025) forensically examines the concepts of financial and impact materiality. He points out that both types of reporting have two filters. For financial reporting, an entity collects information on its resources and on its own impacts that could be relevant to the entity's financial performance and prospects. It then discloses a subset of that information which could reasonably be expected to affect investor decisions. By contrast, impact reporting collects information on the entity's impacts that could affect any stakeholder, and then imposes a materiality filter. Barker concludes that impact reporting requires extra disclosures not needed by investors, partly because investors use aggregated information about a whole group of companies to make focussed decisions, whereas individual stakeholders have a wide variety of interests in impacts and some of the interests relate only to a part of the group.

Wagenhofer (2024) does not examine materiality but draws out other differences between financial and sustainability reporting, noting that sustainability reporting requires a large set of data points but no aggregation that would be analogous to financial statements.

Again, the conclusion is that reporting will be expanded. Wagenhofer also points out the lack of an accruals concept in sustainability reporting, such that one year cannot take some credit for big impacts that are designed to reduce impacts in later years.

The above papers provide a good background for further study. They reveal what has not been studied in detail, including the wording of the standards issued in 2023 and 2024, which will be vital for settling disputes between preparers, auditors, activist users and regulators. The question whether double materiality goes beyond single is also still under debate. To these issues, we now proceed. The focus is on the two sustainability reporting frameworks (of ISSB and ESRS) which will be compulsory in various parts of Europe.

3.4 Materiality in the new standards

IFRS S1 has four "conceptual foundations": fair presentation, materiality, reporting entity and connected information. S1's definition of materiality of information (para. 17) uses the IASB's refined wording of "could reasonably be expected to affect". The thing being affected is "the entity's prospects" rather than decisions. Nevertheless, immediately after that, S1 states that its context is the decisions that primary users make (para. 18). Thus, S1's definition of materiality appears to be aligned with that in IAS 1 and in its replacement, IFRS 18.

S1 contains an extra piece of guidance that possible events are less likely to have an effect on the current decisions of users if the events are many years into the future (para. B24). This is a form of discounting, which fits with the idea that the decisions of primary users rest upon an "assessment of the amount, timing and uncertainty of cash flows" (para. B15).

The concept in IAS 1 and S1 can be called "financial materiality". Instead, as noted earlier, GRI standards focus on "impact materiality". The GRI's standard, G1 (*Foundation*, of 2021)²⁵ contains four "key concepts", including "material topics", which are defined in GRI 3 (*Material Topics*, also of 2021) as topics that:

represent the organization's most significant impacts on the economy, environment, and people, including impacts on their human rights. (Glossary)

Unlike the stated purpose of financial reporting (to improve decisions by investors), the purpose of impact disclosures is less clear. There are three stated purposes (GRI 1, para. 1.2). The first is to help an entity to understand and manage its own impacts, but that is a version of

²⁵ Rather confusingly, the literature uses "G1", "G2" etc to refer to the different sets of GRI standards issued over time, starting with G1 in 2000 and ending so far with G4 in 2021. However, the 2021 set of standards contains documents labelled GRI 1 etc. It is those labels which I use in this paper.

management accounting, which does not require published reports or international rules to regulate them. A second purpose is to help investors "to identify financial risks and opportunities", but that is covered by financial materiality. That leaves the third purpose: disclosing (to stakeholders) the entity's impacts on stakeholders. However, it is unclear what the stakeholders are expected to do with the information.

The CSRD does not itself discuss materiality of disclosures,²⁶ leaving that to ESRS 1 (*General Requirements*), under which disclosures rely on assessments of the two types of materiality: impact and financial (thus, double materiality). ESRS 1 requires an entity to report on "sustainability matters" (para. 21) in the context of materiality (para. 28). ESRS 1's financial materiality (para. 48) is much like that in IAS 1 or IFRS S1, relating to reasonably expected effects on the decisions of primary users. EFRAG (2024, para. 140) confirms that IFRS S1 and ESRS 1 are aligned on financial materiality.

ESRS 1's "impact materiality" is rather like GRI 3's concept, as quoted a few lines above. It relates to an entity's effects on "people or the environment":

A sustainability matter is material from an impact perspective when it pertains to the undertaking's material actual or potential, positive or negative impacts on people or the environment over the short-, medium- or long-term (ESRS 1, para. 43).

Thus, the impacts include "potential" ones, although reporters should "focus on areas where impacts, risks and opportunities are likely to arise" (para. 39). The impacts include those of "own operations and upstream and downstream value chain" (para. 43). The stakeholders to consider include employees, suppliers, customers, public authorities, local communities (para. AR 6) and "nature ... as a silent stakeholder" (para. AR 7). Reporters should also consider the impacts of planned "actions to address certain impacts or risks" (para. 52) and should include "future-oriented information" (para. 74). As with GRI 1, the intended use of impact disclosures to stakeholders is not made clear. Indeed, ESRS 1 does not even have an equivalent paragraph to GRI 1's list of three purposes.

3.5 How much should be disclosed under impact materiality?

That brings us to a major point: how can an entity decide how much to disclose under impact materiality? This question was of limited importance under a voluntary regime, but it has become pressing now that ESRS have been imposed as part of the same legal apparatus that controls financial reporting. Compliance with the disclosure standards will thus be monitored by government regulators and can be enforced through courts. Judgement about what should be disclosed under impact materiality has therefore opened up a potential new battle ground

²⁶ Materiality is mentioned several times in the preamble to the Directive (2022/2464), but only once in the Directive itself, in the different context of "material subsidiaries" (Art. 3).

between preparers (directors and CFOs), auditors, environmental activists and regulators. A close analysis of the text has thus become relevant.

There are several reasons to expect more disclosure under impact materiality than under S1's financial materiality. First, as noted above, the range of acknowledged stakeholders who deserve impact disclosures is enormously wider than the primary users envisaged by IAS 1 and S1. In addition, ESRS's lists of things to disclose (if they are material) already comprise thousands of items, ²⁷ and this will increase. Further, compared to IFRS for financial materiality (see 2.6 above), there is only an oblique warning in ESRS 1 against disclosing too much about impact which could confuse readers. ²⁸ Another reason to expect increased disclosure is that there is no clear guidance in ESRS to match that in IFRS S1 that distant impacts are less likely to be material. ESRS 1 (para. 45) does require assessment of materiality to include the "likelihood" of potential negative impacts. However, likelihood and time-distance are different issues (though sometimes connected), and they are mentioned separately in S1 (see 3.4 above). A highly likely outflow or impact is still discounted if it is time-distant under IFRS.

On the other hand, an entity might have scope to restrict disclosure under impact materiality for the following reason. Despite ESRS 1's lengthy discussion of impact materiality, there is no definition of it. Although paragraph 43 of ESRS 1 (quoted near the end of the previous sub-section) is *framed* like a definition, its references are circular: material is defined as material, and impact is defined as impact. Paragraph 31(a) requires the entity to assess the information's "significance" (undefined); and paragraph 45 requires assessment of severity, scale and scope. Having made these assessments, in the absence of knowing the purpose of the information or any precise users, how should an entity determine what materiality means as the threshold for disclosure?

To address this question, it is first useful to compare the words "material" and "significant" which are used extensively in all the sets of standards, and then to look again at GRI, on which ESRS based its definition of impact materiality. As discussed above, "material" in IAS 1 and in IFRS S1 is a technical term, defined in relation to the effects of information on economic decisions. By contrast, "significant" is not a technical term in those standards, being used to describe events or changes. An event might be small (e.g. the theft of 0.5% of a company's assets by its finance director) but still be relevant for investors' decisions, not least when voting on board appointments.

²⁷ At 8 October 2024, there were 284 pages of detailed lists of topics in: https://eurlex.europa.eu/eli/reg_del/2023/2772/oi (accessed 8 November 2024).

²⁸ Paragraph 19 requires an entity to apply the qualitative characteristic of "understandability". In Appendix B, QC16 requires "concise" disclosures, about which QC 17 says: "Concise disclosures shall only include material information".

Many disclosures under IFRS do not involve numbers. However, when expressing materiality in terms of percentages, some auditors refer to 5% of profit.²⁹ By contrast, "significant", when defined numerically in IAS 28, means a 20% threshold.³⁰ Thus, "material" appears to mean something smaller than "significant" when numbers are involved. It would be perverse if this did not also apply for non-numerical disclosures under IFRS.

So, under IFRS, small things and perhaps those that are not "significant" can still be material and therefore require disclosure. By contrast, GRI 3 states the opposite: only the "most significant" impacts are material and therefore require disclosure (as quoted in the previous sub-section). This implies that an entity should rank its impacts under the separate themes of environment, human rights and so on, which is what GRI 3 requires (in its Section 2.2). The ranking might help to operationalise the concept. However, should the entity then disclose its two largest impacts per theme, its six largest impacts or some other number of them?

A contrast can be made to the procedure for financial materiality. Even the largest impact in a particular theme might still not be financially material, because it is not expected to affect the decisions of primary users. Alternatively, the ten largest impacts might all be financially material. That is, financial materiality does not require the ranking of impacts. The entity should disclose the ones that it expects to affect the decisions of primary users, which might be no impacts or might be very many.

I now turn to ESRS's version of impact materiality. As noted above, ESRS 1 contains a circular description of it in paragraph 43. The nearest we get to a definition of impact materiality is a sentence about thresholds:

Some existing standards and frameworks use the term "most significant impacts" when referring to the threshold used to identify the impacts that are described in ESRS as "material impacts". (ESRS 1, para. 42)

Since this sentence is about impacts, we can interpret the other "existing standards and frameworks" as referring to GRI standards rather than to IFRS.³¹ Indeed, as already noted, GRI 3 does define "material" as "most significant". I conclude that, by quoting from the GRI's standard, ESRS 1 appears to be calling for disclosures about the most significant impacts rather than about all significant impacts. The bottom rows of Table 1 add the various sustainability standards to the list of appearances and definitions of materiality.

²⁹ For example, the auditors of the Irish company DCC refer to 5% of profit in their 2024 report; and GlaxoSmithKline's auditors in 2023 refer to £280m, which is about 5% of profit.

³⁰ Paragraph 5 of IAS 28, *Investments in Associates and Joint Ventures*.

³¹ IFRS very seldom uses the term "most significant". It does not appear in the *Conceptual Framework*, and it appears only once in IAS 1 (para. 122, about recognition judgements, not disclosure) and only twice in S1 (paras. 74 and 77, about judgments and uncertainty).

3.6 Does double materiality really require more disclosure than single?

ESRS require disclosures on matters that are not financially material if they nevertheless have "impact materiality", and vice versa. Thus, the scope of double materiality is wider in principle than either type of single materiality. We can now ask whether, in practice, ESRS's double materiality will require more disclosure than ISSB's financial materiality alone, which is an area of disagreement between the researchers discussed above.

One possible conclusion is that double materiality does not go beyond financial materiality because any of the entity's impacts on stakeholders, such as the environment, will eventually rebound and affect the entity. However, I suggest that, although some of the entity's bad long-term impacts on people or the environment might also have a material negative effect on the entity's current financial prospects, some might not. For example, perhaps some of the company's impacts on Chinese workers or on polar bears are important to some stakeholders but are not financially material for the current decisions of primary users. Nevertheless, will reputational risk always cause environmental impacts to become financially material?

Let us imagine X Corporation, which is a medium-sized listed company based in the USA, the country containing more listed companies than any other. X reports under financial materiality but not impact materiality. X has important upstream impacts because its suppliers in East Asia burn large amounts of coal and employ workers on low pay and in poor conditions. The customers of X Corporation mostly live in middle America. They are interested in products of low price and high quality, and they care little about foreign impacts. X does not disclose the impacts but many similar corporations have similar impacts, and the customers would not be surprised or alarmed to hear about those impacts. The investors in X are also domestic. They are interested in profits (which includes being interested in the views of customers) but, like the customers, they care little about foreign impacts. So, in this case, the impacts are important to some (foreign) stakeholders, but disclosure still might not affect the investors' decisions.

In conclusion, some important impacts on stakeholders would not need to be disclosed under financial materiality alone (e.g. under S1), because the primary users' decisions are not affected. Also, some financially material issues for the entity might not be large enough to be "most significant" effects on the environment and thus would not require disclosure under impact materiality alone (e.g. under GRI). Taking the two points together, some impacts should be disclosed under impact materiality but not under financial materiality, and vice versa. However, under ESRS, both versions of materiality are in operation, so neither type of relief applies.

4. Translation

4.1 Introduction and literature

The inherent ambiguity of "material" and the lack of a clear definition of "impact materiality" can be further revealed by examining translations of relevant laws and standards. Further, the relevant language version of a regulation is the one with legal force in a European jurisdiction. So, standard-setters, preparers, auditors and regulators should be concerned about any errors or lack of clarity in translations.

Baskerville and Evans (2011) surveyed authors who had translated IFRS into continental European languages. They concluded (p.6) that translation should not be seen as impossible, but that exact equivalence is often not achievable. Sometimes the meaning intended by the standard-setter is compromised. Several other authors have focused on the translation of particular terms, such as "income" (Dahlgren and Nilsson 2012), "impairment" (Nobes and Stadler 2018), "substance over form" (Alexander *et al.* 2018) and "realised" (Nobes 2024). There is no detailed study of "material", but some authors mention it in passing. For example, Baskerville and Evans (2011) report a respondent saying that:

[...] "material" looks similar to the French "material" which means "physical" or "tangible". The French translation of "material" would be "significatif", which may in turn be confused with English "significant". (p.45, italics added)

This quotation understates the problem because (i) "material" can also mean physical or tangible in English, (ii) the signifier for "tangible" in French accounting regulations is not "materiel" but "corporel", 32 and (iii) as shown below, French regulations sometimes use "pertinent" or "important" instead of "significatif" to render "material".

Part of the solution for the problems of translation is to establish a technical dialect or "register", which is discussed by some of the above researchers. In the accounting register of English, the word "material" by custom and then by definition does not mean "tangible". In this section, I look systematically at accounting terms for "material" in six European languages: three Germanic (German, Dutch and Swedish) and three Romance, Latin-based (French, Italian and Spanish). We begin with the EU's Fourth Directive on company law, and then move to accounting and sustainability standards.

4.2 Signifiers for "material"

Each language version of an EU Directive is official, so none should legally be seen as the original or as taking precedence. However, in practice, the Fourth Directive was originally drafted in French by a committee chaired by a German auditor.³³ The English translation of the

 $^{^{\}rm 32}$ For example, in Article 9 of the French version of the Fourth Directive on company law.

first draft of the Directive did not contain the word "material" in the context of whether information is important enough to require disclosure. However, the final Directive contained many references to "material" disclosures. As may be seen in Table 2 (second column), none of the other language versions deemed a cognate of "material" to be a suitable signifier for this, although such cognates generally exist with the same signified (e.g. "materiale" in Italian). Instead, to continue with the example of Italian, "material" is rendered by the helpful but lengthy adjectival phrase "d'una rilevanza apprezzabile". As noted earlier, a vital point is that "material" does not necessarily mean "large". However, this point was lost in the German and Swedish translations shown in Table 2. Over time, the chosen signifiers for "material" have changed, as now explained by turning to IFRS, then to a revision of the Directive, and then to the sustainability standards of GRI and ESRS.

The source language of IFRS documents, such as IAS 1 and IFRS S1, is obviously English. However, the standards are available in many official translations, for which Kettunen (2017) discusses the processes involved. Table 3 shows (in its second column) the signifiers used for "material" in the six language versions of IFRS. As may be seen, only Dutch joined English with a cognate of "material". The French translators of IFRS took the approach reported above in Baskerville and Evans (2011) by using "significatif", though when the term first appears in IAS 1 and in S1, the standards also refer to "importance relative". The latter is the type of solution adopted in Spanish, though by turning the adjective into an adjectival phrase "de importancia relativa". The Italian translators use "rilevante", which is an abbreviation of the Italian signifier used in the Directive. Materiality is indeed discussed under "relevance" in the IFRS Conceptual Framework (para. 2.11) but only as part of that quality.

Given my earlier observation (in Section 3.5) that IFRS carefully distinguishes the defined term "material" from the undefined term "significant", has this been understood by the official translators under the guidance of the IFRS Foundation? To take the example of S1, the answer is "yes". For example, The French version of S1 consistently has "significatif" for "material", but "important" for "significant". The Spanish has "material" (or "con importancia relativa") for "material", but "significativo" for "significant". The third column of Table 3 records this. The French and Spanish translators of S1 have taken opposite approaches, but that might not matter because they have each been consistent within the language version, so preparers and auditors might receive the right message. However, as explained in the next sub-section, in translations of ESRS the distinction between material and significant has been lost in a key area.

³⁴ This is not so reliable for translations of some earlier standards. For example, the French version of IAS 1 uses "significatif" for both material and significant (paragraphs 7, 10, 14, 25).

In 2013, a revised version of the EU's accounting Directive was published, incorporating the requirements on group accounting from the Seventh Directive.³⁵ The signifiers for "material" were up-dated compared to those of the Fourth Directive, apparently drawing on the translations of IFRS discussed in the previous two paragraphs. These new signifiers in the Directive are shown in the final column of Table 2. For example, the French generally became "significatif" although sometimes "pertinent pour évaluer", and the Italian became "rilevante". Thus, the Italian signifier in the Directive became much shorter, but the Spanish became much longer: "de importancia relativa significativa".

ESRS 1 was drafted in English, drawing on IFRS and GRI materials. This is clear because all EFRAG's draft documents and training materials on ESRS 1 are in English only. Although the many official EU language versions of ESRS have equal legal status, it is not practical to draft complex documents in several languages simultaneously. Column 4 of Table 3 shows the signifiers for "material" in ESRS. The next column shows a back translation to English using the context of a whole sentence about accounting rather than just the single word. That point is important because, for example, back translation of the German "wesentlich" might lead to "significant" for just that one word but to "material" in the context of the whole sentence on accounting. As may be seen, the Germanic languages can all arrive back at "material" but that is not reliably the case for the Romance signifiers.

The GRI's website provides its standards in English, but a "Resource Center" gives access to translated versions in several other languages, including four of those considered here. The final column of Table 3 shows the signifiers for "material" in the available language versions of GRI 3. As may be seen, the French version has "pertinent" as well as "significatif". The Italian and Spanish versions of GRI 3 use signifiers cognate with "material", unlike the Italian and Spanish versions of the other laws and standards examined here.

4.3 Definition of impact materiality

Returning to ESRS 1, the most alarming translation difficulties occur for its only sentence which approaches a definition of "impact materiality"; that is, paragraph 42 (shown above as the indented quotation in Sub-section 3.5), which can be abbreviated to:

³⁵ See: https://eur-lex.europa.eu/eli/dir/2013/34/oj (accessed 13 October 2024).

³⁶ These are frequent terms in the 2013 Directive, for example in Articles 17(q) and 19(2)(e).

³⁷ See, for example, the exposure draft of ESRS 1:

https://www.efrag.org/sites/default/files/sites/webpublishing/SiteAssets/06%20Draft%20ESRS%201%20General%2 Orequirements%20November%202022.pdf (accessed 14 October 2024).

³⁸ The translations of ESRS 1 can be found at: https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32023R2772 (accessed 16 October 2024).

Some existing standards ... use the term "most significant impacts" when referring to ... the impacts ... described in ESRS as "material impacts".

As noted above, the three words in quotation marks in the first line come from GRI 3.

In the German version of ESRS 1, the sentence becomes:

In einigen bestehenden Standards ... wird der Begriff "wesentlichste Auswirkungen" verwendet ... um die Auswirkungen zu ermitteln, die im ESRS als "wesentliche Auswirkungen" beschrieben werden.

This appears to be saying that GRI "most material" is the same as ESRS "material", which seems incoherent. Furthermore, "wesentlichste Auswirkungen" is supposed to be a quotation from GRI 3, but the German version of GRI 3 actually refers to "erheblichsten Auswirkungen" in its definition of material topics. The translators of ESRS 1 did not know that they should have copied the words from the German version of GRI 3 because ESRS 1 does not say where its quoted words come from.

An analogous problem occurs in the French version of ESRS 1, which uses "importantes" twice:

Certaines normes ... existants utilisent les termes «incidences les plus importantes» ... pour identifier les incidences décrites dans l'ESRS comme étant des «incidences importantes».

Again, the four words in quotation marks in the first line are mis-quoted, because the French version of GRI 3 says "*impacts les plus significatifs*". This time, both the noun and the adjective in ESRS 1 are incorrect quotations. The translators of ESRS have missed the point noticed by the translators of IFRS S1: that "material" is a defined term but "significant" is not. Thus, any attempt to distinguish between the terms, which can be achieved for the English versions of the standards (as in my Sub-section 3.4 above), collapses when reading the translated versions.

In sum, these various translation problems suggest that "material" might be understood differently among countries applying the various standards. The problems reinforce the point that there is no clear definition of impact materiality.

5. Materiality in the context of research into compliance with accounting standards

Materiality is also a central issue in the fertile field of academic research on compliance by companies with accounting standards. Mostly, such research relates to disclosure requirements because these are easier to check than are recognition and measurement requirements. Soon, this field will probably be widened to sustainability disclosures, now that they are becoming compulsory. Materiality is the vital concept when trying to discern whether any non-disclosure also means non-compliance (Archer *et al.* 1995, and Aisbitt 2001), because a company might not have anything that it should disclose on a topic. For example, if a company

has no inventory in its balance sheet, it should not disclose a flow assumption for the measurement of inventory cost. However, it might not be so clear whether various disclosure requirements about deferred tax or impairment apply to the company in that year.³⁹ The above two papers do not discuss the more subtle point that there might be nothing *material* that should be disclosed. On that, I now offer a brief case example.

In the 2024 annual report of the UK-based retailer, Tesco, there are no disclosures about the measurement basis chosen for investment properties, ⁴⁰ even though Tesco shows investment properties in its balance sheet. The relevant standard, IAS 40 (*Investment Property*, para.s 74 to 79), contains many disclosure requirements. These are included in KPMG's "disclosure checklist", ⁴¹ which has often been used by academics to construct disclosure indices. A poor researcher might not even check that Tesco has investment properties, and would score non-compliance with the IAS 40 disclosure requirements. However, Tsalavoutas et al. (2020, p. 17) note that good practice is to check that the disclosure requirement is "applicable" before scoring disclosures. So, a better researcher would examine Tesco's balance sheet, would find investment properties, and only then would score non-compliance. However, Tesco's investment properties comprise only 0.0005% of the company's assets, so disclosures are not only unnecessary but would be distracting and should therefore be avoided. ⁴² Thus, Tesco's lack of disclosure about investment property is not non-compliance, although the inclusion of the immaterial item on the face of the balance sheet appears to be non-compliance.

As noted earlier, for some purposes, auditors express materiality as a percentage (e.g. 5%) of a key figure such as profit; and researchers into financial reporting have picked this up. For example, Weetman *et al.* (1998) used a 5% threshold to suggest that many differences between UK and US practices were not of material importance. Street *et al.* (2000) followed that by suggesting that most IAS-US differences were not large enough to stop the Securities and Exchange Commission (SEC) from accepting IAS financial statements.

I now consider whether previous researchers into compliance have addressed the materiality issue. First, I look at four reviews of such published research. In the literature section of Tsalavoutas (2011), there is a review of 16 studies of disclosure compliance in annual reports

³⁹ The deferred tax point is discussed below. On impairment, the extensive disclosure requirements of IAS 36 are triggered by the recognition of impairment in the current or previous periods, but a reader of an annual report which does not give such disclosures might be unable to detect whether there has been impairment.

⁴⁰ The disclosures about depreciation of property and other assets imply that Tesco uses the cost basis for investment property.

⁴¹ The current list is available at: https://assets.kpmg.com/content/dam/kpmgsites/xx/pdf/ifrg/2024/isg-2023-disclosure-checklist.pdf (accessed 19 November 2024).

⁴² See paragraph 30A of IAS 1, discussed earlier.

relating to years before 2005. All the studies found substantial non-compliance. Some of them had sensibly excluded whole standards which seemed irrelevant to the country or to the company. However, the review does not discuss how the studies dealt with non-applicable or immaterial items within a standard. Hassan and Marston (2019) also review disclosure studies (mostly not about IFRS reports), including 50 papers which used an index of required disclosures. That review, also, does not discuss non-applicable or immaterial items. Hellman et al. (2018) review 81 papers on disclosure compliance. These are mostly about IFRS reporting, though they include some US and pre-IFRS studies. Hellman et al. conclude that many researchers put effort into the matter of applicability of topics but that "the reviewed studies do not fully capture materiality considerations" (p.249). Tsalavoutas et al. (2020) review 70 papers on post-2005 compliance with IFRS disclosure requirements. They also discuss the various ways in which previous researchers have dealt with non-applicable items. They find that only ten of their 70 papers included a materiality threshold at the stage of selecting or scoring annual reports, noting that this matter might have caused over-counting of non-compliance in the other papers.

I now take some examples of the studies of compliance with IFRS, starting with two which consider materiality using a threshold derived from the audit procedures mentioned above. Mazzi et al. (2018), when studying goodwill disclosures, take account of materiality by excluding firm-years in which goodwill was less than 5% of net assets. Devalle et al. (2016) examine compliance by Italian companies with IFRS disclosure requirements related to intangible assets; and they report low compliance even among their sample which excluded companies with intangibles comprising less than 5% of total assets. Devalle et al. use the KPMG disclosure checklist, which at the time contained 30 items from IAS 38 (Intangible Assets). Several of these items relate to those intangibles whose "subsequent measurement" is at fair value. However, IAS 38 suggests that the fair value basis is not generally allowed for subsequent measurement; and probably none of the sampled companies was using it.⁴³ The researchers would then have found universal non-disclosure of the related items. However, this would not be non-compliance even though the researchers had checked the materiality of the intangibles. To take another example on this point, Che Azmi and English (2016) report 54% non-compliance with IFRS disclosure requirements by Malaysian companies in 2011, including items relating to any intangible assets held at fair value (p. 404).

⁴³ See paragraph 78 of IAS 38. The author's extensive research into IFRS practice has never discovered a company using this basis (as opposed to the use of fair value as an initial estimate of cost in the context of a business combination). Tsalavoutas *et al.* (2014, p.7) study 544 IFRS companies, and they also find no use of this basis.

Some other studies are narrowly focussed on a single topic and on a set of companies for which disclosures on the topic are likely to be required. For example, Glaum et al. (2013) examine IFRS annual reports from 17 European countries in 2005, finding 27% non-compliance with disclosures relating to business combinations and goodwill. The paper's narrow focus helps with the matter of whether the requirements are applicable, though Tsalavoutas *et al.* (2020) still classify the paper as not initially considering materiality when selecting the sample or when scoring.

For wider studies of disclosure requirements, applicability and materiality are a joint problem on some of topics. For instance, Ebrahim (2014) finds that 40% of Egyptian companies in 2007 did not show deferred tax in IFRS income statements, and he calls this "noncompliance" (p.28). However, about a third of these allegedly non-compliant companies explained the lack of a deferred tax number. For example, some referred to being exempt from tax, and others explained that the Egyptian tax system did not cause deferred tax for them. This hints at the possibility that most or all of the companies in the 40% were actually compliant because they did not have material amounts of deferred tax to disclose.

Al-Akra et al. (2010, p.178) report 21% non-compliance with 641 IFRS disclosure requirements by Jordanian companies. However, there is no discussion of the possibility that some of these items might have been immaterial. Al Mutawaa et al. (2010, p.47) find 31% non-compliance with 101 IFRS disclosure requirements by Kuwaiti companies in 2006; and Al-Shammari et al. (2008) report 20% non-compliance with 185 IFRS disclosure items in six Arab Gulf countries in 2002. However, the word "material" does not appear in those two papers. The researchers mentioned in this paragraph might have thought that they were solving the materiality problem by checking applicability. However, that does not necessarily work, as discussed above and further illustrated in the next paragraph.

In another important context, alleged non-compliance with IFRS was probably overstated; this time, by researchers working for a regulator. In 2011, the SEC issued a series of papers related to the abandonment in 2012 of its proposal of 2008 that IFRS should be adopted by US registrants. One of these papers (SEC 2011) examined the IFRS practices of non-US companies, allegedly finding much non-compliance. This was surely irrelevant to the extent that many of the companies surveyed were not monitored by the SEC, whereas any future IFRS practice by SEC-registrants would have been thus monitored. Furthermore, much of the detailed criticism did not take proper account of materiality, as the following two examples show. First, the SEC paper complains (p.50) that many IFRS reporters did not disclose an "accounting policy" on the criteria for classifying leases into finance or operating. However, that

was not an accounting policy choice or even an accounting policy. It was a matter of definition in the accounting standard (IAS 17, *Leases*), so a disclosure was no more necessary than explaining what a lease is, and disclosure would not have been material to users. Secondly, the report (p.51) complains that 20% of IFRS companies did not consolidate immaterial subsidiaries even though "IFRS requires consolidated financial statements to include all subsidiaries". This shows a deep misunderstanding of accounting standards (both IFRS and US GAAP)⁴⁴ which only apply to immaterial items, and therefore the word "material" does not appear as part of each requirement in each standard.

In conclusion, the findings of extensive non-compliance in some previous research are probably over-stated because they are partly an indication of the proper application of materiality by companies. The discussion in this section is particularly relevant for future research on disclosures under the sustainability standards discussed in Section 3 above. It will also be relevant for future research on the disclosures related to "management-defined performance measures" as newly required under IFRS 18 (para. 122).⁴⁵

6 Summary, conclusions and policy recommendations

As explored in Sections 2 and 3, the importance of materiality in accounting regulations has varied over time. In early EU and UK documents, materiality was not included as a principle, though it appeared (undefined) in some paragraphs about disclosures. However, under US influence, materiality did appear as a major principle in the first IASC standard, though still undefined. In the *Frameworks* of the IASC and then the IASB, materiality became part of the major quality of relevance, and definitions appeared (see next paragraph). Then, in various versions of standards (IAS 1, IFRS S1 and ESRS 1), materiality featured as one of the main principles, along with a varying number of others. However, materiality was eventually downgraded in IFRS 18. Table 1 (central column) summarises those developments, starting with the US document which was current when European and international standard setting began.

The various definitions of materiality are also summarised chronologically in Table 1, in the right-hand column. The early US definition was that the decisions of users were influenced. However, when a definition first appeared in IASC documents, it contained the wider "could be influenced". This was maintained as the main definition for decades, though being interpreted from 2003 and then replaced in late 2018 by the narrower British idea of "could reasonably be expected to influence". Earlier in 2018, another major narrowing of the

⁴⁴ On US GAAP, see footnote 5 above.

⁴⁵ Elzahar *et al.* (2015) studied UK practice under earlier requirements in this area, finding evidence of reduced cost of capital associated with good quality disclosures about "KPIs".

IASB definition was the change from "users" to "primary users". These narrower wordings were later used as part of the definition of materiality when the ISSB wrote IFRS S1, and that was followed in the EU when defining financial materiality in ESRS 1.

Another change over time relates to the "direction" of materiality. Early IASC documents required disclosure if information was material. Then, in the 1997 version of IAS 1, preparers were told that immaterial information did not have to be disclosed. The UK's Statement of Principles of 1999 went further by holding that immaterial information should not be disclosed, and this formulation eventually arrived in IAS 1 in 2014.

Section 3 explained how the trends towards defining materiality and then narrowing it and then reversing its direction were all dramatically overturned by the concept of impact materiality in GRI 3 and ESRS 1. That is, there is a very wide user group, no discussion of reasonable expectations, only an obscure warning about too much disclosure, and no direct concept of discounting. Furthermore, there is no clear definition of impact materiality, because the formal definition is circular and the subsidiary definition equates material with "most significant" which is undefined. This could be interpreted as requiring a ranking of impacts by importance, but then it is unclear how far down the list to go when making disclosures. Just as some GRI or ESRS disclosable impacts are not financially material (because they cannot reasonably be expected to affect the decisions of primary users), so some impacts that are financially material might not reach the disclosure threshold of "most significant" under GRI 3. However, this would not bring relief under ESRS 1 because it involves double materiality.

Policy implications arising from the above are as follows. EU regulators should attempt to clarify the concept "impact materiality", on the many matters raised above.

Regulators in other jurisdictions should study these problems and observe developing European practice before introducing requirements related to impact materiality. However, the ESRS will already apply not just to EU companies but to many non-EU companies operating in the EU. The vagueness of the requirements introduce great scope for disagreement between preparers, auditors, activist stakeholders and enforcement agencies.

The International Auditing and Assurance Standards Board should consider its standard on "materiality", which is still written in terms of the economic decisions of users, which is not appropriate for compulsory or voluntary impact disclosures under ESRS or GRI standards.

Section 4 then illustrated the slipperiness of "material" by looking at signifiers in six other language versions of EU, IFRS, GRI and ESRS documents. In the EU's Fourth Directive, no other language used a cognate of "material". Instead, a range of meanings seem to be conveyed, as in Table 2. In IFRS, GRI standards and ESRS, the signifiers for "material" (see Table 3) are different from those used earlier in the Fourth Directive, and the same applies in the revised accounting Directive of 2013 (see the final column of Table 2). A key sentence in the original English version of ESRS 1 about the central issue of "impact materiality" contains a term quoted from GRI 3 but the translators of ESRS 1 did not know the source, so the translations are incoherent. The above implication that EU regulators should clarify "impact materiality" is especially important as they know that ESRS must be translated. On this point, ESRS should explain where any of its quotations come from.

As discussed in Section 5, there have been dozens of studies of compliance with financial reporting disclosure requirements, including reviews of such studies. Only some researchers have discussed how to deal with non-applicable requirements or with immaterial matters. The high rates of non-compliance reported by some studies seem to be overestimations caused by this issue. I illustrated this with a brief case example of a corporate annual report and then gave potential examples of the problem in previous academic papers. Similarly, on some topics, an SEC research paper mistook immateriality for non-compliance with IFRS, and this formed part of the case for non-adoption of IFRS in the USA. For researchers, this leads to implications for future examinations of compliance with disclosure requirements. Professional scepticism is needed (by both researchers and journal reviewers) when high rates of non-compliance are apparently found.

For sustainability disclosures, this field of research is potentially very large and has just opened up because the standards were not compulsory before. Given that the sustainability standards relate to disclosures only, researchers into compliance will be restricted to this matter. It will be tempting for them to create disclosure indices containing the many items set out in the various new sustainability disclosure standards of the EU and the ISSB. However, researchers will have to consider carefully how to distinguish any non-compliance from non-disclosure caused by or lack of applicability or materiality. This is especially the case because the sustainability standards do not contain clear instructions on determining impact materiality and therefore on what should have been disclosed.

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Table 1. Materiality as a concept in regulatory documents from 1970, chronologically

Document	Materiality included as a principle?	Definition
APB Statement 4	One of 13 features	affect decisions
SSAP 2	No	-
IAS 1 of 1975	One of 3 considerations for policy	none
	selection	
FASB, CON 2	Threshold for recognition	users influenced
EU Fourth Directive	No	-
IASC and IASB	Part of "relevance"	could influence users
Frameworks		
ASB Statement of	One of 5 qualities	might reasonably be expected to
Principles		influence users
FRS 18	Part of "reliability"	none
IAS 1 of 2003	One of 7 overall considerations for	could influence users
	presentation	
IFRS for SMEs	Part of "relevance"	could influence users
IAS 1 of 2014	One of 8 general features of	could influence users
	presentation	
IASB Framework of	Part of "relevance"	could influence primary users
March 2018		
FASB, CON 8	Part of "relevance"	probable that reasonable user
		would be influenced
IAS 1 of 2018	One of 8 general features of	could reasonably be expected to
	presentation	influence primary users
GRI 1	One of 4 key concepts	most significant
IFRS S1	One of four foundations	could reasonably be expected to
		affect the entity's prospects
ESRS 1	Part of "relevance"	impact materiality: most
		significant
		financial materiality: as in IFRS S1
IFRS 18	Part of "aggregation"	could reasonably be expected to
		influence primary users

Table 2. Signifiers in six language versions of EU accounting Directives where the English versions have "material"

Language	1978 Directive	Approx. English translation	2013 Directive
French	d'une certaine importance	of some importance	significatif
Italian	d'una rilevanza apprezzabile	of appreciable relevance	rilevante
Spanish	de una cierta importancia	of relative importance	de importancia relativa significativa
German	einen gröβeren Umfang	a greater extent	wesentlich
Dutch	van enige beteknis	of significance	materiële
Swedish	större belopp	larger amounts	väsentlig

Notes: The second column shows the terms for "material" in the Fourth Directive in the context of disclosures (such as in Articles 18 and 21). The third column shows an approximate English translation of the third column. The final column shows the terms in Directive 2013/34/EU (for example in Articles 17(q) and 19(2)(e)).

Table 3. Signifiers in translations of IAS 1, IFRS S1, ESRS 1 and GRI 3

Language	Material in IAS 1 and S1	Significant in S1	Material in ESRS 1	Back translation of signifiers for material	Material in GRI 3
French	significatif ^a	important	important	significant	pertinent, significatif
Italian	rilevante	-	rilevante	relevant	materiale
Spanish	con importancia relativa ^b	significativo	de importancia relativa	of relative importance	material
German	wesentlich	-	wesentlich	material	wesentlich
Dutch	materieel	-	materieel	material	-
Swedish	väsentlig ^c	-	väsentlig	material	-

Notes: The second column records the signifiers for "material" in six translations of IAS 1 as published by the IFRS Foundation. Of these languages, S1 has been translated into French and Spanish only. The third column shows the signifiers for "significant" in the available translations of S1. Column 4 shows the signifiers in the versions of ESRS 1 published in Annex 1 to the Commission Delegated Regulation (EU) 2023/2772. Column 5 shows a translation into English of the signifiers in Column 4, as supplied by Google Translate when inputting (on 5 October 2024) the term in the context of the translated sentence "The value of the asset is X", using the term in column 4 for X. The last column shows the signifiers in the translations available in the "GRI Resource Center", which does not include Dutch or Swedish versions. a = The French versions of IAS 1 and S1 also refer to "importance relative" (e.g. in the heading above paragraph 17 of S1). b = The Spanish versions of IAS 1 and S1 also refer to "materialidad" (e.g. in the heading above paragraph 17 of S1). c = This is the translation in the EU's Swedish version of IFRS; there is no official IFRS Foundation translation into Swedish.