

Current value as relational becoming: the case of goodwill impairment testing

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Received 31 August 2020
Revised 15 March 2021
24 June 2021
Accepted 1 August 2021

Abstract

Purpose – The purpose of this study is to shed light on the tools, processes and negotiations involved in the formation of acceptable current values in the context of goodwill impairment testing. The study raises the questions of how a current value for goodwill becomes a faithful representation and how one expectation about the future becomes more convincing than other expectations.

Design/methodology/approach – Drawing on the study of associations, the analysis presents a case study of a large, internationally active organisation. By combining field notes, interview transcripts and a variety of documents, the qualitative analysis focusses on strategies and mechanisms of persuasion.

Findings – The findings reveal how epistemological objectivity of current values forms in three moments of relational becoming that codify, depersonalise and proceduralise the valuation task. Further, the study suggests that a convincing argument forms with the help of four enablers: a bricolage of inscriptions, methodological mystification, transformed professional identities and a practical need for closure.

Originality/value – The study contributes with an analysis and illustration of financial accounting as practice, elaborating on the meaning and construction of faithful representation in cases of measurement uncertainty.

Keywords Goodwill impairment, Faithful representation, Financial accounting, Current value

Paper type Research paper

Introduction

It [Level 3 fair value] cannot in principle be “known” but is instead a “wished-for” social outcome, whereby the preparer is required to adopt the perspective of the market participant in a neoclassical economic world of the International Accounting Standards Board (IASB’s) imagination. Hence, the market ontology at Level 3 is not observable as a social outcome, in the manner of market prices at Level 1, but instead, it is inaccessible to the preparer and does not permit the making of an epistemologically objective claim. Alternatively stated, the absence of verifiability (and so reliability) arises jointly with the absence of the possibility of faithful representation, for the simple reason that there is no institutional fact to be represented in the first place (Barker and Schulte, 2017, p. 60).

Barker and Schulte (2017) gallantly formulate a central dilemma with current value measurements: there is no institutional fact to be represented, yet. This creates an impasse for the traditional financial reporting logic of faithful representation. Whilst most would



agree that current values are more decision-useful than historical cost information if the future were known today, by nature of the subject, this is impossible to do. Even if we accepted the idea that there was *one* reality that could be represented through accounting, an assumption that is debatable (Hines, 1988; Lennon, 2013), to agree on a value of the future involves many actors and technologies (Huikku *et al.*, 2017). In the context of fair value accounting, previous research speaks of “hyperreality” in relation to accounts that only model a model rather than a real object (Macintosh *et al.*, 2000), “wished-for” social outcome (Barker and Schulte, 2017), “myth” of fair value (Macve, 2010) and “quantified fantasies” (Smith-Lacroix *et al.*, 2012), where faithful representation can never be more than an imagination.

Following the question of how we can imagine convincing futures, this study presents the case of a large, internationally active and publicly listed organisation where business combinations presented a major driver for business growth. Consequently, impairment testing of goodwill and the connected current value calculations were a standard part of the preparation of the annual financial statements. The central research question is to investigate how an organisation manages to do the seemingly impossible: to calculate and distribute convincing current values of goodwill. Specifically, the study sheds light on the tools, processes and negotiations that get involved in preparing acceptable impairment tests for goodwill. The study further raises the question of how one expectation about the future can become more legitimate or faithful than other expectations.

Goodwill is a particularly interesting asset to study current value calculations because it constitutes a residual value that does not produce future cash flows independent from other assets. Representing the expected synergies of a business combination, future expectations about goodwill development bear high levels of measurement uncertainty. IAS 36 *Impairment of assets* requires preparers to perform an annual impairment test for goodwill, where the recoverable amount of a goodwill carrying cash-generating unit (CGU) shall be compared to the unit’s balance sheet value. The recoverable amount, hereby, is the higher of the CGU’s fair value less cost to sell and its value in use. The fair value less cost to sell reflects a market perspective and the value in use reflects the asset’s value within the company. Consequently, both values constitute current values that require the organisation to produce convincing expectations about the future, even though the synergies collected in goodwill and assigned to the CGUs might be unclear even to the preparer.

We know that preparers need to “make do” (Barker and Schulte, 2017) and that the formation of current values happens in a distributed calculation that creates a form of relative reliability (Huikku *et al.*, 2017) and distributed cognition (Okamoto, 2014). The concept of relative reliability suggests that we can understand the reliability of current values in the context of impairment testing as an accumulation of traces which is tolerated by many different people inside and outside the organisation. Okamoto (2014) adds to this understanding by highlighting the importance of human interaction in the valuation process.

In other words, the current value of goodwill is a relational becoming. We have no possibility to say what a current value of goodwill *is* in a faithful way. Instead, the value *becomes* something through its relations to many different actors. Huikku *et al.* (2017) suggest three relevant mechanisms. Firstly, the value needs a plethora of traces inside and outside the firm that normalise the number by linking it to the past, an industry average or expectations in wider society. From this perspective, the company’s valuation efforts cannot systematically break free from such norms. Secondly, multiple human allies such as auditors and valuation experts need to acknowledge and carry these traces. The authors find that these human allies become particularly important when the traces used are not

normal enough or produced exclusively for impairment testing. Thirdly, traces that have multiple uses in the company (e.g. budgets) are less disputed because they are perceived as being less political in the context of impairment testing.

The case presented here shows resemblance to the conclusions drawn by [Huikku et al. \(2017\)](#), particularly relating to the idea of the distribution of knowledge and the network surrounding the number. On a more theoretical note, this study contributes by reflecting on the meaning of faithful representation and by elaborating three moments of relational becoming that create a form of epistemological objectivity. Whilst [Huikku et al. \(2017\)](#) suggest a rather unproblematic transition from standard requirements to calculation tools, this study highlights how and why the calculation tool becomes unchallenged, despite the uncertainties related to the standard requirements. On a more empirical note, this study contributes to existing knowledge by clarifying some of the previous findings. Firstly, the analysis refines our understanding of why external allies like consultants (valuation experts) are so helpful and important in the construction of the values. Secondly, the case material suggests that the multi-use traces created in the budgeting process are not as unpolitical and independent from the impairment calculations as previously suggested. Rather, the case material shows how organisations infuse their strategic dialogue with matters concerning strategic impairment management. Finally, the timing of the case study presents an opportunity to illustrate the work organisations put into including “abnormal” ambitions in their impairment calculations. The material for the case study was collected right after the financial crisis, creating a situation where the connection to the past performance was not an option in the budgeting process or the impairment calculations. At the same time, industry averages and future prospects were not taken for granted as suggested by previous findings. Instead, even the norm was uncertain and had to be created as a reference point. The case study at hand highlights the work done by management, staff and outside parties, to design a calculative device and to compile information that produces values that are more acceptable and more relatively reliable than any other imagination about the future, despite their disconnection with the immediate past or pre-defined norm. Thus, the study responds to calls asking for deeper insights into financial accounting as practice ([Himick et al., 2020](#); [Robson et al., 2017](#)).

The remainder of the paper is structured as follows. The theoretical foundations combine the academic discussion relating to faithful representation and financial accounting as practices with further insights into the study of associations. Subsequently, the research setting, method and analysis are described. The analysis presents the three moments of relational becoming and elucidates four related key enabling elements. The article concludes with a summarising discussion of the key findings and contributions.

Theoretical foundations

This section consists of two parts. The first part presents the accounting domain and reflections on the concept of faithful representation. Predominantly discussed in the context of fair value accounting, this literature builds the ground to approach the topic also in the context of value in use calculations. The second part then presents the study of associations as a way to understand and explain how we can create facts in financial reports that are inherently fragile but stable enough to travel and persuade.

Faithful representation and financial accounting as practice

The concept of faithful representation in the case of current values. Fair value accounting, as calculative practice and as a concept, is a complex subject that has given ground for discussion for more than two decades. In earlier stages of the discussion, researchers both

criticised (Dechow *et al.*, 2010; Hitz, 2007; Landsman, 2007; Plantin *et al.*, 2008) and defended (Aboody *et al.*, 1999; Barlev and Haddad, 2003, 2007; Barth and Taylor, 2010) the measurement practice and its use for decision usefulness. The dominant matter of concern was the reliability of mark-to-model evaluations. Like mark-to-model pricing, value in use calculations relies on mathematical models to assess the current value of an asset. The difference to a discounted cash flow method in value in use calculations is that level 3 valuations aim to assess the market price, whilst value in use calculations aim to assess the value the asset will have through continued use in the company. The concern with reliability and verifiability of these measures, however, is of similar nature because both are current values that include expectations about the future that need to be reliable enough to become a fact.

Studies from these earlier stages of discussion reflect a common understanding of accounting quality that views verifiability as a cornerstone of reliable information, which was a key property of financial reporting quality in the IASB conceptual framework from 1989 [1]. Penman (2007) summarises the pros and cons of this debate, where critics raised awareness for problems arising from managerial discretion in projections about future cash flows and applied discount rates, as well as a risk for volatility in earnings. Proponents, on the other hand, highlighted the superior nature of forward-looking fair values, as compared to backward-looking historical cost measures, for the decision usefulness for investors. Fair values were (and are) considered to be more timely and more relevant. Essentially, the dualistic discussion about the usefulness of fair values appears to be linked to tension between different “knowledge templates” and preferences towards or against fair values (Baudot, 2018), rather than actual demand for or the meaningfulness of the measure (Durocher and Gendron, 2014; Georgiou, 2018). Predominantly, the discussion revolves around the notion and importance of verifiability. In this line of thought, problems with fair value measures will arise in the case of measurement errors, due to earnings management (Danbolt and Rees, 2008; Dechow *et al.*, 2010) and weak enforcement (Laux and Leuz, 2009). However, this view shades the underlying question of the meaning of a correct value in the context of future expectations.

With the revised IASB conceptual framework from 2010, the standard-setter moved away from the importance of verifiability, essentially collapsing reliability into relevance (Power, 2010). With this shift, the standard-setter attempted to strengthen the neoliberal development of financial reporting (Müller, 2014; Power, 2010) and to counteract practitioners’ salient understanding of the importance of verifiability, fostering the rise of current values (Erb and Pelger, 2015). This re-orientation of focus towards relevance and faithful representation initiated an academic discussion regarding the meaning of these concepts.

What is a faithful representation of the future? The 2010 conceptual framework elaborated:

[...] To be a perfectly faithful representation, a depiction would have three characteristics. It would be *complete*, *neutral* and *free from error*. Of course, perfection is seldom, if ever, achievable. The Board’s objective is to maximise those qualities to the extent possible. [Emphasis in original] (CF 2010, QC12).

The 2010 conceptual framework, therefore, still shows strong traces of reliability and verifiability because the neutrality and error of the term carry a cultural understanding that implies a *correct* value as a basis for verification. However, the IASB pushed the concept of faithful representation towards relevance, explaining that:

Faithful representation does not mean accurate in all respects. Free from error means there are no errors or omissions in the description of the phenomenon and the process used to produce the reported information has been selected and applied with no errors in the process. [. . .] However, a representation of that estimate can be faithful if the amount is described clearly and accurately as being an estimate, the nature and limitations of the estimating process are explained, and no errors have been made in selecting and applying an appropriate process for developing the estimate. (CF 2010, QC15).

Here, faithful representation is defined through an appropriate and transparent measurement process, including a clear description of the measurement uncertainties. Such definition holds three parts: there has to be an agreed-upon procedure (defined in the standards), the procedure has to be followed accurately and uncertainties in the application, like the managerial judgement of future cash flows, have to be transparently described [2]. In other words, the standard-setter acknowledges with this definition that accounting representations are ontologically subjective – their existence and meaning is not independent of people (Barker and Schulte, 2017, p. 59) – but purports that they should be epistemologically objective, i.e. they should represent an institutional fact (Barker and Schulte, 2017, p. 59) that builds on a shared understanding [3]. Mouck (2004) clarifies that such epistemological objectivity can be reached when the “truth or falsity does not depend on anybody’s attitudes or feelings about them” (Mouck, 2004, p. 528), an aspect that some argue can be achieved through a rigorous process and transparent explanation as required by the standard setter.

In other words, epistemological objectivity can be achieved through a shared understanding about the value of the substance. In Level 1 measurements, where active markets exist, the meaning of faithful, therefore, seems to be a shared understanding of how this underlying substance will develop over time (Mouck, 2004). However, in the absence of active markets, some researchers are critical of the concept and its meaning. Barker and Schulte (2017) criticise that the standard-setter leaves organisations alone in their endeavour to define an “unknowable value”. Without an institutional reality, preparers are required to take a market perspective to establish a “wished-for” social outcome (Schulte, 2017, p. 60). Further, based on their case study data of the implementation of International Financial Reporting Standards (IFRS) 13 *Fair Value Measurements* of publicly listed companies in pharmaceutical, electricity utility, telecom and general industrial sectors in Germany, Switzerland and the UK, these authors find that their preparer’s expectations often stood in direct contrast to the market participant’s expectations. The critique seems relevant also in the context of value in use calculations. Whilst there is no requirement to assess market participant’s expectations, organisations have to defend a “wished-for” social outcome in all cases of current value calculations.

Central to this discussion is a distinction between *ontological* and *epistemological* objectivity. Whilst Tinker’s (1991) claim that representational faithfulness “is unavoidably integral to social action” was a new thought at the time, today the ontological subjectivity of accounting representations is commonly accepted. Accounting is a social practice and an objectivity claim, therefore, will be possible only in an agreement between different actors in social interaction when agreeing about how to know about the subjective world (epistemologically). Barker and Schulte (2017) deny the possibility of epistemological objectivity altogether, depicting faithful representation as an illusion. Mouck (2004), on the other hand, holds that epistemological objectivity can be created for individual users because the values can be seen as indicators for a shared understanding. However, to reach a shared understanding, Mouck argues that it is imperative to understand the rules of the

game before judging the epistemological objectivity. This understanding leads back to the IASB's 2010 depiction of faithful representation which includes the three elements of an agreed-upon procedure, a shared understanding of the application of the procedure and transparent communication of connected uncertainties. In the next section, these three aspects will be discussed further through the lens of the study of associations.

The study at hand does not judge whether one view is more accurate than another. Fundamentally, preparers have to follow the standard requirements and, although self-referential and “hyperreal” (Macintosh *et al.*, 2000), the reported figures have real consequences. Instead, the aim here is to contribute to the emerging field of research that tries to depart from a meta-discussion of current value calculations, investigating *how* organisations cope with the complexities of faithful representation presented to them. In this line of discussion, researchers are interested in understanding the actors, practices and relations that enable preparers, auditors and markets to form a shared understanding, thereby creating epistemological objectivity. The next section gives an overview of the current debate.

Organisational studies of financial accounting. Whilst the socio-political aspects of standard-setting have been on the research agenda for some time (Robson and Young, 2009), financial accounting research remained largely in the economic research paradigm. Only recently, scholars have started to investigate financial accounting as a social practice. The study at hand understands financial accounting as the calculative practices connected to the formation of values: the data gathering, the definition and use of inscriptive devices and the negotiations surrounding these activities. Research at the organisational level is still in its infancy, although the growing importance of IFRS and particularly the organisational struggles experienced during the mandatory adoption of IFRS, triggered more interest in the subject.

For many organisations in the European Union, the introduction of IFRS was a challenging event that required organisations to invest substantial resources and to expand accounting expertise in different levels of the organisation to cope with the transition (Jones and Luther, 2005; Lantto, 2014; Weaver and Woods, 2015). One important aspect of IFRS implementation highlighted in previous literature is a closer relationship between financial and management accounting. Current value accounting requires preparers to use forward-looking managerial expectations in their financial reporting measurements, bringing the practices of financial and management accounting closer together by creating more decision-relevant information for both fields (Hemmer and Labro, 2008) and by creating a shared financial language (Jones and Luther, 2005; Weißenberger and Angelkort, 2011). These transformations became particularly evident in countries like Germany, where financial and management accounting prior to IFRS were institutionally separated disciplines. Accounting systems have an important role in merging accounting disciplines and reaching consensus. The disciplines become linked in shared databases and conceptual definitions that enable preparers to harmonise calculative practices, which, in turn, enables an improved communication between the disciplines. Taipaleenmäki and Ikäheimo (2013, p. 340) show that systems act as “facilitators, catalysts, motivators or even enablers” in the convergence of financial and management accounting. Lantto (2014) and Weaver and Woods (2015) also find that their organisations had to implement new accounting systems with the introduction of IFRS, which then required further changes on organisational level like establishing new routines and expertise. Focussing on the introduction of IFRS, these studies present a valuable point of departure.

However, after the challenges of the first IFRS introduction have passed, organisations still face the challenge of working with the standards. Huikku *et al.* (2017) illustrate that the

formation of goodwill impairment values gains some relative reliability (or epistemological objectivity) in a wide-spanning network of both human actors (financial accountants, investors, auditors) and non-human actors (accounting traces in the form of records and reports) [4]. The relevant accounting traces were part of pre-existing organisational processes like existing budgets. External associations such as consultants or auditors provided particular strength to the network. The authors conclude that the values achieve some objectivity claim if they come from “elsewhere” and if they have a traceable connection to an accepted norm: the past, industry averages or expectations in wider society. These findings resemble the above elaborations on epistemological objectivity: an (epistemological) objectivity claim resides in the distribution of responsibility for the calculative practice as a whole. None of the participants in the formation of the value can be allowed to hold control over the entire practice.

The analysis here aims to contribute with a refined understanding of the different moments of transformation and the creation of epistemological objectivity. The clarification seems necessary because the processes of defining a frame and the tools for the calculation are central for the formation of the fair values and may remain the only auditable element relatively independent from the organisational actors (Power, 2010; Smith-Lacroix *et al.*, 2012). Further, the collection of empirical material for this case study was situated right after the financial crises and the future prospects – on industry and societal level – were still uncertain. The case, therefore, facilitates a refined understanding of how the organisation created a wished-for outcome over and above the immediate past. To this end, Sandell and Svensson (2017) add a strategical element to the discussion, revealing that “write-downs involve the act of writing as a way of responding to anticipated critique” (Sandell and Svensson, 2017, p. 82). Their study draws on the disclosures about goodwill impairment of listed companies in Sweden and illustrates how a financial report is not a neutral representation but a part of a dialogue between organisational management and external stakeholders. The study at hand aims to add to the understanding of this dialogue by presenting insights from the organisational level.

To summarise, from previous literature it can be expected that a shared understanding of a faithful representation that holds an epistemological objectivity claim will be a social activity, where both the process of measurement and the different steps in the calculation (the rules of the game) need to be agreed upon and distributed to many different actors with different aspirations. Accounting systems hold agency in this process of agreement because they can enable or hinder consensus. What is hitherto unclear, however, is how one representation becomes more faithful than any other representation.

The study of associations: current values as imperfect numbers

Associations are relations between heterogeneous elements that “glue” the social together (Latour, 2005, p. 5). Focussing on associations enables us to investigate how something (an order, a claim or an artefact) can travel across time and space, without assuming that this something travels because of an initial power that provides enough inner force to travel unchanged by the many hands it passes on its way. Latour (1986a) calls this latter perspective “diffusion model”, whilst the former is called the “translation model”. Within the translation model, it is unlikely that an opinion about a current value is proposed by some entity and stays unchallenged over time. Latour elaborates:

According to the latter [translation model], the spread in time and space of anything – claims, orders, artefacts, goods – is in the hands of people; each of these people may act in many different ways, letting the token drop, or modifying it, or deflecting it, or betraying it, or adding to it, or appropriating it. (Latour, 1986a, p. 267)

From this translation perspective, we can expect two aspects to be important in the analysis. Firstly, the distribution of specific accounting information or practice will depend on many different actors to carry them across time and space. Actors, here, can be both human and non-human [5]. To report a goodwill value or an impairment, the translation model, therefore, informs us that many different actors need to be enrolled to distribute these values, which has been a conclusion also in previous studies (Huikku *et al.*, 2017; Okamoto, 2014). Secondly, we can assume that each actor will transform the information in some way. Therefore, the temporal durability of the calculated values to prepare a financial report is something that needs explanation [6].

Instead of focussing on pre-existing institutions, hierarchies or cultures to explain what we see, the study of associations channels the focus towards understanding how relations in a network form and how different actors persuade each other about their view of the world. The study of associations, therefore, tells us to understand financial accounting and current values, as a relational becoming rather than some institution that stays unchallenged over time.

Consequently, one question remains: how to persuade others about a wished-for outcome for the future? This study suggests perceiving current values as *imperfect numbers*. Dambrin and Robson (2011) coined this concept in the context of the performance measurement of pharmaceutical representatives. They draw on Latour's (1999) concept of circulating reference, where measures are understood as "signs that translate the world in its absence" (Dambrin and Robson, 2011, p. 430). Latour (1999) argues that an objective claim of the sign can only be achieved when the chain of transformation between the world and the sign is transparent and the receiver of the sign can travel back and forth on that chain to verify the transformations. In a financial accounting context, this implies that investors and other stakeholders can learn about the organisational world when looking at the sign (the financial figures) only when they understand the chain of transformation between the world and the sign so as to be able to follow the chain backwards. The chain of transformation, therefore, has to be transparent to all actors to assure reversibility.

This need for transparent and agreed upon chains of transformation parallels Mouck's (2004) understanding of the rules of the game to reach epistemological objectivity:

The financial accounting rules for aggregating the monetary amount of total assets, for calculating net assets, net income and earnings per share are more akin to the rules for a game such as football. Once the rules have been established, certain representations based on those rules may be said to be epistemologically objective with respect to those rules, even though there is no objective basis for the rules themselves (Mouck, 2004, p. 525).

Once the rules are established, the chain of transformation is transparent and the creation of the sign becomes reversible. As consequence, the signs can become epistemologically objective even though their construction is ontologically subjective. Latour (1999) claims that objectivity can only be achieved if the chain is fully reversible, which would suggest that current values could not become epistemologically objective. Whilst the chain of transformation might be clear in a calculation model, there is no world to represent. This view is shared by researchers like Barker and Schulte (2017).

Dambrin's and Robson's (2011) framework, however, develops Latour's ideas by showing that broken chains of transformation can still perform. Their framework, therefore, builds a useful starting point for the investigation of current values. The financial figures in their study were imperfect in the sense that the implemented performance measures were not directly traceable to the representatives' actions. The chain of transformation was broken. The authors find four central properties that enabled their performance measures to be accepted in the organisation despite the broken chain of transformation: a bricolage of inscriptions, methodological opacity, an ambivalence in professional identity and an enabling of practical action.

Dambrin and Robson (2011) explain that the calculated numbers were legitimised with a *bricolage of inscriptions*, where the measurements drew together many different inscriptions from different information systems, thus, dispersing the calculation into different times and locations. *Methodological opacity* means that the representatives did not understand the measurement formula, but they did not consider this a problem. The representative's positive attitude and lack of understanding was an important factor that held the measurement stay afloat because the representatives could "genuinely believe" in the number. Further, the pharmaceutical representatives seemed to carry an *ambivalent professional identity* because they were educated and presented themselves as medical professionals whilst their backstage orientation rather resembled that of sales personnel. The bonus system and connected performance measures were, therefore, considered an acceptable part of their job. Finally, the authors explain that the inscriptive devices in the form of control systems *enabled practical action* because they not only controlled the activities but also gave the representatives an opportunity for communication and local interaction, making their daily work more efficient.

The analysis takes these four characteristics as a point of departure to analyse the strategies used to enrol the relevant actors to the network of current value. Further, the analysis develops the framework by modifying and elaborating the characteristics in a financial accounting context.

Research setting and design

The case company

The case study features an internationally active group with more than 1,000 companies in over 50 countries and an annual turnover of about 16bn EUR at the time of the investigation. Listed at a European Stock exchange, the group was headquartered in Germany and was predominantly active in converging markets that frequently gave rise to mergers and acquisitions. Consequently, goodwill accounting and impairment testing were a familiar and established practice. The case group had introduced IFRS already in 2002, and therefore had a long-standing tradition with IFRS goodwill accounting and impairment testing.

Because of the long-standing experience with IFRS and the importance of business combinations, the case group presented an ideal setting to investigate the work around goodwill accounting and impairment testing. The initial uncertainties of introducing the standards and the system adjustments lay in the past, which gave the opportunity to see how the organisation [7] continuously worked with the calculative practices in place. Additionally, the German context played a significant role in the investigation. German accounting tradition is defined through conservative accounting practices (Haller, 2003) and strong boundaries between controlling, with a focus on planning and financial analysis and financial accounting, with a focus on reporting financial performance (Ewert and Wagenhofer, 2006; Weißenberger and Angelkort, 2011). With the introduction of IFRS, the case group had chosen to harmonise internal and external accounting within one accounting system and one shared database. The integration of reporting systems, thus, created a link between IFRS definitions and managerial databases. Whilst not in focus here, the high level of integration acted as an enabler of cross-department communication (Weißenberger and Angelkort, 2011), and therefore fostered the different persuasion strategies.

Data collection and analysis

The analysis builds on observations, field diaries, interviews and documents. The material was collected over two periods. Period one stretched over two months in autumn 2010. After an initial theorisation of the material, period two stretched over 1 month in spring 2011 and

focussed on follow-up interviews, as well as additional respondents to extend and triangulate between findings. The time of investigation – directly after the financial crises – played an important role in the collection of the material. Firstly, the calculation and role of current values were highly disputed at the time of the investigation. Researchers and practitioners alike were discussing the role of uncertainty and verification in accounting numbers, as well as the role of current value measurements and enforcement in the advent of the financial crises. Therefore, current value measurements were also much debated in the case group, giving a good opportunity to capture the different perceptions and argumentation strategies. Secondly, the timeframe gave an opportunity to extend our knowledge about the strategies and mechanisms that play a role in defending ambitious future expectations over and above past performance despite uncertainty and dispute about the future prospects of the economy and the industry.

The majority of *observations* took place at the German headquarters (HQ) where the researcher was in-situ in both periods. The organisation granted access to participate in meetings, lunches and other company activities. The *interviews* were conducted with personnel at HQ and through travels to several operational units located in Germany. International units were more difficult to access. The material, therefore, focusses on the German units. However, two interviews were conducted with German business units from two different international divisions to capture the different divisions' reporting activities. In total, the study builds on 42 interviews with 37 employees, all audiotaped and transcribed. The interviews were conducted with personnel from different units, on different hierarchical levels and in different disciplines including financial accounting, controlling, human resources, finance and internal audit. All included quotations were translated from German to English. The *documents* included budgets, IFRS-related documents such as guidelines, training materials and newsletters, as well as publicly available information about the group and its operational units. Additionally, the group granted access to the impairment testing calculation tool, the reporting and consolidation system and the firm's intranet.

The analysis developed in two stages. After the first phase of the investigation, all interviews were transcribed. Together with the detailed observation diaries, these transcripts built the basis for initial theorising to develop key themes. These themes included aspects such as relevant traces, important actors and critical elements of organisational negotiation. In the second phase of empirical investigation, these themes created a starting point to follow up on relevant traces and negotiations. After the empirical investigations, all material including transcripts, documents and diaries, was analysed with Nvivo. The material was coded in a process of continuous reading and comparing the different materials and statements of the respondents. The initial themes were complemented and refined by triangulating the different materials. Overall, the analysis focussed on the different relations and objections that enabled or hindered confidence in valuation practices. Particularly, the analysis focussed on how different actors interacted and created associations to persuade others about a certain process or value.

Three moments of relational becoming

The analysis reveals three moments of relational becoming in which different actors associate with each other to form the financial figures that are included in the annual reports. To [Mouck \(2004\)](#), the first step of achieving an epistemological objectivity claim is to know the rules of the game. These rules of the game define the aspired chain of transformation between the organisational reality and the financial sign. The first moment of transformation defines the standard requirements and translates them into the organisational reporting frame (e.g. guidelines, handbooks and process descriptions). In the

second moment of relational becoming, these broad rules of the game have to be specified into a calculation tool that creates rules for calculating the values. Essentially, the calculation tool forms an inscriptive device that draws together information from many different sources into one value. Inscriptive devices, therefore, are not neutral intermediaries in this game but construct what is allowed to become reality and what is denied (Law, 2004). With the rules of the game established, Latour (1999, p. 304) informs us that the “machine” can run efficiently and only the inputs and outputs remain in focus. Consequently, the third moment of relational becoming takes up the inputs to the calculation. The outputs in the form of financial reports are not considered here. Their investigation would mean following new and different traces not captured in the empirical study. In the case group, the three presented moments of relational becoming together created a notion of objectivity for the impairment value calculations that enabled the organisation to accept the calculations for communication in the financial reports and, thus, to close the matter of concern until the next instance of valuation.

First moment: defining the frame

In the context of financial reporting, the reporting standards build a legal environment, which presents the starting point of the negotiations that instantiated goodwill impairment testing as a new practice in the organisation [8]. Previous literature shows how the negotiation of standards is a socio-political endeavour (Robson and Young, 2009). As Mouck (2004) explains, there is no calculation more right or more wrong without linking the understanding of right or wrong to the use for the user. Even the notion of the user is a negotiable construct (Georgiou, 2018; Young, 2006) and is connected to the overall financialisation of standard-setting (Müller, 2014; Zhang and Andrew, 2014). When implementing the standards, the organisation needs to operationalise the requirements into rules and routines. The calculation of current values in relation to goodwill impairment, therefore, has been the object of negotiation long before the formation of a particular current value figure.

Concerning the implementation of the standards in the case group, the negotiations had taken place before the investigation for this study. However, traces of the negotiations were still evident, hinting at the ways in which “the token”, i.e. the rules of the game, transformed with each new association. The standard requirements were negotiated elsewhere, in a powerful network that spans across the world. Within the organisation, however, the different actors that carry the requirements into the organisation also transform the procedure. For example, the case group had decided to calculate only the value in use for all its CGUs, arguing that this value per default would be higher than the fair value less cost to sell. The argument was successful because it is common practice and was likely unchallenged by the auditors. Further, the calculation for the value in use built on five years of cash flow forecasts even though the internal budgets built on three years of forecasts. The standard requires the companies to include cash flow projections that are reasonable and supportable, building on the most recent budgets and internal forecasts, as well as an extrapolation for periods that go beyond the budgets (IAS 36.33). Choosing five years of forecasts, therefore, was not a standard requirement, as the standard allows a maximum of five years plus terminal value. However, the consultants helping with the IFRS implementation suggested the five years of forecasts because it was the benchmark practice in Germany. The auditors needed to confirm the procedure and required a technical link between reported budgeting figures and the calculation tool to limit human failure. HQ implemented special routines for “critical” CGUs, where impairment was possible or would be substantial.

Traces of struggles remained visible mostly relating to the five years of cash flow forecasts. The controllers tried to object to the five years but were not strong enough. From a controller's perspective, providing respectable judgements about the future for more than three years was neither reasonable nor supportable:

Our planning stops after three years. And in impairment testing, I have to say that this actually is not enough. Then I need to go back and do something that I usually don't [forecasting two more years]. And I can't even do this to that level of detail. [. . .] We have to make assumptions and our experience from the past shows that we have not been very successful in doing so. Head of controlling, operational unit 1, Division B

This controller elaborates on how difficult it was to assess the future over and above the budgeted expectations. Most controllers explained during the interviews that in their line of business, it was difficult to present even the three years of budgeting forecasts with relative certainty. Local control often built on one or two years of forecasts. These reflections indicate that there might have been some reluctance or even objection in the definition of the calculation but that some actors were more persuading than others.

Already in the initial formation of the rules of the game, the case, therefore, suggests traces of a distribution of responsibility where no actor is responsible or in control of the entire structure. Further, the formation shows that external associations are important for a consensus such as the auditors and consultants that imply the notion of an unpolitical process because they are presumably not part of the inner organisational politics.

Second moment: constructing the calculation tool

The annual impairment test of goodwill was an issue in all divisions and the calculations were performed per CGU as a discounted free cash flow method, with five years of free cash flow forecasts and a terminal value, all discounted at risk appropriate rates. A spreadsheet tool, designed during the implementation of IFRS with the help of a consulting firm, produced a value in use for all the CGUs, compared the value in use with their balance sheet values and presented the impairment amounts in cases of write-downs. The spreadsheet, thus, operationalised the abstract standard requirements and organisational guidelines into mathematical rules and defined the necessary inputs. The tool acted as an inscriptive device that collected calculation inputs from many different sources. The inputs came from the reporting packages for the budgets, the operational units and the group's HQ, in collaboration with tax experts, accounting consultants and auditors. [Figure 1](#) illustrates the different sources of input.

In [Mouck's \(2004\)](#) understanding, the inscriptive device created epistemological objectivity for the calculated values because it defined the rules of the game. It also distributed the responsibility for the value to many different places. To perform and understand the calculation, the actors had to "look elsewhere" ([Huikku et al., 2017](#), p. 78).

Firstly, the tool distributed the responsibility for the cash flows of the CGUs to the respective operational units [9]. Three of the five years of forecast came from the budgeted information in the databases of the individual divisions via a technical bridge. Then, the operational units added two additional years of cash flow forecasts and a terminal value manually for the respective CGU. Further, the tool required and applied a discount rate in the form of a weighted average cost of capital (WACC). It also demanded estimates of amortisation on asset revaluation step-ups [10] and deferred taxes.

The relatively simple construction of the calculation tool managed the production of current values for more than 1,000 CGUs. This spreading and collecting of calculation inputs

represents a *dispersed calculation* that ensured a de-personified process of the calculating practice (Huikku *et al.*, 2017). Despite the responsibility of the operational units for the preparation of the impairment test, their influence on the total outcome was limited because of the centralised measures for WACC and the strategic dialogue around the cash flow forecasts discussed in the next section.

Overall, the spreadsheet established the mathematical model that formed the necessary condition to reach a consensus about epistemological objectivity (Mouck, 2004). It also made things auditable (Power, 1996) because it created transparent measurement procedures, established a notion of control through technical bridges and relied on different experts. Constructed by external consultants during the IFRS implementation, the calculation tool was considered to be state-of-the-art by accountants and auditors. Consequently, negotiations and auditing activities were concerned with the valuation inputs, not with the tool as such. However, as Barker and Schulte (2017) highlight, the defined procedure was not enough to close the matter of concern. The inputs to create the wished-for outcome were negotiated at every instance of valuation. In Latour’s terms, the aspired chain of transformation was transparent and agreed upon by the relevant actors; and, technically, the actors could follow the transformations back and forth on the chain. The “machine” was running, but the world to be represented was uncertain and had to be negotiated.

Third moment: persuading others about the input values

Negotiating the inputs for the value in use calculations was not a trivial task. Whilst the calculation tool clearly defined the source of the information, there were many actors involved in providing the necessary information. Each of the sources, in turn, generated the information in its own dialogue process at different times and locations. Hence, the individual inputs, when they came to the calculation tool, already had been negotiated elsewhere. In theoretical terms, each of the different valuation inputs had associated with other actors, creating a network that had built a consensus around the information. By the time these inputs were included in the calculation tool, they had become “facts” in the sense that they came with relations to the relevant actors that had reached a consensus.

Some of the inputs were more negotiated than others. The deferred tax calculations, for example, were connected to a *legal dialogue* involving tax laws and IAS 12 *Income taxes*. These adjustments to the carrying amounts of the CGUs were considered of mathematical nature, determined in the differences between the tax base and the carrying amounts [11].

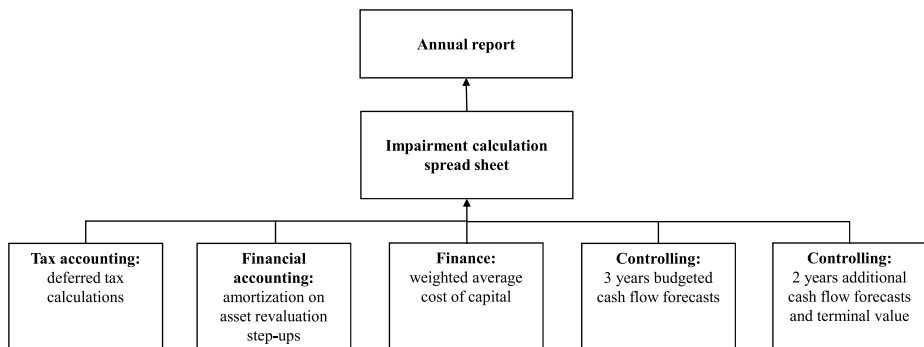


Figure 1. Summary of the different sources of calculation input information

Similarly, the consolidation system provided the additional amortisation on asset revaluation step-ups in a *technical dialogue*. The financial accountants added these technical adjustments manually, but their values were determined through an automated algorithm. The fair values of the individual assets were negotiated during the purchase price allocation of the respective business combination. However, by the time of the impairment test for goodwill, these matters were considered closed because the figures had been included in previous financial reports and were, therefore, fixed. A further negotiation of reported figures usually happens only outside of the organisational reporting realm [12].

The cash flow forecasts and the discount rates were negotiated with a clear connection to the impairment test. Nevertheless, the discussions spread over different times and locations. The first three years of forecasts originated from the budgeted figures, whilst the operational units prepared the additional two years of forecasts and the terminal value separately (Figure 2).

By the time of the impairment calculations, the budgeted figures had been part of a *strategic dialogue* that fixated the figures in the internal planning reports. Auditors or HQ no longer challenged these figures. They represented the best management estimate:

In the example of impairment testing, the budgets clearly come from the divisions. [...] We can pose a question here and there, but most of the time the planning process has progressed so far that, when we get the impairments, years one to three are relatively fixed. [...] Most of the time it is the already approved planning, which is anchored quite high in the hierarchy and has been thought about by many people already. Valuation expert, support unit, group headquarters

These figures had been “thought about by many”, and therefore represented multiple-use traces (Huikku *et al.*, 2017) that built on a distributed cognition (Okamoto, 2014). The budgeting negotiations were a complex process, involving many different parties, all of which had to come to a consensus before the budgets could be closed. Interestingly, the case respondents explained that risks for impairment could become part of the strategic dialogue, suggesting that the multi-use traces of the budgets were not as unpolitical as assumed by Huikku *et al.* (2017). Critical CGUs could become a matter of concern already during the budgeting discussions, introducing a strategic foresight element into the impairment calculations:

The planning process is monitored closely by top-level management. What do you call that? Bottom-up/top-down planning: firstly bottom-up, but then also top-down, so that all opinions already are taken into account accordingly. [...] In critical cases, where an impairment loss is involved, of course, the board of directors gets involved early in the process. This does not work at the last second, so as to surprise the board of directors. Valuation expert, support unit, group headquarters

In critical cases, where there was a risk for impairment or where an impairment would have a substantial impact, top-level management got more involved in the planning. This insight is in line with Sandell’s and Svensson’s (2017) finding that write-downs are part of a strategic dialogue in which organisations anticipate the reaction of the investors beforehand. The valuation expert at group HQ elaborated on this point:

Of course, the board of directors is also concerned with the external appearance, which means: when can we best carry an impairment? [...] In years where everyone knows that business was bad, the market expects you to have impairment losses. [...] Benchmarking is important as well. “They have impaired so much and we do nothing. Can that be right?” Valuation expert, support unit, group headquarters

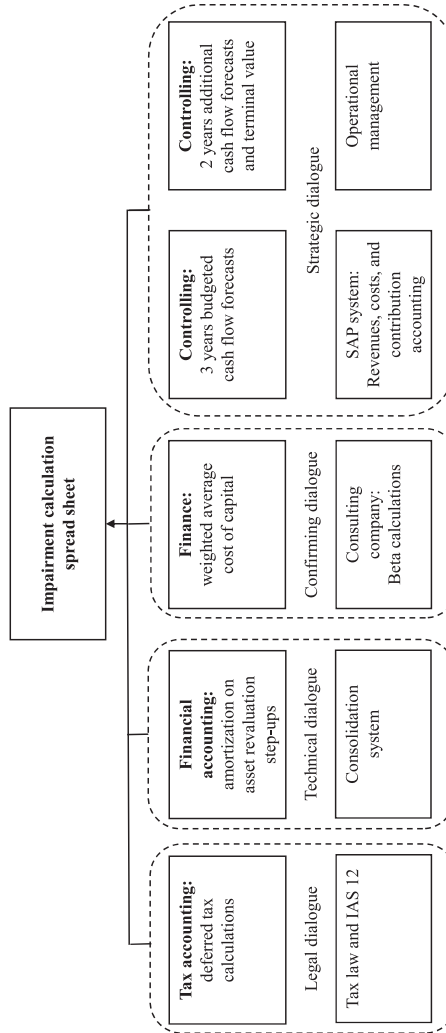


Figure 2.
Negotiation of inputs

This quotation suggests that organisations do not necessarily avoid impairments. Whilst impairments can signify bad management after a merger, organisations might also want to show impairments at different points in time because there is an opportunity to show negative figures in a big bath or because not having an impairment might suggest non-realistic expectations about the future.

The two additional years of cash flow forecasts were part of another *strategic dialogue* at the time of impairment testing. Providing these two additional years of forecasts felt alien to the companies because there were significant amounts of uncertainty and little use for these figures operationally. Principally, the companies could follow two strategies: extrapolating the budgeted figures in a normal (linear) development or including ambition for the future by breaking away from the past. The former was the easier road because it mirrored the expectations of the standard setters [13] and the financial accountants at HQ. Connecting to the immediate past, however, was particularly problematic during the time of investigation for this study. The financial crises had affected the group significantly and the budgets still carried forward low expectations for the future. However, in 2010, the outlook for the organisation had changed and the companies were hoping to avoid further impairments to their investments, trying to break free from the restricting budgeting figures. To convince the auditors and HQ about ambitious figures, the companies needed strong allies. The next section takes up the issue of how to persuade others about an ambitious wished-for outcome, particularly in a situation where there was still uncertainty about future prospects for the industry and for the overall society.

Similarly, to the cash flow forecasts, the discount rates were debated in a *confirming dialogue*. Whilst the finance department at HQ was perfectly capable of calculating the WACCs, the department needed stronger allies to be able to convince. The head of finance explained this as follows:

Essentially, he [one of the staff members] has all the betas of the world, so in principle, we could calculate it [WACC] on our own. However, we take help from a consulting firm in some sort of pre-matching, so the consultants refine the information that we then present to our auditor. It has different persuasive power, argumentation strength if you will, if another auditor has prepared the information as compared to me and my colleague. Of course, we set some signs of quality as well, but it is better if it is also signed by an auditor. Head of corporate finance, group headquarters

The association to the external party gave “persuasive power” to the figures. This quotation excellently shows that each actor transforms the token in some way. The consultants needed to “refine” the information. The strength of the relation matters in the negotiation, where the strength of the actor is defined by its own network of associations. Essentially, the auditor and the other relevant actors needed to be able to believe in the value, requiring a level of trust that lies with the associations. The finance department “has some sign of quality”, but was not strong enough alone.

Finally, the terminal value, calculated as a perpetual annuity, was an important part of the current value calculation. In the case company, this value was considered merely a technicality by HQ, companies and the auditors, and therefore rarely gave matter for concern. However, an instance mentioned by the head of accounting at HQ confirms that the strategic ambitions and dialogue concerning impairment values mentioned above were relevant at different points in time, from the budgeting process to the construction of the recoverable amount. Consider the head of accounting’s explanation:

Last week, for example, we made a political move in our balance sheet, where technically [...] we were safe regarding an impairment. However, we saw some future risks in the risk management

report of one of our sectors. [...] So, we decreased the terminal value growth rate by 0.5% and produced an impairment loss. Our auditors were really angry that we changed the calculation without prior notice. We just argued that our expectations had changed. [...] For us, this is normal prudence. Head of accounting, group headquarters

The head of accounting favoured the construction of an impairment loss as prudent. In German accounting practice, the prudence principle still carries much weight with practitioners, an aspect that likely contributed to the persuasion of the auditors in this case. Statements like these hint at how the interpretation, use and enforcement of IFRS standards will be bound to the national context [14]. More importantly, this statement implies that the company – at the highest level – strategically decided when an impairment would be most fitting. This stands in stark contrast to the idea of representing some verifiable truth. The auditors seemed to have few options to argue against these management expectations. What remains is an auditing practice that resides with the assurance of the process and the calculation tool rather than the inputs (Smith-Lacroix *et al.*, 2012).

Overall, it took external nods and convincing arguments to build a consensus about cash flow forecasts and discount rates. Given the three moments of becoming, the next section elaborates further on the question of how some actors and arguments became more persuasive than others in the negotiation of calculation inputs.

Persuading others about a wished-for outcome: current value as the imperfect number

The analysis of persuasive power takes Dambrin's and Robson's (2011) framework as a starting point to highlight different aspects that enabled the organisation to conclude the negotiation of inputs. Whilst the four elements are helpful, the analysis shows that some of the extant ideas need to be refined and complemented in the context of financial accounting.

Bricolage as enabler. Inscriptions are important in producing facts (Latour, 1986b; Robson, 1992). Dambrin and Robson (2011) elaborate on this statement by highlighting the importance of information systems. They find that control was an outcome of combining and triangulating different reports in a bricolage of inscriptions. In the case group, this element of persuasion became particularly clear in relation to the cash flow forecasts and the beta assessments for the WACC calculations. Different reports, assessments, visualisations and descriptions were combined in the different dialogues, within the organisation and with external parties. The external parties provided documentation that strengthened the bricolage of reports, system extracts and visualisations because they had access to even more systems and analysis tools producing even more inscriptions.

Following the notion of relative reliability (Huikku *et al.*, 2017), the traces making up the number are reliable if they abide by the norm. The norm is an extrapolation of the past, some industry average or shared expectations about the future prospects for society. Hence, trying to include abnormal ambitions will be a struggle. The case analysis suggests that organisations still might be able to argue their ambitious case in some instances. In 2010 and 2011, the future prospects for the economy were still uncertain. The case company's industry showed signs of upward development, but these fragile developments were still very uncertain. For instance, for fear of future underperformance, HQ had instigated several new routines to limit investments and to enhance central control over the decision-making processes.

Breaking free from the low budgets prepared as an aftermath of the financial crises was a difficult undertaking and evoked questions by the HQ and the auditors. Drawing on

industry averages was equally challenging because the entire industry was still trying to agree on what the future might bring. Whilst [Huikku et al. \(2017\)](#) implicitly suggest that it is possible to readily draw on industry averages to argue for a reliable future estimate, this case suggests that the industry prospects the organisation drew upon were created by designing a bricolage of traces that presented a positive picture of the industry. The traces chosen to present the industry were equally important as the allies presenting these traces:

The planning came from July 2008 for the budget 2009. If the world breaks down, no one knows where the journey will lead you, and therefore the planning was very pessimistic. [...] In such situations, we are the fire brigade and help our colleagues with our expert knowledge. We have very good and early contacts with our banks, which also help us to prepare presentable and convincing arguments, where we use long-term analysis to show that the current valuation is unique. That we can see tendencies, and therefore can use different growth rates. [...] In the end, we produced a book with 25 pages where we reflected upon our impairment test from different angles. [...] We managed to convince our auditors of the enormous growth rates. Therefore, it never came to impairment. Head of corporate finance, group headquarters

As the head of corporate finance explains, it took “a book with 25 pages” to convince the auditors. The book combined many different inscriptions and relations because it linked the company to banks, analysts and market research institutes. The person further explained:

They [the auditors] fight long and sustained. I always try to provide a lot of information, which they need for internal assurance. [...] I understand this. It's their job to be critical. And therefore I write and document a lot. I know exactly what they need for their internal documents. That's fine, the more they get, the calmer they are. Without looking closely, whether what I provided is relevant for the solution or not. Head of corporate finance, group headquarters

The auditors need the external relations and the cascade of inscriptions for their “internal assurance”. This observation is in line with [Smith-Lacroix et al.'s \(2012, p. 43\)](#) observation that auditors have become some kind of intermediary that needs to rely on other systems of expertise.

Auditors need to be able to believe in the traces provided, to relieve themselves from further investigation. The quantity of information provided seems at least as important as its content. Combining and superimposing different inscriptions was the mechanism that made things auditable ([Power, 1996](#)) and the combination of many different forms allowed for interaction and triangulation ([Justesen and Mouritsen, 2009](#)).

Unlike the case of the drug representative's self-assessments in [Dambrin's and Robson's \(2011\)](#) case, however, the bricolage and triangulation of information could not exclusively build on organisational internal inscriptions. In a financial accounting context, the bricolage needs to span across and outside the organisation, including allies such as banks, analysts and market research institutes. Additionally, not only the number of traces was relevant but also their associations, providing them with legitimacy. Organisation external valuation experts were necessary to create a “network of trust” ([Power, 1996](#)) that created legitimacy for the judgements. The next section elaborates on why these external allies were so important.

Methodological opacity as an enabler. A key element in [Dambrin's and Robson's \(2011\)](#) study that kept the performance measures working despite a broken chain of transformation was the methodological opacity of the measures. The pharmaceutical representatives did not understand the calculations. Instead of raising objection as could be

expected, this seemed to enable the representatives to accept the measures because they could “genuinely believe” that they were appropriate, and thus carry the valuation into a consensus (Chua, 1995, p. 132). The authors explain:

By obscuring the lack of any trace in inscriptions, methodological opacity assists enrolment. Transparency would offer opportunities to question the interruptions of traces between drug reps’ activities and the performance measures shaping their rewards. Dambrin and Robson (2011, p. 441)

In a similar manner, the dispersed nature of the impairment calculation, assisted by the different dialogues and negotiations across time and space, ensured that few actors understood the entire calculation. The auditors and the experts of the group accounting team were familiar with the procedures, but even these parties were not involved in all details of the customisation of the tool. Several people referred to their role in the process as “one part of a big wheel”, where the individual positions were clear in terms of working tasks, but unclear in relation to the overall purpose.

Additionally, this present study suggests that methodological opacity enabled consensus only to some extent. It facilitated the inner-organisational discussions between operating units and HQ, and discussions within HQ between the different parties involved. However, to convince the auditors, another aspect was also important. At the time of investigation, it was still common practice that auditing firms also acted as accounting consultants for non-audit clients. The auditors, therefore, had likely implemented similar tools in other organisations and were familiar with the process. Further, it is part of the professional task of auditors to attest the methods and understand the processes.

To enable the auditors to believe in the numbers, the case analysis suggests that it was important that the auditors were able to free themselves from the responsibility of scrutinizing and challenging every single measurement input. To be able to leave some opaque aspects in the process allowed for the closure of the discussions. Trusting in the betas for the WACC calculations, for example, was relatively unproblematic, but only if the consulting firm got involved. The closure of the matter was achieved through external relations with a similarly strong ally, i.e. another auditing firm that acted as an accounting consultant. The consulting company built the gateway to even further allies such as rating agencies and banks. The auditors needed a notion of *mystification* (Boland, 1982) to be able to believe because the vast amount of documentation provided by the firm gave transparency but not enough strength:

The myth that a profession possesses special wisdom with regard to certain moral mysteries establishes its control over a domain. Searches for rational justification within the domain lead to the development of checklists. These official codifications of folklore become the recognised techniques of the profession. (Boland, 1982, pp. 120-121).

The trust in institutions builds on a “myth of special wisdom”. Strong and international networks defined the strengths of the consulting firm, its brand and its perceived wisdom. In addition, the consultants were a gateway to far-away traces and actors (including banks and rating agencies), where the making of the judgements and traces largely remained a mystery. Consequently, part of the institutionalised respect and legitimacy for the traces provided was due to the complete silence as to how exactly these judgements came about. As described earlier, in the case of a challenge, the different parties provided a “cascade of inscriptions” to produce facts (Latour, 1986b). It is plausible that the consulting firm itself would have been unable to verify some of the traces, becoming an intermediary itself – a mere link between analyst forecasts, bank

databases and other sources of economic information – adding legitimacy based on its company history and brand.

The substantive knowledge of the consulting team which provided the betas may not have been more significant than that of the group's finance department, but it was external and it was trusted enough by the auditors to relieve themselves from objection. The external experts had experience and network (Glückler and Armbrüster, 2003), expertise (Morris and Empson, 1998), image (Power, 2003) and access to banks, analysts and market research institutes. Furthermore, they were understood as distanced from organisational politics. These parties were, therefore, able to confirm the network of trust (Power, 1996) required to relieve the auditors of their objections.

Ambivalence of professional identity as an enabler. A further aspect incorporated in Dambrin's and Robson's (2011) study is the ambivalence of the pharmaceutical representative's professional identities. In their analysis, the representatives had a pharmaceutical background and considered themselves as medical professionals rather than sales personnel. However, backstage these people seemed to have more of a commercial sales orientation, creating an ambivalence in their professional identity that made them more appreciable of the performance measures and bonus systems in place. With a positive attitude towards these measures, their imperfect nature seemed less aggravating.

The aspect of ambivalence was less prominent in the present study. However, there seemed to be a *transformation in roles and understanding of the different professional identities*. With the IFRS introduction and the harmonisation of databases, financial and management accounting moved closer together. New practices like impairment testing further enhanced the communication between the fields, requiring the different units to work closely together. Consider the following statement from a head of reporting:

There are almost no issues that I am not involved in. Even investments, when we have something in mind, will not go past me today. They would usually come and let me have a look so that I can tell them how it looks in the balance sheet. Head of reporting operational unit 1, division E

The strong separation between financial and management accounting that had been present in Germany for a long time faded into changing roles of controllers and financial accountants. This financial accountant, for example, explains that investments had to be planned together – a domain that previously was exclusively handled by the management accountants – because the managers and controllers were unable to assess the full extent of the transactions over and above the income statement. Similarly, the finance department had to step in and help the operational units to convince their auditors about ambitions future cash flows and growth rates with a bricolage of inscriptions as elaborated above because they were the organisational link to outside associations such as rating agencies or market research institutes.

Compared to the ambivalence of professional identity described by Dambrin and Robson (2011), where the individuals seemed to have an ambivalent self-understanding of their identity as pharmaceutical representatives, the transformation here related more to their organisational roles, the practices they performed and the technologies used. These transformations in professional identities played an important part in the creation of faithful values because the transformations brought distant actors closer together. The closer link observed also in previous studies (Hemmer and Labro, 2008; Jones and Luther, 2005; Weißenberger and Angelkort, 2011), enabled a distributed cognition (Okamoto, 2014) and

enhanced the perceived quality of accounting information (Hemmer and Labro, 2008). Essentially, the transformation of professional identities gave strength to the network because it enabled the construction of more convincing inscriptions. Professional identities, therefore, also played a role in this case group. Whilst not ambivalent, the transformation of professional identities towards more connectivity improved insight and enabled the necessary trust in numbers.

Promotion of practical action as an enabler. As a final key element, Dambrin and Robson (2011) present the control systems as enablers of practical action. They show that control systems not only facilitate control, discipline or reward of the pharmaceutical representative's actions, as depicted in previous management accounting literature. Their findings suggest that the control systems also enable a more efficient practice of the representatives in the form of self-organisation and self-management. The inscriptions produced to report their actions to the superiors also played a significant role in their own work. The inscriptions visualised and organised their tasks, making the communication with customers and colleagues more efficient. In other words, the inscriptions fulfilled a practical need.

As discussed in the context of professional identities, the analysis presented here suggests that the bricolage of inscriptions produced with the help of accounting systems to prepare an impairment test might have improved the communication between different parts of the organisation in some respects. However, this argument is a positive effect more from a financial reporting quality perspective than from the individual controller's perspective. The controllers felt less able to fulfil their tasks without asking a financial accounting colleague. Operational staff usually had a negative attitude towards impairment calculations because of the additional administration and limited internal use.

However, the case material shows an important aspect that resembles the idea of enabling practical action. The financial accounting context differs from the management accounting context because it is bound to standards with legally binding requirements for listed companies. Essentially, the organisation had a *practical need* for closure. There had to be a value in the end. This practical need was an efficient motivator both for financial and management accountants, as well as managers. Everyone involved, including the auditors, was aware when the reports had to be finalised because the measurements came in a clearly structured sequence of measures and tasks, ranging from the budgets to the reports to HQ, to the HQ adjustments like impairment losses and finally to the statutory financial reports. Without this central element of need for closure, it is doubtful whether a calculation like impairment testing would prevail within an organisation.

Interestingly, the practical need for the calculation of impairment tests, technically, is only connected to the financial accounting side (continuing with a linear amortisation of goodwill likely would have been sufficient for management purposes). Operations management is not legally bound to financial accounting standards. This case, therefore, also suggests that the association between financial and management accounting had grown so strong in this organisation, transforming systems, professional identities, rules and routines, that the different actors did not see an alternative where operations handled matters separately from financial accounting.

Concluding discussion

This study set out to shed light on the tools, processes and negotiations around the formation of current value measurements in impairment testing. Particularly, this study

aimed to contribute to previous knowledge by illustrating how one wished-for social outcome became more legitimate or faithful than any other.

The study confirms and clarifies earlier studies concerned with the formation of current values. Earlier studies have shown that impairment values are constructed in a wide-spanning network of actors inside and outside the organisation. These actors mobilise inscriptive devices that distribute the responsibility for the values in a form of relative reliability (Huikka *et al.*, 2017) when many parties agree on the most relevant information (Power, 2010). An important aspect of the strength of such networks is that they externalise and proceduralise evidence processes, making things “auditable” (Power, 1996, p. 307). The externalisation and proceduralisation are what Mouck (2004) formulates as “the rules of the game”. When the procedures are in place and agreed upon, negotiation only will arise about the inputs and outputs because the inscriptive device becomes a fact-producing machine (Latour, 1999). This study contributes by disentangling the formation of the rules of the game into two different moments of relational becoming to clarify the complexity involved in notions of verifiability or faithful representation.

Previous research highlights the politics of standard-setting relating to the definition of appropriate calculation procedures and the limited connection between regulation decisions and accounting context (Baudot, 2018; Georgiou, 2018; Young, 2006). If we consider these negotiations as a prelude to the first moment of translation between an organisational world and a financial sign, then the analysis shows that the standard requirements following these negotiations are not as readily usable and understandable as sometimes assumed in an organisational context. Whilst compelled to abide by the regulations, organisations need to bring the principles included in the standards into the organisation as accounting rules and systems. Calculation methods like a discounted cash flow method with a terminal value as a perpetual annuity are unchallenged practices to create current values (Huikka *et al.*, 2017), but the specifics of the calculation are negotiated in a network spanning inside and outside the organisation.

In the second moment of translation, the principles then need to be further transformed into inscriptive devices that conclude the rules of the game. The inscriptive devices included in the network – the calculation tool, the reporting packages and the consolidation system – are important actors in convincing central allies (Hyvönen *et al.*, 2006; Taipaleenmäki and Ikäheimo, 2013). The analysis illuminates the shadows of the negotiations in the case company, highlighting that the interpretation of accounting standards creates a form of compromise that is more concerned with rule compliance than actual meaningfulness (Durocher and Gendron, 2014). Creating a standard-compliant procedure that pleased the consultants and the auditors led to a calculation practice that alienated operational management because it forced the organisation to imagine cash flow forecasts that had no connection to operational practice.

Whilst the case material shows positive effects of a closer relationship between financial and management accounting in a shared language, enhanced strategic interaction and shared databases (Hemmer and Labro, 2008; Jones and Luther, 2005; Weißberger and Angelkort, 2011), the analysis also highlights some of the problems connected to a closer relationship. Hemmer and Labro (2008) argue that the closer connection between financial and management accounting figures leads to increased relevance of the information both inside and outside the organisation. In the case company, the closer connection and transformation of professional identities made the inscriptions more convincing and the shared practices and financial language enabled practical action. However, the downside of this connection might be that the compromises created in the process of IFRS implementation might not necessarily fit with the operational practices, particularly in large organisations where different practices likely were in place before the introduction of IFRS. A unification of practices and enhanced cooperation through a shared financial language, therefore, might also lead to a loss of local specificity and information relevance. Nevertheless, the integrated

data systems and the calculation tool were crucial to distribute the responsibility for the values and to create auditable epistemological objectivity.

The study further contributes by illustrating how the impairment testing practice was linked to the organisation's strategic dialogue. Sandell and Svensson (2017) show how organisations anticipate shareholder reactions already in their financial reports, concluding that financial reporting is more of a dialogue than a representation. This case study contributes by illustrating how the organisation strategically worked with impairments relating to their budgeting process and relating to the construction of actual calculation outcomes. Top-level management got involved more closely in budgeting processes of impairment critical CGUs, assessing how and when an impairment should be carried. The material even shows one instance where the organisation constructed an impairment loss to be able to show a more prudent performance. This suggests a strategic concern with impairment testing that extends the notion of multiple-use traces suggested by Huikku *et al.* (2017). In critical cases, these multiple-use traces might not be as independent and unpolitical as assumed but create a procedural legitimacy because they connect the calculation to different actors, times and spaces.

An important aspect of financial accounting extrapolations is the notion of normalised expectations (IAS 36.33c). Huikku *et al.*'s (2017) case study shows how it was impossible for the organisation to break free from the norm: the past, the industry average or wider societal prospects. Due to the time setting after the financial crises, this case study contributes by illustrating that "the norm" can also be in dispute. Under such circumstances, actors need to apply similar methods of persuasion as summarised in Table 1 to convincingly present what the industry average or societal expectations are before they can break free from their own organisational past documented in the operational budgets.

Finally, based on Dambrin's and Robson's (2011) four key elements of persuasion, the study contributes by proposing a framework that enables us to understand how organisations cope with the task of creating faithful representations of an imagined future. The four key elements of the framework are summarised in Table 1.

The four elements of persuasion enabled the different actors to convince others about their views. Whilst Barker and Schulte (2017) make an important point that a faithful representation of Level 3 measurements can be never more than an illusion, focussing on these four elements of persuasion enables an understanding of how this illusion can become convincing enough to close the matter of concern.

The practical need for closure is a central driver of consensus that differentiates financial accounting from the management accounting context. The legally binding need for closure prevents the different actors from remaining in dispute. To reach a consensus, however, the bricolage of inscriptions needs to span wider than in Dambrin's and Robson's (2011) case. The network needs associations inside and outside the organisation. Organisational actors such as in-house valuation experts and accounting information systems enable triangulation but do not carry enough authority alone in the current value context. The importance of external actors – both human and non-human – is based on the legitimacy of the actors due to their pre-existing associations with a wide network spanning all over the world.

Further, the case analysis suggests that methodological opacity as proposed by Dambrin and Robson (2011) is not strong enough alone in the context of financial accounting because a central task of the auditing process is to understand and attest the methods. Instead, this study proposes that, to relieve auditors from further investigations, the calculations have to be mystified by involving acceptable external parties and a cascade of inscriptions, traces that are far enough from the organisation that their construction is unknowable even to actors that understand and orchestrate the calculation.

Key elements of persuasion	Imperfect numbers in a management control setting (Dambrin and Robson, 2011)	Current values as imperfect numbers in a financial accounting setting
Bricolage of inscriptions	Accounting systems draw together a variety of inscriptions from different organisational information systems in a calculation dispersed in time and space. The bricolage enables triangulation of information that creates legitimacy.	In a financial accounting context, the bricolage of inscriptions needs to span inside and outside the organisation. Hence, the network has to span wider around the calculation, including even further traces to be trusted. The authority of the information builds on the additional associations the actor can bring the network. Regarding consultants, this strength builds both on the organisation as an institution and from being a gateway to even further-reaching associations to analysts, banks and market research institutions.
Methodological opacity and mystification	Imperfect numbers become more trustworthy if the calculation is opaque. Not understanding a calculation completely enables people to believe in and have a positive attitude towards the measure.	In current value calculations, few people understand the entire calculation and no actor understands the making of all the traces included. For central actors such as auditors and valuation experts, however, the calculation is not opaque in the meaning defined by Dambrin and Robson (2011) because these actors are familiar with the makings of the values. The opacity instead stems from the mystery connected to the furthestmost traces included in the calculation and the authority and legitimacy of the actors producing them such as consultants, analysts or research institutes.
Transformation of professional identities	The sales representatives seemed to have an ambivalent professional identity that made them more acceptable of a sales performance-based bonus system despite the unclear link to their medically framed profession.	The study shows no signs of the ambivalence of professional identities. However, the closer cooperation forced through the introduction of IFRS contributed to a transformation of professional identities towards a more liberal understanding regarding the boundaries of the different professions.
Practical need for closure	The imperfect measures were not just perceived as a control mechanism but enabled a more efficient work practice due to enhanced communication and interaction. This created a positive attitude towards the measures.	IFRS and current value accounting have brought financial and management accounting closer together, simplifying coordination and communication efforts. In addition to a management control context, statutory reporting is bound to a legal commitment that creates a practical need for closure. The involved time aspect pressures the actors to agree at some point.

Table 1.
Overview of the key
elements of
persuasion

Finally, the study shows some of the consequences of a closer relationship between financial and management accounting practices observed in previous research. Integrated systems and a shared language created a ground for distributed cognition (Okamoto, 2014). Internal accounting information became more reliable through the technical links and harmonised practices (Hemmer and Labro, 2008), which strengthened the network around the current values. However, the transformed professional identities also created frustration for operational staff because their objections had no bearing in the face of strong financial accounting actors such as auditors, consultants and group HQ.

Overall, this study shows that the construction of a faithful representation involves a lot of work from diverse actors across time and space. The relations that make up the network are not random. Instead, each source forms a network itself that builds on a dialogue of even more actors and traces. Whilst researchers tend to draw ever stronger lines between, e.g. financial and management accounting, practitioners have to handle the interrelations between different fields of organisational action on a day-to-day basis. This case illustrates how many parts of the organisation worked together to form a faithful representation. The interrelations have implications for researchers because management control systems will be influenced by financial reporting standards. Similarly, the meaning of financial reporting requirements will be transformed with each step of operationalisation. Understanding the micro-processes involved in interpreting financial standards in organisational settings also holds implications for standard setters because it suggests that we need to understand concepts like comparability and faithful representation in a national or even organisational context. Finally, the study is interesting for preparers of financial statements because it highlights the ways in which organisations can cope with the difficult challenge of creating faithful values, whilst at the same time upholding their strategic concerns relating to the communication of performance in their financial reports.

Focusing on the day-to-day challenges in orchestrating impairment tests, the study's empirical material presents a limited ground for investigating the first two moments of relational becoming relating to the politics of standard-setting and the operationalisation of the standard requirements into the organisations. Whereas shadows of the negotiations were traceable in the material, future research could empirically elaborate more on the detailed ways in which IFRS implementations create interrelations between standard requirements and operational management. This interrelation shapes organisational practices and defines what IFRS becomes at the organisational level. Furthermore, the design of the study prevented a further focus on the use, perception and transformation of calculated current values by different market actors. Initial findings suggest a rather limited interest in current values by investors (Georgiou, 2018). Contextualising financial accounting, therefore, means to look at interrelations to further depict the meaning of complex concepts such as relevance or faithful representation.

Notes

1. The trade-off between relevance and reliability was included as a constraint in this old version of the conceptual framework.
2. In the context of impairment testing of goodwill, IAS 36 specifies a general measurement procedure and disclosure requirements regarding the key assumptions.
3. The 2018 version of the conceptual framework principally follows the 2010 definition of faithful representation, albeit lessening the focus on the process and accuracy of the description of measurement uncertainties. The standard setter opted for a vaguer formulation, requiring the information needs to "represent faithfully what it purports to

represent". The connection to verifiability is still perceptible in this formulation, which the standard setter tries to counteract by describing verifiability as a consensus of knowledgeable, independent observers. In relation to this study, the essence of faithful representation, therefore, holds the same consequence: organisations are required to enact a form of epistemological objectivity. For an extended discussion of the development of the IASB conceptual framework and the relationship between reliability and verifiability in the different versions of the framework see (Pelger 2020).

4. Huikku *et al.* (2017) consider the calculations of recoverable amount as one calculative practice, not separating explicitly between fair value less cost to sell and value in use calculations, as both are current values that need to convince allies about future expectations. Overall, fair value less cost to sell is seldomly used in practice and impairment calculations, therefore, generally focus on the value in use calculations.
5. Latour prefers the term actant because the term actor is so closely related to people. This study uses the concept of actor because it is most established in the accounting literature. Essentially, an actor or actant is an entity that acts or that is made to act by other entities.
6. The analysis in this study stops with the inclusion of the values in the annual reports. Whilst the values at that time are stable and accepted enough to be included in an artefact like a financial report, the translation model also purports that the numbers in the report will need support to carry on further. If investors or other stakeholders do not use the information, the number loses interest and stops travelling. Each new ally in the network of the number, again, is likely to transform the token in some way, e.g. by including it in another calculation, adjusting it in some way or rejecting and recalculating it.
7. If not indicated otherwise, the study refers to the conglomerate as a whole as "case group" or "organisation". The individual subsidiaries are referred to as companies.
8. Under German GAAP, goodwill was amortised on a linear basis.
9. Although the operational units were responsible for providing the information necessary to calculate the cash flows in the test, the definition of CGUs was subject to discussion between the divisions and group HQ. CGUs did not always represent legal entities and sub-units could instead cover several operational units or parts thereof.
10. These asset revaluation step-ups were the consequence of fair value revaluations during business combinations. In accordance with IFRS, revalued assets are depreciated or amortised over the remaining useful life of the asset. In the group, the consolidation system calculated the amortisation/depreciation for the historical asset cost separately from the amortisation of additional value step-ups from the revaluation.
11. Whilst IAS 36 requires organisations to use pre-tax cash flows and pre-tax discount rates, it is common practice to include deferred tax liabilities in the carrying amount of the related CGU to prevent day-one impairment losses (BDO Global, 2020, p. 20).
12. For a discussion on the complexity of negotiating the meaning of faithful representation and compliance in an enforcement context, see (Hartmann *et al.* 2018).
13. IAS 36 *Impairment of Assets* specifies that companies shall "estimate cash flow projections beyond the period covered by the most recent budget/forecasts by extrapolating the projections based on the budget/forecasts using a steady or declining growth rate for subsequent years, unless an increasing rate can be justified" (IAS 36.33c).
14. The difficulties of enforcing compliant goodwill impairment testing has been a top issue of the German financial reporting enforcement panel (FREP). For several years, including 2010 and 2011, the accounting treatment of business combinations, specifically purchase price allocations and goodwill impairment testing, have been at the top of the list of accounting infringements (FREP, 2010, 2011). The statement here suggests that companies strategically work with their impairments and that there seems to be little ground to disagree management judgements.

However, the statement also suggests that in the eyes of the head of accounting, this prudence represented the best managerial estimate and could, therefore, be seen as compliant with the management approach of IAS 36 and as the most relevant information. Compliance, as concept, therefore, is more problematic as often assumed.

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