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Obtaining entity-specific information and dealing with uncertainty: Financial accountants' response to their changing work of financial reporting and the role of boundary objects

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ABSTRACT

Although recent academic debate highlights that production of financial statements is challenging from financial accountants' perspective, little is known about the social situation in which those statements are produced. To address this gap, a study examined how financial accountants acquire the entity-specific information used in producing financial statements and how they deal with the uncertainty that the situation entails. The study examines cases of implementation of International Financial Reporting Standards, considers the new kinds of entity-specific information the standards require, and argues that the most critical issue in such implementation is that the accountants grow more dependent on the business managers' knowledge. The paper describes how the case firms' accountants responded to the necessity of 'opening up' the business perspective by adopting models (from a consulting firm) that took on a vital role in organising financial statements' production and rendered it more manageable. These models need not actually lay bare the business perspective as the business managers understand it; rather, they help the accountants maintain and negotiate task boundaries related to financial reporting. The study argues that the outcome (or possible outcomes) of financial reporting play an important part in controlling this production, and the accountants actively used them as a resolution tool when the business side was unable or unwilling to give a 'clear view' of the business operations.

1. Introduction

Scholars have argued that the ability for an entity-specific perspective to play a role in measurement of the fair value of non-financial assets leads to 'a varied and inherently unstable accounting representation of fair value' (Barker & Schulte, 2017, p. 56) and that financial accountants prefer impersonal (external) traces to internal ones in the case of goodwill impairment testing because some internal traces are, for example, proposed by entrepreneurial managers and hence not to be trusted (Huikku et al., 2017, p. 69). Hayoun (2019), however, illustrated that 'values within financial statements – whether Fair Value (e.g. for Property Plant and Equipment) or Value-in-Use (as in impairment) – are two-dimensional' (p. 78). These dimensions are market aspects and entity-specific aspects. Hayoun has posited that the entity-specific perspective 'is not less factual than market based accounting', as 'it is "merely" a situation-sensitive measurement' (p.

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79). Furthermore, Hayoun showed how the International Accounting Standards Board (or IASB)'s 'own guidance – and not only preparers' behavioural or institutional tendencies – reflects this principle' (p. 78).

Although, in Hayoun's description (2019, p. 79), 'the indeterminacy of the accounting value is not a matter of the calculative power of markets but rather a property of the statement and business activities underlying it' (see also, for instance, Quattrone, 2016), little is known of the social situation (on social context and valuation as an action, see Hutter & Stark, 2015; Muniesa, 2012) in which financial statements are produced by means of entity-specific information or of how the actors involved in that process deal with the uncertainty created by the multifaceted social situation. This question is important because many standards require reliance on internally generated information, as Hayoun pointed out: 'All measurements aim to be supported by externally-corroborated facts, and all unavoidably involve subjective forward-looking estimates' (p. 75; also, for example, Penman, 2007). Furthermore, little is known about the accounting valuation/calculation infrastructure linked with the production of financial statements and assessment of profits (e.g., Lowe et al., 2020; Vargha, 2016).

To fill this gap, this study set out to understand how financial accountants acquire the new kinds of entity-specific information needed in the production of financial statements and how they deal with the above-mentioned uncertainty of the situation. The study focused on the accountants' perspective since recent academic debate on financial reporting standards (e.g., Ijiri, 2005; Ravenscroft & Williams, 2009; West, 2003) and fair value accounting (Barker & Schulte, 2017; Durocher & Gendron, 2014; Huikku et al., 2017) provides a starting point only, with some insights into how fair value accounting could be challenging from their perspective. Further grounding was provided by studies showing how International Financial Reporting Standards (IFRS) implementation requires business knowledge and a connection to business angles and may also blur the boundaries between corporate accounting and the audit field (Aburous, 2019; Lantto, 2014). Scholars (e.g., Ijiri, 2005; Ravenscroft & Williams, 2009; West, 2003) have argued that the role of accountants as providers of accounting information has been transformed from a task of describing phenomena into one of conjecture about the future or imaginary concepts, with some (West, p. 188, 2003; Ijiri, 2005) arguing also that the emphasis on abstractions places the opinions of company managers beyond rigorous scrutiny. West (2003, p. 188) found that 'such decisions do not involve accountants and auditors in exercising professional authority' and criticised the accounting profession for not 'seeking to ensure that accounting information corresponds with the actual financial features of firms' but concentrating on ensuring 'that financial statements have been prepared on the basis of prescribed technical accounting rules'. Finally, Durocher and Gendron (2014, p. 630) used interviews with Canadian professional accountants to draw attention to 'an important level of variability in practitioners' epistemic commitment toward fair value accounting, highlighting a lack of cognitive unity in the field'. They call for research examining whether the sorts of fragmentation and identity confusion they found 'have significantly impacted accountancy's ability to secure and expand jurisdiction' (p. 651).

The study examined IFRS implementation in two firms that had followed Finnish Accounting Standards (FAS), which can be classified as continental European accounting (details are provided by such authors as Nobes, 1998) and differs markedly from IFRS (Lantto, 2014; Lantto & Sahlström, 2009), revealing how adopting IFRS required the case firms' financial accountants to obtain new kinds of entity-specific information and how this rendered the accountants more dependent on business managers' knowledge with regard to three key topics: accounting for business combinations, goodwill impairment testing, and provision measurement.

This paper contributes to the literature on such themes (e.g., Lowe et al., 2020; Vargha, 2016) by providing information on the valuation techniques and showing how various models obtained from a consulting firm have aided in organising financial statements' production and decisions on how to bring the business perspective and the business managers into their production. These models rendered the production task more manageable and ensured a hierarchical work approach. The paper contributes also to work examining workplace profession boundaries and the role of boundary objects in collaboration across occupation-specific groups (Bechky, 2003a; Carlile, 2004; Nicolini et al., 2012; Okhuysen & Becky, 2009; Orlikowski, 2007) by developing an argument that the models help the accountants maintain control over the financial reporting task. Although the study's findings show how these models are helpful from the financial accountants' standpoint, they also reveal that the models do not bring the accounting and business perspectives genuinely closer to each other and may even create problems for the accounting process. This result is consistent with what Hayoun (2019, p. 79) has suggested with regard to generalised market prices: such models are not necessarily able to 'fully capture the specificity of individual judgment, unique interrelations, and situated value constellations' (see also Quattrone, 2016). The study's argument that the models may actually limit opportunities to 'open up' the situation in that they are not necessarily able to reveal the business perspective – for instance, because of unique interrelations and/or managerial intentions and plans for the future – contributes to the literature in this area (Hayoun, 2019; Quattrone, 2016).

The two firms' financial accountants tried to respond to this challenge related to alignment – different views of the models and of the business angle, and an 'unclear view' of the business can result – by turning their and business managers' attention to outcomes (or possible outcomes) of financial reporting. The study found that the outcome started to play a mediating role in the process as suggested by the pragmatist approach (see Lowe et al., 2020). Analysis revealed ways in which these outcomes can bring discipline to the financial reporting processes but also how the accountants actively use them to gain managers' commitment to contributing to the processes. Hence, the study adds to scholarship (Carlile, 2004; Nicolini et al., 2012; Okhuysen & Becky, 2009; Orlikowski, 2007) by refining our understanding of how (and why) objects' role and function change over the course of collaboration across occupation boundaries.

In addition, the study argues that the models facilitating collaboration helped to shift the focus toward outcomes and learning about them. Upon analysing the perspective of financial statement users, Georgiou (2018, p. 1324) concluded that investors and analysts do not care much about the market value of individual assets and liabilities; rather, 'they are interested in accounting numbers that help them to assess how the business has performed'. The present study illustrates that in cases wherein the business side is not able/willing to convey a clear picture of the business, the financial accountants shift focus to discussing outcomes (at least potential ones) to resolve matters and to get the business managers involved in the production process. The study found that in these cases, these accountants and the business managers were called upon to start evaluating (simultaneously) the performance/profitability (outcome). Where Hayoun (2019) proposed that a given accounting item's interrelations with the entity's other assets and liabilities matters in the valuation (i.e., from an entity-specific perspective), the present study goes further in reasoning that, in general, the item's connection with the (prospective) business-performance (outcome) may play a role in the valuation. Finally, the study ties in with the work of Durocher and Gendron (2014, p. 652), who argued that practitioners 'refer to profitability issues when reflecting on the appropriateness of standards of practice': The present study shows how and why the actors may pay attention to these issues in real-world financial reporting processes. Following the lines of a pragmatist approach, the study suggests that 'profit' mediates what Lowe et al. (2020, p. 774) called 'the collective and dialogical process of valuation'.

The paper is divided into six sections, where the research design is presented next and Section 3 describes the theoretical framing. Section 4 describes the financial reporting and the work performed by the relevant objects in financial reporting processes at the two case firms. The findings are discussed in Section 5, before the conclusions are addressed.

2. Research design

I started the research process by collecting numerical data about the transition from the domestic standards of FAS to IFRS from the publicly traded firms' press releases (e.g., transition reports) that present the major changes in accounting standards in the conversion from FAS to IFRS and articulate the effects of that transition on consolidated financial statements. In all, 125 Finnish firms were required to issue transition reports in 2005. Moreover, to gain general insight and to identify the most important aspects of IFRS adoption in Finland – e.g., its most problematic/demanding facets – I collected this basic information about the adoption through three survey-based questionnaires, administered to financial analysts, financial managers, and auditors in early November 2005.

Having collected said data, conducted the surveys, and gathered relevant documents, I decided to concentrate on two organisations so as to gain more profound understanding of how accounting numbers are produced in accordance with IFRS in the relevant organisations. Therefore, I asked the firms surveyed whether they were willing to participate in a more in-depth case study. Ultimately, I selected these two firms because they had adopted numerous IFRS standards, among them the standards whose adoption was expected to have (and the surveys pointed to as having) the greatest effects on organisations and on accounting numbers.

The case firms, both established more than 70 years ago, had operations in Finland, other Nordic countries, and Eastern Europe at the time of the project. As have many other European firms (e.g., Drury & Tayles, 1997; Jones & Luther, 2005; Joseph et al., 1996; Wagenhofer, 2006), the case firms had been applying an integrated design for their accounting system for decision-making, financial reporting, and control work for nearly two decades. Accordingly, both firms started to use IFRS-based figures in their internal reports also. The two firms were organised in a decentralised manner and based on business units. In both firms, the actual execution of operations was left to the business-line and unit managers. They take responsibility for their budgets and are held responsible for the results (also getting rewarded on the basis of them), such as the profits of the business lines/units. While in the smaller firm B all the accountants worked in the centralised finance department, in firm A some of the accountants were 'decentralised' to work more closely with the division managers. However, the accountants working in the divisions and those in the corporate accounting group all were involved in the financial reporting processes.

The principal source of data was interviews[1] conducted between November 2006 and May 2009. Details of the interviews and the key responsibilities of the interviewees are presented in the appendix. In addition to interviews, I used my notes from informal conversations with the members of the IFRS adoption teams from both firms and the IFRS specialists (recruited in 2005 and in 2008) of firm A and confirmed some details via e-mail. My fieldwork also included direct observation in firm A (from the monthly meetings of the IFRS working group; see the appendix). In addition, with regard to both firms, I collected and reviewed publicly available materials such as annual reports, the Web pages of the firms, newspaper items (e.g., job advertisements), and some internal documents.

The study's field research material has its limitations and strengths. I concede that the number of both interviews and interviewees is relatively low. Moreover, I did not have an opportunity to interview business managers (e.g., managers of the business units/divisions) of the two firms. However, all key accountants involved in the financial reporting processes, in both firms, were interviewed. Also interviewed were two division controllers, who, alongside the business-line and unit managers, represented their respective divisions of firm A. While the accountants played a key role in the financial reporting, they could be expected also to provide insight into the financial reporting practices and changes in their work.

[1] I conducted the interviews at case firm B with another researcher because we were collecting data for another project in the very same meetings.

Although it is recognised that many other actors, not only the accountants and managers of the firms, contribute to financial reporting by translating, negotiating, and streamlining, this study concentrated on collaboration and negotiation between the accountants and managers in the two case firms. Therefore, the present paper does not, for example, provide analysis of how consultants and other actors outside the two case firms created the tools used in financial reporting.

Before 2005,[2] both of the Finnish case firms followed the FAS approach,[3] so the accountants working in these firms were used to accounting wherein the main function is calculating the profit for the accounting period and, therefore, accustomed to giving 'primacy to the direct measurement and recognition of the revenue and expenses related to the class of transactions' (Benston et al., 2006, p. 172). Since 1973, the FAS approach has been based on expenditure–revenue theory, which places emphasis on annual profit calculations and 'is coherently based on the realization principle for the recording of business transactions' (Näsi & Virtanen, 2003, p. 259). In addition, accounting practice in Finland has long been based on historical costs and focused on accounting for transactions (e.g., Lantto & Sahlström, 2009). This setting provided a fruitful opportunity to study the response of those accountants responsible for financial reporting to the changing work of that reporting in the two firms. The accountants were used to preparing and analysing information under both sets of standards: FAS and IFRS. Hence, although the data were collected 10 years ago, one of the strengths of this field-research material was that the accountants interviewed had an opportunity to reflect on what IFRS requires from them in light of their experiences of reporting in accordance with FAS.

The specific objective of the study and the theoretical framework guiding the analysis of the material were identified and accepted late in the research process, to allow the material to shine through (on 'naturalistic' or 'emergent' approaches, see Ahrens & Dent, 1998; Lincoln & Guba, 1985; Kurunmäki, 2004). I analysed the data in two steps. Firstly, I examined the interview material and thereby pinpointed the adoption of three particular entities as requiring new kinds of entity-specific information and, therefore, collaboration between the accountants and managers. Furthermore, I noted that the accountants identified this collaboration as the most difficult aspect (e.g., the most effort- and time-consuming one) of the financial reporting practice and IFRS implementation in the two firms. I also found that objects play a crucial role in this collaboration and actually influence social relations between the accountants and business managers, in both firms. Having identified these aspects, I analysed the data to shed light on the collaboration and on the work performed by the various objects in the collaboration in the two case firms. The main strength of this setting is that the work performed by specific objects becomes apparent because I focused on how the accountants and managers collaborated in practice (e.g., Bechky, 2003a; Orlikowski, 2002).

3. Theoretical framing

Professions usually compete for dominance over particular areas of work (Abbott, 1988). Although jurisdictional disputes do not always arise (e.g., Kurunmäki, 2004), members of a particular occupation usually guard their core task domains from potential incursions by competitors (Abbott, 1988). They do so through the opportunities that workplace interaction gives the members for enacting and for making solid claims (Bechky, 2003a). While investigations of workplace occupation boundaries are rare, Bechky (2003a, p. 721) does describe 'how task boundaries are maintained and challenged in an organizational setting where specialization creates significant interdependence and where the hierarchy generates differentials in status and power'. This paper likewise examines how the financial accountants obtained entity-specific information (for instance, by collaborating with business managers), with particular attention to interdependence of occupations. The study concentrated on objects because 'they offer a means to fruitfully approach jurisdictional issues at the workplace' (Bechky, 2003a, p. 724; on the role of techniques see, for example, Kurunmäki, 2004). Although the business managers collaborating with financial accountants do not necessarily seek to occupy accountants' territory *per se*, their activities may problematise and disrupt the capacity of the accountants to defend or extend their jurisdiction (see also Sikka & Willmott, 1995). The key question is how financial accountants defend/protect their financial reporting knowledge and keep their jurisdiction[4] secure while their work is becoming more dependent on business managers' knowledge.

[2] As are other firms listed on a stock exchange, the case firms were required by regulation 1606/2002 of the European Parliament and of the Council to comply with IFRS in their consolidated financial statements by 2005.

[3] In Finland, as in many other countries following continental European accounting, the objective of financial reporting has been to inform the tax authorities at the expense of other users of financial statements (see Pirinen, 2005). Since the 1960s, bookkeeping and financial accounting have been linked to taxation (Näsi & Virtanen, 2003; Virtanen, 2009). In practice, for instance, most of the tax incentives can be claimed only if the same treatment is applied to the items in question in the commercial financial statements (Näsi & Virtanen, 2003). In addition to tax incentives, Finnish financial statements have been affected by the fact that Finnish companies have been financed mainly by debt (e.g., Pirinen, 2005). This has given banks an important role as an interest group of companies, which means that, overall, their information needs have been taken into account better than those of investors. However, large and listed Finnish companies have had the option, though not an obligation, to follow the International Accounting Standards (nowadays IFRS) system, as this was included as an alternative in the legislation of the 1990s (see Pirinen, 2005). While these standards affected Finnish accounting legislation and practice during the 1990s, the effect has been secondary, on account of implementation of the European Union directives in Finnish legislation (Pirinen, 2005; see also Pajunen, 2009). More precisely, the reforms to accounting law in 1992 and 1997 harmonised Finnish accounting legislation with these directives (Näsi & Virtanen, 2003). For example, since the 1992 reform, the legislation has included the 'true and fair view' concept (Näsi & Virtanen, 2003).

[4] Lack of knowledge weakens professional jurisdiction (Abbott, 1988).

Work drawing on the concept of boundary objects (see Star, 1989; Star & Griesemer, 1989) suggests that objects play a role in transforming knowledge and changing practices across profession boundaries (e.g., Bartel & Garud, 2003; Bechky, 2003a, 2003b; Carlile, 2002; Swan, Bresnen, Newell, & Robertson, 2007). These studies emphasise the positive and performative aspects of boundary objects (Oswick & Robertson, 2009). Diverse kinds of boundary objects[5] or mediating artefacts (see also, for example, Briers & Chua, 2001; Brown & Duguid, 1998; Carlile, 2002, 2004; Carlile & Rebentisch, 2003; Chua, 1995; Levina, 2005; Wenger, 1998, 2000) facilitate the connection, support collaboration across diverse specialist groups, and/or enable co-ordination between the worlds. These objects are meaningful across different worlds. As Nicolini et al. (2012, p. 614) specify, 'they create the conditions for collaboration while, by way of their interpretative flexibility, not requiring "deep sharing"'. Therefore, the notion of the boundary object is helpful for shedding light on how groups co-operate without consensus (Star, 2010; Star & Griesemer, 1989). In a financial reporting context, Lantto (2014) has shown how boundary objects are useful in facilitating the interaction across the boundary between the reporting work and business interests. Lantto argues, for example, that systematic models (here, for goodwill impairment testing) act as boundary objects and facilitate translation of transactions and events into reported numbers.

Although the literature focuses on describing how boundary objects may 'act as anchors or bridges' (Star & Griesemer, 1989, p. 414), some studies also show that boundary objects can simultaneously 'generate conflict and reinforce boundaries across social and occupational groups' (Oswick & Robertson, 2009, p. 180; see also Bechky, 2003a, 2003b; Kim & King, 2004). In fact, Oswick and Robertson (2009, p. 181) have situated three emerging streams of research on boundary objects[6] within a discourse-analysis framework 'in order to highlight the ways in which boundary objects can equally be thought of as creating barricades and mazes, protecting and/or privileging different interest groups' frames of reference or occupational positions, rather than creating new shared understanding and perspectives which can inhibit and constrain the possibilities for change'. In addition, Bechky (2003a) shows how engineering drawings 'are used to legitimize work and maintain and challenge occupational control over task areas' (p. 326). These studies emphasise that 'boundary objects are not inherently apolitical or inert', in Oswick and Robertson's words (2009, p. 187).

Some scholars point to boundary infrastructure[7] as able to ensure that the wider social order is maintained and 'prevent positive change occurring' (Oswick & Robertson, 2009, p. 183). This may explain why some decentralised technologies fail to produce the expected organisational and infrastructural changes, along with why and how locally tailored applications emerge (e.g., Oswick & Robertson, 2009; Star & Ruhleder, 1996). Therefore, we should pay attention to infrastructure, which 'is something that emerges for people in practice, connected to activities and structures' (Star & Ruhleder, 1996, p. 112; see also Nicolini et al., 2012). In other words, we should be mindful of a 'host of objects that constitute the infrastructure [...] of daily work activities' and structure, anchor, and enable collaborative work (Nicolini et al., 2012, p. 614). These objects play an important role, although they may be categorised as 'boring objects' (Star, 1999) that are often forgotten. Within a given cultural context, the accountant considers a business combination agreement to be working infrastructure that is integral to preparing financial reports; for the business manager, it is a target for negotiation. The key question is 'when – not what – is an infrastructure' (Star & Ruhleder, 1996, p. 113).

In addition to infrastructure, Nicolini et al. (2012) argue that one should pay attention to the object(ive) of collective action that motivates collaborative[8] work (see also, for example, Engeström, 1987; Kaptelinin & Nardi, 2006; Leont'ev, 1978) and gain better understanding of why and how a given object takes centre stage or shifts into the background at particular times (e.g., Carlile, 2004; Nicolini et al., 2012; Okhuysen & Becky, 2009; Orlikowski, 2007). An object that is a background element and constitutive of infrastructure can take centre stage at some point and change role and function over the course of collaboration (Nicolini et al., 2012). These objects may become akin to 'prospective outcomes that start to motivate and direct activities, around which activities can be coordinated, and in which activities can be crystallized [...] when the activities are complete' (Kaptelinin & Nardi, 2006, p. 66; see also Nicolini et al., 2012). According to the cultural-historical activity theory (e.g., Cole, 1996; Davydov, 1990; Engeström et al., 1995), an object is (at least partly) emergent (Miettinen & Virkkunen, 2005) and a 'result of the interests of the community that gathers around it' (Nicolini et al., 2012, p. 621). Groups might retain their own interests, which may be aligned by the emergence of the collective object, per Nicolini et al. This object needs to be concretely present in the world so that it can hold these various elements together and make them work together (on this too, see Nicolini et al., 2012).

[5] These may include the following: repositories (e.g., a library or customer/supplier databases), or 'ordered "piles" of objects which are indexed in a standardized fashion'; ideal types (e.g., a diagram or atlas), which do not 'accurately describe the details of any one locality or thing'; coincident boundaries (e.g., the physical contours of a product), which are common objects that have the same boundaries but different internal contents; visionary objects (e.g., 'world best practice' or 'world-class manufacturer'), which 'have high levels of legitimacy within a particular community'; and standardised forms (e.g., methods of collecting, aggregating, and transforming data), which are 'devised as methods of common communication across dispersed work groups' (Briers & Chua, 2001, p. 242; Star & Griesemer, 1989, p. 410–411). While some of these objects have a physical form, some do not. They can form parts of larger systems but might, alternatively, be 'brought to life only through social interaction' (Briers & Chua, 2001, p. 240). One should 'look at objects not only as boundary devices but also as epistemic things, objects of activities, and infrastructures' and 'understand objects as something people act toward and with' (Nicolini et al., 2012, p. 603).

[6] These three streams of research address the development of 'boundary infrastructures' (Bowker & Star, 1999), pragmatic knowledge boundaries (Carlile, 2002), and the identification of 'temporal boundary objects' (Yakura, 2002).

[7] Multiple boundary objects and systems of boundary objects can grow to become 'boundary infrastructures', entities consisting of 'objects that cross larger levels of scale than boundary objects' (Bowker & Star, 1999, p. 287). For a list of characteristics of such infrastructure, see Star and Ruhleder (1996).

[8] According to Bedwell et al. (2012, p. 130), collaboration can be defined as 'an evolving process whereby two or more social entities actively and reciprocally engage in joint activities aimed at achieving at least one shared goal'.

4. Financial reporting and the work performed by objects

4.1. Three topics requiring new types of entity-specific information

According to the IASB's 1989 Conceptual Framework for Financial Reporting (for details of the framework and neoliberalisation, see, for example, Zhang & Andrew, 2014), the version in force when the key standards were written, one of the objectives for a financial statement is to provide 'decision-useful'[9] information for its users.[10] To reach its goals – and in contrast against the FAS approach – the IASB had adopted the asset/liability accounting model or balance-sheet approach (see Power, 2010) as the fundamental building block of accounting standards (see Benston et al., 2006). Therefore, focus was placed on the assets, the liabilities, and changes in these. Furthermore, IFRS was articulated similarly to other so-called capital-market-oriented standards (see West, 2003, p. 83) in stipulating that the term 'future economic benefits' is pivotal to the definitions of assets, liabilities, revenues, and expenses (see the 1989/2001 IASB framework, paragraphs 49–80).[11] According to the IASB's 1989 framework (paragraph 83), an item incorporated into the balance sheet or income statement 'should be recognised if: (a) it is probable that any future economic benefit associated with the item will flow to or from the entity; and (b) the item has a cost or value that can be measured with reliability'.[12]

It appeared that IFRS implementation's most critical issue from the financial accountants' point of view was that – especially with regard to the three topics discussed below – the accountants were required to obtain new kinds of entity-specific information and, in this, were rendered dependent on the business managers' knowledge, whereas they had worked quite independently before, under FAS.

4.1.1. Accounting for business combinations

International Financial Reporting Standard 3, 'Business Combinations', or IFRS 3, requires all business combinations to be accounted for via the purchase method. In accordance with this method, the acquiring company measures the cost of the acquisition and recognises the acquiree's identifiable assets and liabilities at their fair value[13]. In both firms studied, the process was organised in collaboration between the accountants responsible for IFRS 3 and the line of business in question. In practice, the management are required to use market value, if available, to determine fair value. When market values are not available, the management's measurements are based on the historical revenues from the asset and its use in future operations. The measurement of intangible assets requires management estimates of future cash flows (discounted), the future use of the assets, and the effects of these on the financial statement.

In one major difference from FAS, IFRS requires the acquiring company to identify various intangible assets which were not recorded in the acquiree's balance sheet. Like the other acquired assets, the acquiring company must recognise these assets at 'cost' (at acquisition-date fair value). Hence, the key difference in the move to IFRS from FAS is that IFRS expects the accountants to find business managers who can provide the information needed for identifying the 'new' assets (and liabilities) acquired, estimating the fair value of these, and determining their depreciation/amortisation periods. The accountants of the two case firms argued that this difference caused practice to change completely. While accounting for business combinations in accordance with FAS was found to be easy and straightforward, it was perceived to be demanding under IFRS, as the latter requires accountants to collaborate/cross boundaries between the accounting group and business units. The accounting analyst of firm B described the move from FAS to IFRS thus, with regard to what an accountant had to do:

> Before IFRS, one took a balance sheet [of an acquiree] and a cost of the business combination, and [by using the two] one counted the amount of goodwill, and that was all. Now [under IFRS], I send all kinds of forms to right and left [to various business managers] and try to find out who has the knowledge of this [the business combination / asset acquired] and who is the best source. And I send directions [to the business managers]. You cannot do [accounting] fast. It is a process that you try to start as soon as possible.

4.1.2. Goodwill impairment testing

Alongside accounting for business combinations in accordance with IFRS 3, another example of the process requiring a boundary crossing (and estimation of the future) is goodwill impairment testing. More precisely, International Accounting Standard 36, 'Impairment of Assets' (IAS 36), requires goodwill (i.e., a cash-generating unit that has goodwill allocated to

[9] The objective is to provide information that is useful in making decisions – e.g., decisions about whether to hold, buy, or sell the entity's securities.

[10] According to the IASB framework (1989/2001), 'the objective of financial statements is to provide information about the financial position, performance and changes in financial position of an entity that is useful to a wide range of users in making economic decisions'. Also, '[t]he users of financial statements include present and potential investors, employees, lenders, suppliers and other trade creditors, customers, governments and their agencies and the public'.

[11] The framework materials (for the 1989/2001 version) state: 'An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity' and 'a liability is a present obligation of the entity arising from past events, the settlement of which is expected to result in an outflow from the entity of resources embodying economic benefits' (paragraph 49).

[12] Under the IFRS framework, a variety of measurement bases may be used for financial statements, including historical costs, current replacement cost, and net realisable value and present value (see the IASB framework's paragraph 100).

[13] Accounting in accordance with IFRS 3 poses a complex challenge for the acquiring company in that the assets and liabilities recognised may comprise some not previously recognised in the acquiree's financial statements. The most complicated steps in the accounting entail valuation of intangible assets such as brands, patents, and customer relations – i.e., estimating future economic benefits.

it) acquired in a business combination to be tested for impairment annually and at any time there is an indicator of impairment. An impairment test is conducted by comparing the carrying amount of the unit's assets (including goodwill) with the recoverable amount of the unit's assets. In practice, this means that the goodwill impairment test process under IAS 36 includes phases such as identification of cash-generating units, allocation of goodwill to those units, and determination of a cash-generating unit's value in use via estimation of future cash flows and interest rates (used to discount cash flows). This makes the style of accounting for goodwill under IAS 36 completely different from that under FAS, which requires goodwill to be amortised in five years. Eliminating this amortisation caused a considerable increase in the profits declared by the two firms (13% and 38%) in 2004. This was because no impairment losses were recorded that year. In a year with a large impairment, profit might be lower than under FAS.

While calculating amortisation in accordance with FAS was an easy task for the accountants and did not require them to collaborate with the business managers, the above-mentioned phases that IAS 36 ushered in required accountants to cross the boundaries between the business staff and the corporate accounting group in both companies.

4.1.3. Provision accounting

The third key topic that required combining knowledge from two, quite different practices and collaborating was accounting for provision in accordance with International Accounting Standard 37, 'Provisions, Contingent Liabilities and Contingent Assets' (IAS 37). More precisely, Firm B had a landfill site for which it was required to record provisions in accordance with both FAS and IFRS. However, the way it was recognised and measured (and, hence, the amount recognised) differed between the two sets of standards. While FAS required the provision related to post-use treatment expenditure for the landfill site to be measured on the basis of the waste deposited[14], IAS 37[15] dictated that this be considered at current value, inclusive of expenses for preparing the landfill-site area, 'dismantling' it, and restoring it to its prior condition[16].

Thereby, firm B was required to adopt a completely different style of provision measurement. Rather than record the cost of transporting and handling the waste at the site as FAS dictates, the accountants were now expected to find engineers (the managers of the business units) who could provide the information needed for estimating the expenses for constructing the facility, decommissioning it, and restoring the land, to inform 'the best estimate of the expenditure required to settle the present obligation' jointly with these engineers (see paragraph 36). The CFO of firm B identified two critical issues in estimation under IAS 37: it required technical experts' involvement in the accounting process and demanded effort in negotiating with these experts:

> People [engineers] who know what a landfill site is must be involved.
> [The landfill site] is a difficult case. It required a lot of meetings [with the engineers].

4.2. The roles of the models

The key role in financial reporting processes was played by the models that expressed 'what was relevant', as the financial accountants described it. These models were obtained from the 'Big Four' accounting firm whose consultants the two firms consulted on IFRS implementation processes. One of the reasons for selecting this particular accounting firm to advise on the implementation was that its consultants had experience with IFRS, United States Generally Accepted Accounting Principles (U.S. GAAP), and related implementation processes:

> This main consultant had practical view about IFRS. He had also studied U.S. GAAP. He was able to make some decisions on how we should account at the same time when we [the firm's accountants] were wondering what these standards mean [how they should be translated]. And it was also helpful that [at the consulting firm, a] couple other consultants were [or had been] involved in the [IFRS] implementation processes in Europe [outside Finland]. (Financial manager of firm A)

These consultants provided the models that translated the requirements of the three standards in question (IFRS 3, IAS 36, and IAS 37) into rubrics for the case firms and specified, as both firms' accountants explained, how to address them in accounting and/or what type of information is needed from the business side.

The accountants at the two firms emphasised that the artefact playing a crucial role in the accounting for business combinations in accordance with IFRS 3 was the purchase price allocation model (hereinafter 'PPA model'), which was

[14] The costs of waste's transportation and handling/management.

[15] According to IAS 37, a provision is 'a liability of uncertain timing or amount' (paragraph 10). The standard stipulates that 'the amount recognised as a provision shall be the best estimate of the expenditure required to settle the present obligation at the end of the reporting period' (paragraph 36). It continues by stating that 'the estimates of outcome and financial effect are determined by the judgement of the management of the entity, supplemented by experience of similar transactions and, in some cases, reports from independent experts' (paragraph 38). For arriving at the best estimate, the standard requires taking account of 'the risks and uncertainties that inevitably surround many events and circumstances', the material effect of the time value of money, and 'future events that may affect the amount required to settle an obligation' (paragraph 38).

[16] In the case considered here, this was recorded as provisions and assets (as part of the area's acquisition cost). The asset was depreciated in line with a depreciation plan.

used to allocate the purchase price to the acquired assets and liabilities at fair value. The accountants of firm B learnt this accounting with the aid of the consultants but also with the model obtained from the consultants. At firm B, the first accounting for business combinations under IFRS 3 was carried out jointly with the consultants. According to the accountants, the most important part of the learning process was to understand the details and logic of the model, which mapped the requirements of IFRS 3 to practice:

> I have studied it [the model bought from the consultants], its details, its components, and what it requires one to document. (Accounting analyst of firm B)
> The model is around 20 pages. There wasn't any manual available. I had to look through it [the model] by myself to find out where all those figures come from and the logic behind them. And, of course, another issue is that it is more about finance than an accountant is used to [under FAS]. (Accounting analyst of firm B)

As this accounting analyst explained, the accountants learned the accounting related to business combinations by looking at how the model had translated previous business combinations into numbers: 'I had to look through it by myself to find out where all those figures come from and the logic behind them.' It seemed that this was made possible, at least according to the accountants, by the fact that the kind of business operation being acquired does not make a big difference for the accounting process. The accounting analyst stated that, in any case, one is always expected to measure, for instance, the value of customer relationships. She argued that the logic of the model (and the items used) is always the same and that, therefore, the accounting process is highly uniform, irrespective of which acquired business is involved. Hence, by standardising, the model translated the complicated requirements of the standard and transactions into simpler form and made the accounting process manageable. This was the most obvious role of the model. Alongside IFRS 3, many other standards, such as standards pertaining to impairment testing and lease accounting, were translated similarly via the models created by the accountants or consultants for the two case firms.

The business managers who became involved in accounting were leaders of the business units and later, at firm B, also included business controllers specialising in business combinations also. It is worth reiterating that very often the accounting for business combinations in accordance with IFRS 3 brought a requirement for extremely specific knowledge of the business/assets acquired. Then an accountant responsible for accounting for business combinations was always directly in contact with a businessperson who, as a domain expert, had the best possible knowledge of the business – i.e., the asset, liability, or transaction in question. According to the accounting analyst at firm B, business managers were not expected to understand accounting for business combinations thoroughly, only the basics. She defined their role in the negotiation process as follows:

Their role was just to answer those questions – what was acquired and why – and, of course, estimate the depreciation/amortisation periods used.

Because the model standardised the business transactions, it allowed the accountants to ask 'standardised questions' of the people on the business side, as the accounting analyst put it. Hence, the model not only aided accountants in figuring out what was relevant but also simplified communication with the business side because it indicated which accounting items the accountants need and, thereby, what types of information are needed from the business side for determining those items.

Although the model assisted in the accounting process by standardising, as described here, it added difficulties to that process in that it diverged from the real–world business perspective. According to the financial manager of firm A, one obstacle to the collaboration was that the PPA model (and IFRS 3), as so many other models (and IFRS standards) do, interprets the business perspective in too 'standardised' a way; the acquirer is expected to have a clear sense of what assets and liabilities it has acquired. The financial manager articulated that this is seldom the case: the business managers do not usually plan an acquisition in the manner presumed by the model, and the reasons for wanting to acquire a particular business are not always those foreseen by the model; therefore, the business combination cannot be 'opened up', or captured, in the way the model expects. Speaking of the managers negotiating business combinations, one interviewee said:

> They don't think in such an organised way [as the PPA model assumes], that if we [the managers] pay this amount [for a specific asset] and this amount [for another], we will get the [total] price paid. Instead, they want to acquire for one reason or another and then conclude with some [total] price, and if they want to have that acquisition, they will pay what is necessary. I don't know whether there is any bigger acquisition that is decided by logically valuing. (Financial manager of firm A)
> Other things are important to the business managers. They don't have energy to think about the consequences [for accounting]: how to estimate [values]. These issues don't belong [to the acquisition process]. It [accounting] should be also a seller's problem, but the seller isn't interested in how they [we] are going to account [for] it. (Financial manager of firm A)

Though the models apparently helped the accountants standardise transactions, they did not actually bring the accounting and business perspective closer to each other. It seemed that, because of the gulf in views between the two, the models (and IFRS standards) remained unclear to the business managers. Therefore, the managers seemed to end up

depending more on the financial accountants' knowledge and needed the accountants to translate the models into numbers. The accountants/IFRS specialists described the situation as follows:

> IFRS causes a lot of surprises [for managers negotiating business combinations] because the calculation they use to estimate the [total] price paid doesn't have anything to do with what I am doing [the PPA model]. Therefore, we have agreed that they make contact and explain the case to me and ask me to give my opinion about the items they should use [in their calculations so that the reporting outcome does not come as a surprise to them]. (Accounting analyst of firm B)
>
> They [the managers negotiating] should understand what is the effect of the business combination on the group: numbers. But they don't understand it. That is why they need the accountants to interpret what is the effect on the published financial statement. They cannot actually identify what they are buying [in the way the model assumes] or what they are paying about and what is the consequence [for financial statements]. The accountants need to make the consequences clear to them. (Financial manager of firm A)

Although the models – the PPA one and others – apparently remained unclear to the business managers, they seemed to have a strong role in guiding the accounting processes in which communication across boundaries between financial accountants and business lines (business managers and controllers) was necessary. The case of impairment testing in firm A illustrates well how a model may play a crucial role in collaboration. That firm's accountants described how the impairment test model makes it possible for the financial accountants to negotiate, discipline and control the process across the boundaries between units. More specifically, as an IFRS specialist stated, the annual impairment tests of goodwill were executed by following the shared process and using the impairment test model, which mediates between the perspectives:

> In our organisation, it is followed through so that I basically answer for the directions and those calculations [models] and I give [the models] annually to the person in question in the business line at the time when we execute the testing. Those business lines answer for the calculations [models/testing] by themselves. Sometimes we have preliminary discussions about what probably should be taken into account when they prepare their calculations. When the calculations are ready, they will be sent to us; we will look through them; and, depending on the entity [subsidiary or business line], we will look at the calculations more specifically and discuss what they have taken into account and whether everything is there that in our opinion should be taken into account. We will look through them as many times as necessary to ensure that there is an acceptable [IFRS-compliant] result. Both sides [the corporate accounting group and the business line] are active, but, basically, a business line tests its own goodwill for impairment by itself. (First IFRS specialist at firm A)

As the quote illustrates, the model operates between the corporate accounting group and the line of business and makes the collaboration involving the two perspectives possible. As the IFRS specialist stated, the process is given discipline, guided, and controlled by the financial accountants, who try to ensure that the data provided by the business managers will satisfy the minimal demands of the group's financial accountants. The model simplifies the accountants' job by aiding in negotiation with the business-line managers (or controllers), bridging with their perspective, as the extract illustrates. Although the accountants emphasised the business lines' role in this process by stating that 'basically, a business line tests its own goodwill for impairment by itself', the model did appear to offer an opportunity for the financial accountants to intervene in the accounting process and exert control over it. As the quote illustrates, the information provided by the business lines is actually used as a starting point for negotiation and evaluation, and the accountants seemed to have control over this (final) step; i.e., they had opportunities/authority to have the final say, as the IFRS specialist articulated in saying that 'we will look through them as many times as necessary to ensure that there is an acceptable result'.

The excerpt also helps elucidate that the process in which the accountants and lines of business receive and give information is relatively well-organised and smooth. However, as the first IFRS specialist at firm A clarified, this is not always true – the goodwill impairment testing process can grow very demanding:

> That calculation [model] gives you a specific result with specific assumptions, meaning that you have to check it many times and calculate whether it's really so and whether the assumptions are really right. That is a demanding process. Of course, in those situations where you otherwise already have a clear view of the operation, it is not a problem, but if you know that the business is doing probably a little less well than expected and your calculations also show that [...], it's time–consuming.

Without question, the process might become challenging if the business perspective does not provide a 'clear view' of the possible impairment. If this is the case, more effort has to be put into the negotiation process during which the perspectives of the standard (i.e., the model) and the business side (in the form of future economic benefits) are clarified and negotiated to achieve agreement, as defined by the IFRS specialist. As in the case of business combinations, the model (i.e., the calculation) used in the accounting has the specific role of embodying the requirements of the standard. However, as the last two extracts illustrate, the model is also an important mediator between the standard and the business angle. The calculation models aid

in negotiation between the two perspectives by making it easier to see how predictions of business are translated into reportable numbers. As the IFRS specialist described it, this role of the model is critical if the business perspective as expressed does not provide clarity as to the possible impairment. In that case, the model gives an opportunity to turn the focus to (and learn about) assumptions and highly consequential outcomes – the numbers produced, which can be carefully evaluated, as the quote illustrates.

As the work of impairment testing shows, the most critical moments appear to be those in which the process becomes challenging for reason of the business angle articulated not providing a 'clear view' of the possible impairment. Likewise, the financial accountants indicated that the process becomes tricky if that perspective does not clearly identify the assets and liabilities acquired via the business combination (as noted above). Business managers may not even be willing or able to estimate the costs (for provision purposes). This issue is presented next. It seems that such cases required the financial accountants to devote more effort to gaining the business managers' commitment and maximising communication between the two sides – dynamics considered below.

4.3. The roles of the outcome (or possible outcomes)

Examples of impairment testing at the case firms attest that in 'critical cases' wherein the business perspective yielded insufficient clarity as to the possible impairment, the financial accountants directed their attention to assumptions and the outcomes following from them. This is not surprising, since possible outcomes from financial reporting represented power to align disparate interests. That power was exercised in practice. The accountants themselves prioritised among the various IFRS standards by the magnitude of their possible effects on the numbers that formed the core outcome of the financial reporting. Moreover, the accountants argued that business managers too concentrate on that outcome. All this focus on the outcome was entirely understandable. It represented the means through which collaboration was structured in the case firms (before and after IFRS implementation alike). As the accountants specified, the firms were managed through numbers, the managers were held accountable for these outcomes, and the profits were reported and monitored very carefully in both firms:

> Our business is managed through numbers and profits. We were told some time ago that they [the units] are like small private companies and their managers are like entrepreneurs. They have the power to decide how to achieve the targets and how to improve profitability. (CFO of firm B)
> We have very systematic reporting systems. We [all divisions and their units] report by using the same model/form. Everybody gives comments on sales and profits and compares them to the plans [forecasts] and previous years. It [the process] is made to be very systematic. Then these unit controllers prepare a so-called verbal–comment report about profits for me, and I prepare the same report [for division level] to our [division] board. (Division controller of firm A)

As these extracts illustrate, the outcome was accorded great weight in both firms. It played an important role in the business communities and their business-related discourses. The quotations show also that the outcome-related discourses concentrated mainly on the profitability of actions and operations. Moreover, as the division controller noted, the infrastructure was built to support this key role of the outcome.

The vital role of profitability in daily work activities and management–related discourse became apparent also in the context of collaboration and seemed to cause friction between the managers and accountants. An example was visible in the accounting for business combinations in accordance with IFRS 3, which implementation led to a considerable (117%) increase in the intangible assets of firm B. More precisely, the management's responsibility for identifying 'new' assets acquired and estimation of the amortisation periods for these assets were specific issues that seemed to create troubles for the firm's main accountant. According to that accountant, the managers' interest lay in the profitability of the business combination:

> There has been rough-and-tumble [quarrelling] about those amortisation periods, because amortisation periods affect negotiators' profitability calculations. Negotiators are against them [high rates]. They don't want to use such high amortisation rates in the purchase price estimations because in that case the acquisition isn't profitable. (Accounting analyst of firm B)

Since the managers' view was at cross-purposes with the accounting angle, the accountant was forced to highlight the accounting process's perspective.

> I tell them that I can't use anything except what can be explained, that I don't make these up by myself. I can't just use 10 years simply because it looks good on the income statement. It has to be based on something. (Accounting analyst of firm B)

However, it seemed that such efforts to emphasise the accounting perspective did not 'settle' the negotiations with regard to this type of 'critical case', which has a large effect on the income statement. Instead, the outcome (or possible outcomes)

appeared instrumental to motivating actors and directing activities, as illustrated by the cases of collaboration described below.

The accountants in firm A held that it was the key status of profitability that helped to bring discipline to the company's impairment testing process. It is important that the testing model and the whole process led by the accountants determines the outcome (again, the resulting numbers), which is crucial for the managers because their success is measured in these terms. It was not a surprise, therefore, that managers looked at the process from an outcome perspective. The firm's accountants argued that this key role/status of the outcome in managers' discourses guaranteed managers' respect for the accounting perspective. The financial manager presented the matter thus with regard to goodwill:

> It helps us [the accountants] when one [of the managers] knows that if one accounts for it in the wrong way, then it will have [. . .] a large effect [on the income statement] and that one can't cancel it. (Financial manager of firm A)
> It is associated [with the important issues]. If an item's value is something else than what we have accounted and if we need to de–recognise it, [this is problematic because] bonuses, all other things are dependent on that. (Financial manager of firm A)

In this description, an unsuccessful accounting process, one wherein the 'value is something else than what we have accounted', should not ensue, because it would have impacts on many other issues, such as bonuses. Referring to this fact seemed to help the accountants ensure that the managers involved in the process were taking that process seriously. The key status of the outcome seemed to extend further in its effects also, not only helping discipline the accounting process but getting actively used by the accountants as a tool to motivate managers to act such that the minimal demands of the accounting perspective and business perspective were satisfied. More precisely, firm B's accountants tapped into managers' interest in the outcome and stressed a 'link' between the outcome and the estimates to managers when communicating with them. Firm B's accounting analyst described the situation thus:

> I have given very strict orders about what [business managers] can take into account when they make these forecasts, a very strict order to be as conservative as possible and not to include any trouble items. So in that way [following these orders] they can be sure that the outcome won't be a surprise to them – we [they] have followed the rule to be as conservative [in the forecasts] as possible.

This description portrays the accountants as trying to control the process and supplying guidelines that the people on the business side can follow for satisfying the minimal demands from the accounting perspective. As the extract emphasises, the business managers do not act independently; rather, the accounting analyst has 'given very strict orders' on what to take into account. The extract illustrates nicely how the accountant has cast satisfying the minimal demands of the accounting world – i.e., being 'as conservative as possible' – as the path to the business managers reaching their targets (as in 'the outcome won't be a surprise').

In addition to serving the accountants as a tool for providing guidelines and motivating managers, outcomes or possible outcomes were cited to 'resolve' tricky negotiations. An example of this was found with regard to provision. As was indicated above, the accounting related to provision figures in accordance with IAS 37 requires the accountants to ask the engineers managing the business units to provide the background information (estimates etc.) needed in the calculation. This created a need for regular meetings with the engineers. In the example of the landfill site, these meetings were found to be difficult because, just as with regard to business combinations, the business view and the perspective of the model differed greatly. Interviewees described the difficulties that arose for communication/negotiation:

> It [the previous provision-measurement method] isn't consistent with IFRS: It [the model] requires to discount, depreciate, etc., and if we would close our operations, it [the standard/model] expects that there is enough money [per the balance sheet] to close [the landfill site]. And this logic of IFRS [IAS 37 / the model] is very hard to understand from the business perspective: It doesn't make sense because our [company] intention isn't to close [the landfill site]. And if one would close it, this [the previous approach] would make sure that there is enough [money]. But now [under IFRS], there isn't enough money. (CFO of firm B)
>
> The problem was that the engineers answered from an engineering perspective that 'this is a landfill site'. And I tried to understand it. [And it was important] that I understood the process: what they were doing [in the business]. Of course, the engineers can explain it; no-one can explain better than they whose work it is. But [the key issue was] that I myself understood what was relevant in the construction [of the landfill-site area]. (Accounting analyst of firm B)

As the CFO's comment quoted above illustrates, the model (representing the standard's requirements) was hard to understand from the business standpoint because the business's intentions are not identical to what the model or standard presumes.

The accountants at firm B described negotiation processes as rendered challenging not only by the differences in perspective between the two parties but also in their own right, by the disparity of interests. As with the other two topics, that of provision exhibited management interest in the numbers reported. This was understandable: IAS 37

implementation created a 135% increase in firm B's provision total. The accountants emphasised that the engineers were concerned about the effects of the provision on the financial statement, especially with regard to the income statement, as the following interview extract illustrates:

> CFO of firm B: They [engineers] draw pictures, but we didn't get any exact answer. We have noted that if they don't know how we are going to use the information [they give], then they are not willing to say. If [engineers expect] trouble will result...
> Researcher (author): Trouble?
> CFO of firm B: If we [the accountants] record some additional expenses that we wouldn't record if I [as an engineer] weren't to say anything. They don't necessarily understand [why they have to give information].

As the CFO states here, the engineers were concerned about the influence of their estimates on the financial statement: the firm has to record additional expenses. The engineers' tactic – born of being unsure about the role of the information they might give and of fearing surprises – of trying to avoid 'additional expenses' by being imprecise was problematic, in turn, from the accountants' point of view. After all, as the CFO noted, the accountants were expecting an 'exact answer'. Accordingly, every time the two perspectives were required to come together, there was potential for negotiations to become extremely intensive on account of the difference in interests, the gulf between viewpoints. The following comment about engaging with engineers provides further illustration:

> I am constantly required to ask and research whether they still agree with their cost estimates, and sometimes they say 'no, it is one million less', and the next day it is two million more. [They say so] because [the estimates] depend on opinion; depending on whom and how you ask, you will get totally different answers. They have had the opinion that this is just accounting. [But I answered:] 'Nice that you said so [this estimation is fine], but there will be an extra expense entry or higher depreciation' [because of the information given]. Then they wake up [and say] that 'no, it doesn't go in that way' – 'take it off' [don't use the information they just gave]. (Accounting analyst of firm B)

The quote highlights that it was the outcome that acted as a bridge and enabled negotiation between the two perspectives. As the accounting analyst noted, the estimates depend on opinion. Therefore, it seemed that the engineers needed an object that can be used for setting/marking their goals and that lets them negotiate from a position of knowledge. The quote presents the accounting analyst's use of a special tactic to give the engineers an incentive to collaborate and grasp the importance of the accounting process from an engineering perspective: the accountant showed how the cost estimates provided by the engineers affect the numeric outcome. In this way, the actual collective object of an activity, the provision accounting under IAS 37, turned into discussion of the outcome.

5. Discussion

As the example of business combinations revealed, the PPA model aided the financial accountants in obtaining critical knowledge about the business angle. In adopting the PPA model – and other models provided by the consultants – the accountants accepted the interpretation embodied in those models. The models told them 'what was relevant' in the transactions and other business activities and, thereby, what type of information the accountants need from the business side. As the case of business combinations illustrates, the models translated the transactions into simpler form (by standardising them) and thereby both helped the accountants take control of the business perspective and rendered the process more manageable. The most important issue seemed to be that the models offered a standard form for transactions, enabled one to ask 'standardised' questions of the business managers, and thus informed decisions on how the work should be organised. One might argue that the models provided an opportunity for the accountants to decide how the business managers would be involved in accounting processes and helped guarantee a hierarchical way of working. As the cases illustrate, these managers and other business staff were left little leeway for determining the nature of their involvement in the processes; the managers' role was defined as to supply details about the views of the business (e.g., what was acquired). The models can be characterised as providing a ready-made interpretation of the standards and as not requiring the accountants to establish some sort of shared understanding with the business managers. It seemed, therefore, that the business managers did not have a chance to be genuinely involved in the interpretation processes. Moreover, they seemed to lack working knowledge of the models and were not really communicating via them. It seemed that the models remained largely unclear to them and this made the business side dependent on the accountants' knowledge. The accountants translated the models (their requirements) and explained the link between assumptions of the business side and the possible outcomes of financial reporting to the personnel on the business side. By adopting the models the accountants seemed to ensure that they had control over the financial reporting task. One could argue that the models did not actually bring the accounting and the business side closer to convergence but may even have reinforced the boundary between accounting and the business side.

While it could be claimed that the models helped the accountants to co-operate with the business staff because they translated the requirements of standards and transactions into simpler form, one could argue also that, paradoxically,

such models themselves can make co-operation more difficult, in that they might embody views that differ from the actual business ones, as the business-combination and provision examples illustrate. Both exemplify that the model used may not make sense from a business perspective: business managers' understanding and evaluation can differ greatly from the PPA model's representation or the provision-related accounting logic. It is evident that the business side is not necessarily able (or willing) to identify the assets and liabilities acquired clearly or to estimate the costs in the models' language. Overall, the accountants appeared to identify this as a broader problem that extends beyond the topics cited (business combinations and provision accounting) and created trouble for accounting processes. Interviewees used these words to describe the results if business managers are involved:

> In some cases, when one is contemplating what is the best estimate – not necessarily accountants but those who are involved in that business – they can easily say that 'we don't know [what is the best estimate]'. They don't necessarily understand that the 'spirit' is that we estimate something as well as we can, and we don't necessarily have all facts available. (First IFRS specialist at firm A)
>
> Of course, there are more contradictions. Accountants accept the fact that we have a standard, which, regrettably, requires [us to do something] even though one doesn't find it to be the most sensible solution. Giving reasons for that is much harder if there is a person involved who doesn't have this [accounting] background; one can be from a field in which operations aren't that much under the control of regulations. (Second IFRS specialist at firm A)

Even though the models may have expressed a perspective somewhat different than the business angle, they seemed to play an important role in cultivating and maintaining a hierarchical approach to the work. As the provision and business-combination accounting examples attest, the accountants at firm B defined the role of the business managers as being responsible for answering the questions asked by the accountants. Although the accountants at firm A argued that the business managers should test the goodwill for impairment themselves, even in this case the business managers did not seem to be acting independently. Specifically, the actual conducting of impairment testing showcased the involvement of members of the corporate accounting group in analysing the calculations and, in the end, using the information provided by the business lines as a starting point for negotiation and discussion. They did this by means of the impairment testing model, a tool that afforded their intervention in the accounting process and directing of the focus to assumptions and highly influential outcomes, the numbers.

While these descriptions seem to show that the accountants' use of the models limited the business managers' opportunities to engage in the accounting process, this is where the above-mentioned paradoxical factor enters in: the requirements of the models created hurdles for accounting work because of the lines drawn. Since they diverged from the business perspective in some regards (and for other reasons), the accountants had to find further/special strategies to encourage collaboration from the business side. It seemed that in critical situations of this nature in which those articulating the business perspective were not able/willing to give a clear picture of the business, the accountants relied on outcomes. While the models helped the financial accountants to control the accounting processes and render the overall process more manageable, references to outcomes could be seen as playing a key role in the collaboration. For all three example topics, the accounting processes necessitated by IFRS benefited surprisingly greatly from the key status of the numeric outcome: the numbers served as effective means that remained in the background, in the toolbox, until they were called into play. The outcomes had shifted in status and role: while they had been used under FAS to evaluate the successfulness of business operations and/or reward managers, now they brought discipline to financial reporting, helped ensure that the managers were taking the processes seriously, and gave them motivation to participate in the financial reporting. The fact that the impairment testing process may have a huge impact on the income statement, a matter of considerable interest to the managers, helped bring the accounting process under control. Furthermore, the impairment testing shows how the accountants focused their attention to likely outcomes to resolve situations in which the business perspective did not provide a 'clear view' of the possible impairment. At the same time, not just in impairment testing work but also with regard to business combination and provision accounting, outcomes or possible outcomes served the accountants as a medium for getting the managers interested in considering the minimum demands of the accounting perspective and getting them involved in the processes. In particular, the accountants seemed to give the business managers an incentive to negotiate with them on provision by showing the possible outcomes. That is, they made the managers contribute to the financial reporting by turning the discussion to outcomes.

Although the outcomes were employed as tools on the business side also, a case could be readily made that it was the accountants who had control over when and how they were used in the accounting process. Again, the accountants evidently used them to motivate the business managers in cases of the latter's inability or unwillingness to give information or, more generally, to resolve cases in which the business perspective did not yield a 'clear view'. Finally, the outcome brought discipline to the process even when not actively used by the accountants, as the impairment testing practice illustrated.

Because the models, while articulating the link between managers' decisions and the outcomes on the financial accountants' side, seemed opaque to the business side, they ensured that the business side remained dependent on the accountants' knowledge. Although the managers too were using the outcomes, the fact that the accountants controlled the models and, thereby, the link between managers' decisions and the numbers reported seemed to help the accountants to maintain their status as experts. The accountants emphasised that it was important that they themselves

provided the link between managers' decisions and the numbers reported because managers are not interested in standards (or models) and just want to concentrate on planning their actions in accordance with the possible outcomes. Accountants with the two firms described this division of work thus:

> I think that [the business managers] just want to have explicit rules that if you do this, then this will happen, and if you do the opposite, then that will happen. If I were to start to send them some copies of standards, they would probably pass out. I don't think they have any interest in standards. They just want to know what the outcome will be. (Accounting analyst of firm B)
> It is important that you show from the accounting perspective that things are done in the right way so that you will achieve the outcome that was your goal. Accountants have to let everybody know how it [a decision] affects [the numbers]. (Second IFRS specialist at firm A)

As these quotes illustrate, the accountants enacted claims of authority around the objects by asserting their knowledge of and control over those objects and the processes related to them. However, the accountants at the case firms did not try (or need) to convince themselves or others that these numbers are factual (see also, for example, Bayou et al., 2011; Lambert & Pezet, 2011; Macintosh, 2009; Morales & Lambert, 2013; Mouritsen, 2011) or decision–useful:

> If I critically evaluate [something such as the usefulness of information prepared under IFRS 3], I really don't know in comparison to the previous situation whether there is such a big difference. And has [IFRS] made things clearer? I believe it hasn't. (Accounting analyst of firm B)
> If one thinks about the outcome – [IFRS] financial statements – and [...] the information [an investor] gets now, [the problem is that in some cases] the CFO is thinking about whether he can trust it or not and whether he can translate it into numbers [in accordance with IFRS]. (Financial manager of firm A)

Instead of attempting to argue that the numbers prepared in accordance with IFRS possess the above-mentioned qualitative characteristics, the accountants emphasised that they try to ensure compliance with the standards and provide the link between managers' decisions and the numbers reported, as described above.

Finally, it seemed that the knowledge of (and authority over) the models and the link between the management decisions and the numbers were appreciated in the two firms. The accountants controlling these objects had high status in both case organisations, and they seemingly did not face difficulties in securing jurisdiction (on cognitive unity and jurisdiction, see also, for example, Durocher & Gendron, 2014). Almost all of these accountants, if not already holding such a position as CFO, financial manager, or internal auditor, rose to one of these positions after having performed the above-mentioned tasks of financial reporting for a few years, even those who were recruited in the first years of IFRS reporting, 2005–2007.

6. Concluding remarks

The present study set out to understand how financial accountants working in the two case firms obtained entity-specific information used in the production of financial statements and how they were dealing with the uncertainty caused by the social situation under IFRS, with particular regard for the new requirements to gather this new kinds of information for the handling of the three accounting topics discussed above. The study provided valuable information on the valuation/calculative technologies (e.g., Lowe et al., 2020; Vargha, 2016) and revealed how the financial accountants responded to the need to 'open up' the business perspective by adopting the models obtained from the consultants. Namely, these models started to play an important role in organising the financial statement production and in deciding on how the business perspective and business managers would be involved in the financial reporting processes. The models provided a ready-made interpretation of the relevant standards, so the financial accountants did not need to create some sort of firm-specific interpretation of the standards. Importantly, the business perspective and the managers representing it were not involved in creating shared understanding of these standards with the accountants (on 'shared understanding', see the work of, among others, Oswick & Robertson, 2009).

The work illuminated how these models render the financial reporting work and collaboration more manageable by not just translating the requirements of the standards but also standardising business transactions. Among the most important findings is that these models, while they do help the financial accountants to acquire critical knowledge about the business perspective, do not bring the accounting and business perspective genuinely closer together. Counter–intuitively, they may even create wrinkles in accounting processes. Yet the accountants use the models, notwithstanding the fact that these do not necessarily describe the business transactions as the managers understand them (cf. Quattrone, 2016; Hayoun, 2019, as referred to above). Indeed, one of the core contributions of the study is the argument that infrastructure, such as models, used to estimate the values may also play a role in limiting the possibilities for explicitating the situation – e.g., with regard to unique interrelations or managerial intentions. In that the case firms' models, simultaneously with simplifying the accountants' work via standardisation and making the process more manageable, risk standardising transactions or events, the entity-specific perspective produced by means of these models is not necessarily truly entity-specific. It may not take into consideration the management's real plans and intentions.

In fact, that the models may not naturally 'open up' the situation seems to be one of the reasons the accountants used the potential outcomes from financial reporting to resolve important cases in which players on the business side proved unable or unwilling to present a clear view of the business. The case companies illustrate, more precisely, that the outcomes can act as an object bringing discipline to financial reporting processes; importantly, the accountants actively used them to motivate managers to contribute to the processes in critical circumstances. Thereby, as intended, the study refines understandings of how (and why) these objects' role and function change as collaboration across occupation boundaries continues. The findings are consistent with a pragmatist approach suggesting that 'profit' is 'an instrument mediating the collective and dialogical process of valuation, rather than the decree of unquestionable calculative devices' (Lowe et al., 2020, p. 774). The study ties in with work by Lowe et al. (2020) by showing how outcomes may represent infrastructure and, in this, facilitate and direct the collaboration yet also get turned into an object(ive) of the activity as the collaboration progresses. Also evident is how the models supporting collaboration helped move the focus to (and illuminate) outcomes. Whereas an outcome (actual or potential) served as a key means through which the collaboration was structured in the two firms before IFRS, with the new standards it was something more also: an object of the activity when practitioners were wrestling with the most difficult cases.

One can consider the handling of 'critical cases' in which the business perspective is not expressed as / does not yield a 'clear view' in light of Georgiou's point (2018) that investors and analysts may be interested more in how the business has performed than in market valuations of individual assets and liabilities. The financial accountants of the two case firms shifted the focus of discussion toward the issue of outcomes so as to bridge this gulf – they resolved matters through getting the business managers involved in the production process. The study, further, provides evidence that in these cases, the financial accountants and/or the business managers actually evaluate or at least consider the outcome (or possible outcomes) and, through this, evaluate and give their view/opinion on how the business has performed (e.g., profitability) rather than just individual items' value.

The study also ties in with work by Hayoun (2019), who posited that 'entity–specific measurement is a two-dimensional constellation of values on both the associative and syntagmatic axes' and that, therefore, the value of any specific item is 'a product of its interrelation with other assets in the specific entity' and (simultaneously) 'its comparability (similarity and difference) with similar market-priced assets' (p. 74). This study follows on from Hayoun's by suggesting that an item's relation with other elements, such as the outcome, may also have a role in that item's valuation. It seems that, to the preparers, what matters in the valuations is not only the item's interrelations with the entity's other assets and liabilities but also its overall set of interrelations with outcomes or possible outcomes. The results dovetail also with Durocher and Gendron's (2014) finding with regard to practitioners' citing of profitability issues when reflecting on the appropriateness of standards of practice. That is, the study pinpointed how and why profitability issues may be a factor in the actual financial reporting processes.

Finally, the study contributes to the literature on artefacts. Bechky (2003a, p. 725) has described how two artefacts – machines and drawings – mediated the social relations of engineers, technicians, and assemblers in a manufacturing firm; e.g., 'the machines are occasionally employed to challenge the dominance of engineers', and 'the use of drawings successfully maintains and reinforces the engineers' jurisdiction'. Just as it was easy for engineers to maintain their status as experts because the drawings were unclear to other groups, the models in the present study helped the accountants to maintain their status as experts and supported a hierarchical way of working. Such insights refine our understanding of how the objects help to maintain jurisdiction in the workplace. As described here, the models helped the accountants take control of the business perspective, decide on how the business managers were to be involved in the accounting process, and articulate the link between managers' decisions and the numbers reported. Therefore, the accountants' control over the models ensured that the business side remained dependent on the accountants' knowledge and expertise.

Appendix

Details of the tape-recorded interviews and direct observation

Firm	Interviewee	Data description and time frame	IFRS/reporting responsibilities briefly
A	Financial manager & First IFRS specialist	Tape-recorded interview: 12 June 2007 2.5 h	IFRS adoption process, accounting systems and preparation of information in accordance with IFRS (e.g. IFRS 3, IAS 36 and IAS 37)
A	Internal auditor (previous Division controller)	Tape-recorded interview: 12 June 2007 1 h	IFRS adoption process, accounting systems and preparation of information in accordance with IFRS (e.g. IFRS 3 and IAS 36)

(continued on next page)

(*Appendix continued*)

Firm	Interviewee	Data description and time frame	IFRS/reporting responsibilities briefly
A	Two group accountants	Tape-recorded interview: 4 Dec. 2007 2.5 h	IFRS adoption and reporting in accordance with IFRS (accounting systems)
A	Financial manager & First IFRS specialist	Tape-recorded interview: 4 Dec. 2007 2.5 h	IFRS adoption process, accounting systems and preparation of information in accordance with IFRS (e.g. IFRS 3, IAS 36 and IAS 37)
A	Internal auditor (previous Division controller)	Tape-recorded interview: 4 Dec. 2007 1 h	IFRS adoption process, accounting systems and preparation of information in accordance with IFRS (e.g. IFRS 3 and IAS 36)
A	Second IFRS specialist	Tape-recorded interview: 13 Nov. 2008 1.5 h	IFRS specialist, reporting in accordance with IFRS and IFRS education
A	Division (I) controller	Tape-recorded interview: 29 May 2009 1.5 h	Reporting in accordance with IFRS (e.g. IFRS 3, IAS 36 and IAS 37) and FAS
A	Division (II) controller	Tape-recorded interview: 29 May 2009 1.5 h	Reporting in accordance with IFRS and FAS
A	IFRS working group meeting	Observation notes: 29 May 2009 1 h	Special issues concerning IFRS and accounting manual
B	CFO	Tape-recorded interview: 23 Nov. 2006 1 h	IFRS adoption process, accounting systems and preparation of information in accordance with IFRS (e.g. IFRS 3, IAS 36 and IAS 37)
B	Accounting Analyst	Tape-recorded interview: 23 Nov. 2006 1.5 h	IFRS adoption process and preparation of information in accordance with IFRS (e.g. IFRS 3, IAS 36 and IAS 37)
B	Finance Director	Tape-recorded interview: 23 Nov. 2006 1.5 h	IFRS adoption process and preparation of information in accordance with IFRS (e.g. IAS 17 and IAS 39)
B	Chief Bookkeeper	Tape-recorded interview: 19 Feb. 2007 1 h	IFRS adoption process, preparation of information in accordance with FAS and accounting systems
B	Business Controller	Tape-recorded interview: 19 Feb. 2007 1 h	IFRS adoption process and accounting systems
B	CFO	Tape-recorded interview: 19 Feb. 2007 1.5 h	IFRS adoption process, accounting systems and preparation of information in accordance with IFRS (e.g. IFRS 3, IAS 36 and IAS 37)
B	Finance Director	Tape-recorded interview: 10 Dec. 2007 1.5 h	IFRS adoption process and preparation of information in accordance with IFRS (e.g. IAS 17 and IAS 39)

(*Appendix continued*)

Firm	Interviewee	Data description and time frame	IFRS/reporting responsibilities briefly
B	Accounting Director	Tape-recorded interview: 10 Dec. 2007 1.5 h	IFRS adoption process and accounting & control systems
B	Accounting Analyst	Tape-recorded interview: 10 Dec. 2007 1 h	IFRS adoption process and preparation of information in accordance with IFRS (e.g. IFRS 3, IAS 36 and IAS 37)
B	CFO	Tape-recorded interview: 10 Dec. 2007 1 h	IFRS adoption process, accounting systems and preparation of information in accordance with IFRS (e.g. IFRS 3, IAS 36 and IAS 37)

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