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Analysts' evaluations of acquisitions: Swedish survey evidence on IFRS knowledge and the use of accounting information for valuation purposes

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ABSTRACT

The International Financial Reporting Standards (IFRS) Conceptual Framework emphasizes *understandability*, i.e. that users have a reasonable degree of relevant knowledge and an ability to study financial information diligently. This article reports results from an empirical study of Swedish financial analysts' knowledge of IFRS Standards in an area of high complexity (acquisitions) and their use of such information for company valuation purposes. The study comprises financial analysts with experience analyzing acquisitions. Yet we find that the median analyst only knew the standards "to some extent," which we interpret as a *poorer* knowledge level compared to the expected IFRS understandability level. We further find that IFRS knowledge varied considerably across the analysts. Higher IFRS knowledge was not associated with using more sophisticated valuation methods, even though such methods require inputs involving accounting complexities. Our results provide some support for higher IFRS knowledge being associated with higher use of acquisition-related IFRS information. This suggests that analysts' incentives to invest in accounting knowledge may be driven by factors other than those related to fundamental analysis. Our empirical study considers various aspects of the analyst decision context and the findings are discussed in relation to this context and the research literature.

1. Introduction

The objective of this article is to empirically examine the impact of *accounting knowledge* on financial analysts' use of accounting information for valuation purposes. This is an aspect largely ignored in prior research, despite a number of field studies following Bradshaw's (2009) call for research addressing the "black box" between analyst inputs (information) and outputs (forecasts, investment recommendations), e.g. Brown, Call, Clement, and Sharp (2015, 2016). We focus on corporate acquisitions, an area of high financial statement complexity (FSC) where differences in knowledge can be expected to matter. We use an International Financial Reporting Standards (IFRS) setting, conducting surveys of Swedish financial analysts with experience evaluating acquisitions.

In their conceptual frameworks, the International Accounting Standards Board (IASB) and the Financial Accounting Standards Board (FASB) express high demands on users' abilities to understand complex accounting information. Financial ana-

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lysts can be expected to meet such high demands as fundamental analysis requires knowledge of the firms' business activities, how they are accounted for, and how the firm valuation should be performed (Penman, 2011). Prior research tends to view analysts as financial experts, even for complex accounting issues (e.g. Chang, Donohue, & Sougannis, 2016). However, analysts are also subject to economic incentives, information overload, and pressure from clients to respond quickly to news (cf. Imam & Spence, 2016). These aspects may counteract investments in accounting knowledge. Recent research suggests that analysts are subject to anomalies (Engelberg, McLean, & Pontiff, 2020), but the role of accounting knowledge has not been investigated. There is research focusing on financial literacy and users' understandability of accounting, however, this literature does not target analysts. This article contributes to filling this gap in the literature by presenting structured arguments regarding the role of accounting knowledge for analysts and findings from an explorative empirical study of the impact of analysts' accounting knowledge on the use of complex accounting information for valuation purposes.

We find that the degree of accounting knowledge greatly varied among the financial analysts. The lower third knew the relevant standards to a slight extent, a very slight extent, or not well at all, whereas the upper third knew the standards very well or fairly well. The median analyst only knew the standards "to some extent," which we interpret as a *poorer* knowledge level compared to the IFRS understandability level that we refer to as our benchmark. As more sophisticated valuation methods require more detailed accounting-related inputs, we expected to find a positive association between IFRS knowledge and more sophisticated valuation approaches/measures. However, this proposition was not supported by the data. We further expected a positive association between analysts' IFRS knowledge and their use of complex IFRS information. The results were mixed as most univariate tests, and one multivariate test (referring to the use of detailed items in the acquisition analysis), showed no association between IFRS knowledge and the use of information. In contrast, such an effect was significant in multivariate analysis of IFRS knowledge and the use of information related to purchase price allocation (PPA) and goodwill impairment. As the level of IFRS knowledge was not associated with the choice of a sophisticated valuation approach, we suggest that analysts' incentives to invest in accounting knowledge may be driven by other factors than those related to fundamental analysis (e.g. Abhayawansa, Aleksanyan, & Bahtsevanoglou, 2015).

The paper is organized as follows. Section 2 provides a review of the relevant literature, followed by research propositions presented in Section 3. The fourth section includes a description of the applied methodology and the questionnaire. The results are presented in the fifth section. Section 6 discusses the findings and limitations of the study and concludes.

2. Literature review

2.1. Analysts' knowledge and expertise

According to Penman (2011), understanding a business through accounting numbers represents core knowledge to financial analysts. This knowledge is applied when processing information and appraising stocks, i.e. the "black box" referred to by Bradshaw (2009). Acquiring knowledge of both the business *and* how it is described through accounting, in Penman's view, will create competitive advantages for analysts in search of mis-priced stocks.

Holland, Holyoak, Nisbett, and Thagard (1989) argue that knowledge is obtained by analysts through some combination of instruction and practice. The instruction part is likely to have accounting content, i.e. a relevant university degree or an analyst certification. Analyst practice is characterized by large amounts of information and time constraints (e.g. Abhayawansa et al., 2015). Information and knowledge are related concepts. In line with Fransman (1994), we view information as being closed-ended (not representing anything beyond the specific piece of information), while knowledge is open-ended, grows with information, and is used to clarify and interpret incomplete information. Information received in analyst practice can be expected to have business content and some of that information will be provided as accounting numbers.

A concept closely related to knowledge is "expertise". According to Pollock and Williams (2015), expertise applies to a field of knowledge where the expert possesses specialized knowledge that cannot readily be evaluated by generalists applying everyday criteria. Professionalization is a common solution to define expert status. But Pollock and Williams suggest that new professions such as financial analyst, management consultant, or journalist differ from well-established professions in medicine or law because of the fast information flows and the difficulty of maintaining knowledge monopoly in the field. They use "business knowledge" as an example and conclude that this term cannot become a body of knowledge for which expertise applies because such knowledge turns over too fast. An earlier study by Preda (2009) shows how financial analyst expertise could be attained with reference to a technical analysis (chartist) approach by persuading clients that they needed this knowledge and by controlling the distribution of expert knowledge and making it difficult to access.

The last point would seem to suggest that the "black box" of analyst information processing and valuation, referred to earlier, must remain black for the analysts' expertise to be acknowledged by clients. Rather than having expertise in a specific field of knowledge, it seems more appropriate to refer to a combination of business, accounting, and valuation knowledge (cf. Penman, 2011), where the expertise lies in the way information is collected, processed, and communicated. An example of such a combination is the "mosaic" approach observed by Roberts, Sanderson, Barker, and Hendry (2006), where pieces of information obtained from meetings and other sources are combined to produce insight into a company or an industry.

2.2. Analysts' accounting knowledge – What do standard setters require?

Standard setters emphasize the need for users to comprehend the information produced under the standards. In the International Accounting Standards Committee (IASC) Framework (IASC, 1989), later adopted by the IASB, *understandability* is stated as one of the four principal qualitative characteristics that makes financial statement information useful to users (together with relevance, reliability, and comparability). Preparers should strive for understandability, but users are expected to have reasonable knowledge of business and economic activities and accounting, and be willing to study the information with reasonable diligence (IASC, 1989, p. 25).[1] Relevant information about complex matters should not be excluded merely on the grounds that it might be too difficult for certain users to understand (IASC, 1989, cf. FASB, 1980), which may be interpreted as *a de facto greater knowledge requirement than "reasonable knowledge*".

In the current version of the conceptual framework (IASB, 2010), prepared jointly by the IASB and the FASB, understandability is an enhancing qualitative characteristic of financial reporting (together with comparability, verifiability, and timeliness), but not a fundamental (principal) one. According to the basis for conclusions (BC 3.40–3.43), one reason for downgrading understandability was to clarify the extensive responsibilities of users regarding complex accounting information. For example, it is not sufficient for users to be willing to study reported financial information with reasonable diligence, rather they must actually do so.

The boards also suggest that users may need to seek the aid of advisers to understand economic phenomena that are particularly complex. The boards view capital providers as the primary users whereas analysts may be seen as their advisers. Arguably, economic phenomena and accounting standards have become more complex over time. However, striving for less complexity to make more users comprehend the information has not been considered a viable option. Effectively, the position taken in the prevailing IASB framework implies *increased knowledge demands* on users, including their advisers. Ewer (2007) criticizes the FASB and the IASB for having gradually abandoned the needs of those for whom the accounting information is intended, suggesting that insufficient knowledge combined with an overload of complex information will create user problems. In the current study, we investigate whether problems related to insufficient accounting knowledge apply to financial analysts, who in their role as financial advisers are at the top of the IASB hierarchy of users with high understandability.

2.3. Analysts' use of accounting information

In practice, analysts receive large amounts of information (both financial and non-financial). Bouwman, Frishkoff, and Frishkoff (1995) found that GAAP-based information primarily served a screening function to quickly eliminate unattractive investment alternatives, whereas such information appeared less important for developing positive investment cases. Many subsequent studies have examined financial analysts' use of non-financial information for company valuation purposes and identified contexts where such information is particularly important (e.g. Orens & Lybaert, 2010). A combined view is offered by Barker and Imam (2008), who conclude that although non-accounting information may be widely used by analysts, accounting information is still highly relevant (p. 314):

> [...] accounting-based information nevertheless plays an important role in anchoring and constraining analysts' views. Specifically, we find that in cases where analysts are positive on accounting aspects of earnings quality, they are 'free' to be either positive or negative on non-accounting aspects, but that if they are negative on accounting aspects, then they are, in effect, constrained to be negative overall.

For analysts to be able to form opinions on accounting aspects in the way referred to by Barker and Imam, they would need to make ongoing "investments" in technical accounting knowledge and devote time to use the accounting information with diligence.

Prior field research suggests that accounting information plays a primary role in *anchoring* investors' and analysts' valuation-related opinions about companies (Barker, 1999). As learned by many during the Enron, WorldCom, and Lehman Brothers debacles, this implies a need for *accounting knowledge relevant to the specific context* of the company analyzed. According to recent studies by Brown et al. (2015); (2016;), clients place a high value on analysts' in-depth industry knowledge. This is likely to require knowledge of industry-relevant transactions and how they are accounted for, especially when the level of complexity is high.

2.4. Financial literacy and understandability

The information processing literature has investigated the role of non-professional investors' financial literacy, i.e. a person's knowledge of fundamental financial concepts, measured through multiple-choice quiz questions. Many of these studies pertain to relationships between financial literacy, socio-economic factors, and capital market characteristics. For example, some studies in this area suggest a positive relationship between financial literacy and stock market participation (Almenberg & Dreber, 2015; van Rooij, Lusardi, & Alessie, 2011). As regards accounting information, a recent study by Krische (2019), based on US survey data, reports that "[...] financial literacy further strengthens the influence of financial

[1] A similar approach had earlier been adopted in the US, in Concepts Statement 1 (FASB, 1978, p. 34).

accounting disclosures on investors' (but not non-investors') judgments" (p. 1634). The current study differs from these studies in that it targets professional users and complex financial information.

A related line of literature focuses on readability (textual difficulty) and understandability of narratives in financial reports. The concept of understandability refers here to the ability of a reader to gain knowledge from a text, as measured by letting subjects (students in most cases) fill in words left out of a text. According to Bailey and Harrison (1984), caution must be paid when using these tests in contexts that require prior knowledge. In a research review, Jones and Smith (2014) find that the most popular measures of understandability in accounting research, the Cloze procedure and the C-test, are not strictly measures of understandability and conclude that "[...] despite 40 years of attempting to measure the readability and understandability of accounting narratives, there is no agreed measure of understandability." (2014, p. 184). To be fair, the ambition in this line of research to go beyond the syntactical difficulty of the text to include user characteristics is commendable. However, the current study adopts a different approach in that it starts out from how individuals' levels of prior knowledge correlate with their use of specific information (acquisition-related) in a particular context (valuation).

2.5. Acquisitions – An area of complex accounting information

Both FASB and IFRS Standards in the area of acquisitions have been referred to as complex (Chykyla, Leone, & Minutti-Meza, 2019; Glaum, Schmidt, Street, & Vogel, 2013). IFRS 3 *Business Combinations* and the revised version of International Accounting Standard (IAS) 36 *Impairment of Assets* came into force in 2005. The European Union (EU) endorsed these standards and accordingly they became part of EU legislation for listed companies from 2005. Similar standards were adopted in the US a few years earlier. Three major changes were: (1) prohibition of the pooling method; (2) weaker recognition criteria for identifying intangible assets in the target company (e.g. trademarks, customer relations), implying a lower share of the purchase price being allocated to goodwill; and (3) the "dual model" (amortization and additional impairment when needed) was replaced by an "impairment only" model for goodwill during the post-acquisition period (e.g. Hamberg & Beisland, 2014).[2] Acquisitions involve economic complexity that proved difficult for accounting standard-setters to deal with in a way that provide users with relevant information (Johansson, Hjelström, & Hellman, 2015). For example, how will analysts know whether an acquisition is successful when the goodwill impairment test evaluates a different entity than the one acquired? In addition, there is complexity for analysts related to understanding firms' accounting judgments regarding, for example, the separation between identifiable intangible assets and goodwill (e.g. Shalev, Zhang, & Zhang, 2013) and the goodwill impairment test (Ramanna & Watts, 2012).

2.6. The role of financial statement complexity

FSC may refer to the economic phenomena as such and/or to how the accounting is done, including disclosures. Filzen and Peterson (2015) argue that FSC "[...] represents the increased difficulty of understanding, interpreting, and forecasting financial statements" (p. 1560). The forecasting aspect is important as investors and analysts often use the information for this purpose. Filzen and Peterson further argue that FSC is primarily driven by the complexity of economic transactions, which could either originate from (1) particular transactions that are less familiar or more complicated, or, from (2) situations where a wide range of economic transactions are aggregated which makes it more difficult to identify how economic events affect the firm. An acquisition pertains to the first type, where a transaction often has significant and complex financial effects. Aggregation of acquisition-based and organic growth may cause complexity of the second type.

The IASB aims for economic events to be faithfully represented in the financial statements, so the underlying complexity of economic transactions should not be reduced in favor of simplicity. If the IASB succeeds in this ambition, FSC will primarily be driven by the complexity of economic transactions, whereby the accounting portrayal should not add (or reduce) complexity. Although analysts have incentives to invest in knowledge of complex business and accounting issues (see Section 2.3), some prior research has questioned how sophisticated analysts really are in this area (Bréton & Taffler, 1995). As regards forecasting, the results of Plumlee (2003) suggest that analysts assimilate less complex information to a greater extent than more complex information. Focusing specifically on the area of financial instruments, Chang et al. (2016) find that despite having financial expertise, "[...] analysts routinely misjudge the earnings implications of firms' derivatives activity" (p. 584). Plumlee (2003) and Chang et al. (2016) rely primarily on analyst forecast data and presume analysts to have accounting expertise without including any measure of such knowledge.

2.7. Analysts' use of valuation models

In addition to understanding a business through accounting numbers, analysts must know valuation models (e.g. Penman, 2011). Prior research on analysts' use of valuation models distinguishes between more sophisticated, multi-

[2] We limit our study to IFRS 3 and IAS 36 as they are the main standards related to acquisitions (acquisition analysis, goodwill impairment tests). We also considered including IAS 27 (Consolidated and Separate Financial Statements) and IAS 38 (Intangible Assets) but decided they did not represent acquisition-related core knowledge to the same extent as IFRS 3 and IAS 36. IFRS 10 (Consolidated Financial Statements) was not issued at the time of the first survey. As regards IAS 38, please note that goodwill from a business combination is not within the scope of this standard. IAS 38 primarily focuses on self-generated intangible assets, such as capitalized development costs, and refers to IFRS 3 as regards identifiable intangible assets acquired in a business combination.

period models and less sophisticated, single-period models (Demirakos, Strong, & Walker, 2004; Imam, Barker, & Clubb, 2008). The former includes discounted cash flow (DCF) and residual income valuation models, whereas the latter refers to valuation multiples that relate share price, or enterprise value (EV), to short-term earnings forecasts. Prior research is mixed regarding analyst preferences for different valuation models. Demirakos et al. (2004) and Imam et al. (2008) find that earnings-based approaches are more frequently used than cash-flow based approaches, while Imam, Chan, and Shah (2013) report that analysts often use multiple methods (both earnings-based and DCF models).

There is a vast literature on firm valuation in connection with acquisitions. Prior research suggests that acquiring firms underperform relative to non-acquiring firms, especially in public takeovers (Renneboog & Vansteenkiste, 2019). This may simply reflect a reversal of a pre-takeover overvaluation of the acquirer. However, Ma, Whidbee, and Zhang (2011) suggests that at least some portion of the underperformance can be attributed to the destruction of intrinsic value, caused primarily by lowered earnings forecasts during the post-acquisition period. More recently, Donnelly and Hajbaba (2014) point out that these decreases in forecasted earnings after acquisitions may be caused by failure to achieve initial forecasts but could also reflect the correction of overly optimistic expectations. They control for optimism and find that the poor post-acquisition performance is primarily explained by the financing method used (equity-issuing acquirers perform poorly). Tehranian, Zhao, and Zhu (2014) investigate whether analyst coverage after a takeover deal reveals information about the deal's future performance. They find that when more analysts of the target firm decide to cover the merged firm, this is correlated with better long-run stock and operating performance.

The literature on the role of analysts in relation to valuation effects in connection with acquisitions has not, to the best of our knowledge, addressed issues related to analysts' accounting knowledge. However, Kerl, Stolper, and Walter (2012) show that merger and acquisition (M&A) news from companies had limited effects on the analyst outputs, such as forecast updates, target prices, and recommendations. This may be due to the increased complexity of estimating the future consolidated earnings stream for the merged entity. This is consistent with prior research showing a decline in overall forecast accuracy following mergers (Haw, Jung, & Ruland, 1994). Arguably, accounting knowledge plays an important role in this context.

2.8. Analysts' incentives for not investing in accounting knowledge

Although analysts have good reasons to acquire accounting knowledge relevant to the industries and companies they follow, research has pointed at problems related to analysts' incentives resulting in opportunistic use of accounting information, optimistic forecast bias, optimistic target prices, analyst catering, and inadequate analyst pressure on companies for growth (Baik, Farber, & Petroni, 2009; Bradshaw, Huang, & Tan, 2019; Cowen, Groysberg, & Healy, 2006; Doukas, Kim, & Pantzalis, 2008; Pacelli, 2019). Barker and Imam (2008) examine analysts' economic incentives to generate trading volume and their results suggest that analysts may behave opportunistically in their use of both accounting and non-accounting information for the purpose of developing coherent investment cases and news flow. Bischof, Daske, and Sextroh (2014) observed that analysts' interest in banks' fair value accounting practices at conference calls varied considerably between the highest quarter (fourth quarter 2008 in connection with the Lehman Brothers default) and the second quarter of 2010 (when almost no analyst questions were asked). This indicates that analysts are mainly interested in complex accounting information when they can use it to support a particular investment case. Imam and Spence (2016) argue that because of the economically driven working conditions, the main role of analysts is no longer to make accurate forecasts or correct investment recommendations, but to provide rich contextual information about companies and industries. The context in which analysts operate involves quick responses to news and building convincing investment cases. Investments in accounting knowledge may not necessarily be viewed as worthwhile in this context compared to, for example, collecting forward-oriented, non-financial information (e.g. Abhayawansa et al., 2015; Orens & Lybaert, 2007).

2.9. The role of experience

Analyst incentives are part of a more general framework of human judgment and decision-making. Bonner (2008) describes this framework in terms of three components, *person*, *task* and *environment*, which interact and shape judgment or decision. Incentives relate to the analyst environment, but there are also important aspects related to the other two components. Prior research shows that financial analysts develop task-specific knowledge which is linked to analyst experience (e.g. Bouwman, Frishkoff, & Frishkoff, 1987). To the best of our knowledge, the relationship between experience and analysts' levels of accounting knowledge has not been investigated. In the auditing literature, industry-related experience is a good proxy for specialized knowledge (Solomon, Shields, & Whittington, 1999). There is also research suggesting that technical knowledge will only improve auditors' performance up to a certain seniority level (Tan & Libby, 1997). At the highest level, tacit knowledge seems more important than technical knowledge (Tan & Libby, 1997). Analogous to these findings in auditing, accounting may be perceived as more important for junior analysts to master whereas more experienced analysts may focus more on other things, such as meeting client demands to make short-term share price forecasts in response to the news flow (Abhayawansa et al., 2015). Indeed, one form of tacit analyst knowledge related to experience is potentially the ability to successfully communicate with clients. Again, prior research in auditing suggests that audit partners need to master commercial logics rather than specialist, technical knowledge (Carter & Spence, 2014).

2.10. Changes in the institutional environment

During the 2010s, the analyst community experienced institutional changes. Internet-based sources made comprehensive analysis of financial numbers more directly accessible to clients, whereas regulatory changes reduced the incentives for sell-side analysts to generate trading income and potentially made sell-side research more independent (e.g. MiFID II issued by the EU in 2014).[3] According to Spence et al. (2019), this forced sell-side analysts to recalibrate their professional expertise and further develop their role as "relational devices" by providing more value-adding interactions with firms and buy-side actors, while relying less on simply providing informational content. These changes in the institutional environment may have influenced analysts' incentives to invest in accounting knowledge, either to motivate increased knowledge to meet the new demands on professional expertise, or a decreased need for accounting knowledge as the "relational" competence appears to focus on interpreting market behavior rather than firm-specific aspects.

3. Research propositions

The literature review suggests that business and accounting knowledge are imperative when performing fundamental analysis and standard setters expect users to have knowledge in these areas and to study accounting information diligently. As business and accounting complexity has increased, the IASB has gradually increased knowledge requirements and asked primary users, who do not meet these demands, to turn to financial advisers. Financial analysts are financial advisers who perform fundamental analysis. Therefore, at least from a normative perspective and a standard-setter perspective, they can be expected to have a high level of accounting knowledge, including areas of high complexity. The research literature suggests that new professions, such as financial analysts and management consultants, will find it difficult to develop and maintain expertise in their fields of knowledge because knowledge turns over too fast. Instead of being experts in fields of business, accounting, or valuation, empirical research suggests that financial analysts develop expertise in combining knowledge in these areas and using information in a way that is difficult for clients to access (a "black box"), such as the "mosaic" approach (Roberts et al., 2006). Nevertheless, to be able to combine knowledge and information in this way, arguably, a high level of accounting knowledge is needed. Against this background, we empirically evaluate the following research proposition (RP):

RP 1: Financial analysts who evaluate complex accounting information as part of their work will have a high level of knowledge of the relevant accounting standards.

The complex accounting information we evaluate pertains to corporate acquisitions and the standards relevant to the financial analysts we study are IFRS Standards.

Next, we turn to the role of accounting knowledge for the use of acquisition-related information in the context of valuation. One aspect of relevance to our study is that sophisticated models, such as DCF valuation, require inputs and assumptions at a detailed level when preparing projected income statements, balance sheets, and cash flow statements. This will make the accounting knowledge requirements, including FSC areas, more visible to analysts in comparison with the use of valuation multiples. In the case of acquisitions, the analyst must understand the multi-period financial consequences of the inputs made for various accounting-related items, such as goodwill, identifiable intangibles, synergies, and integration costs. This reasoning corresponds with Penman's (2011) view that investments in accounting (and business) knowledge makes it possible to apply sophisticated valuation models (cf. Penman, 2012), which then create competitive advantages for analysts in search of mis-priced stocks.

The valuation methods used by financial analysts range from more to less sophisticated approaches. Based on the above reasoning, we expect analysts with greater accounting knowledge (including FSC areas) to more frequently use sophisticated methods as more such knowledge is needed when producing the detailed financial statement inputs and assumptions required by, for example, DCF modelling. We evaluate the following RP empirically:

RP 2: Analysts who are more knowledgeable of the relevant accounting standards in an area of complex accounting information will use more sophisticated valuation measures than less knowledgeable analysts, when evaluating the financial effects of such information.

In the empirical analysis, we compare the use of sophisticated modelling (DCF) to the use of less sophisticated approaches that involve the application of valuation multiples (such as the price-earnings ratio). By including both more and less sophisticated models in the empirical design, we allow for the use of multiple methods (cf. Imam et al., 2013) and enable comparisons with prior research on analysts' valuation methods (see Section 2.7).

[3] MiFID stands for "Markets in Financial Instruments Directive." In the aftermath of the Global Financial Crisis 2008–2009, the EU regulation in place, MiFID I, was assessed, and various weaknesses were identified. For example, the lack of a level playing field between markets and market participants (the 2011 EC Impact Assessment of MiFID I, SEC/1226/2011). MiFID II was issued by the EU in 2014 (2014/65/EU) and the deadline for member state compliance was January 3, 2018. The European Securities Markets Authority (ESMA, 2019) comments on MiFID II: "The protection of investors is strengthened through the [...] improvement of requirements in several areas, including the responsibility of management bodies, inducements, information and reporting to clients, cross-selling, remuneration of staff, and best execution." For a review of the development of financial market regulation in Europe, see Huettinger & Krašauskaitė (2019).

The literature section presents various reasons for analysts to invest in accounting knowledge. On the one hand, accounting information plays a primary role in anchoring analysts' valuation-related opinions about companies (Barker, 1999) and negative accounting aspects tend to have strong negative effects on analysts' investment cases (Barker & Imam, 2008). Accordingly, clients would expect analysts to know also about the complex accounting issues relevant to the firms and industries they follow. This is consistent with the IASB's view on financial advisers' understandability and diligent use of accounting information. On the other hand, analysts are also subject to forces working against investments in accounting knowledge (Imam & Spence, 2016). For example, analyst work involves swift responses to news and building convincing investment cases, where accounting knowledge may not appear to be of critical importance. Based on this reasoning, we expect analysts who choose to invest in greater accounting knowledge to make more use of detailed items in financial reports related to areas of complex accounting information. The following RP is formulated:

RP 3: Analysts who are more knowledgeable of the relevant accounting standards in an area of complex accounting information will take specific financial statement items in this area into account to a greater extent, and assign greater importance to these items, than less knowledgeable analysts, when evaluating the financial effects of such information.

RP 3 is evaluated by focusing on the information provided by firms when acquisitions are announced and during the post-acquisition period, particularly details of the acquisition analysis (AA) according to IFRS 3 and impairment-related information according to IAS 36.

4. Methodology

4.1. Survey

To investigate RPs 1–3, we used a web-based survey distributed to financial analysts on two different occasions.[4] The survey, which is in Swedish and available upon request, comprised four blocks of questions pertaining to the areas referred to in Section 3. Specifically, the respective contents of the blocks were as follows:[5]

Block 1: This block had 11 questions. The first six questions concerned background details (e.g. age, gender, education, job characteristics, and analyst certification). Then two questions on whether respondents analyzed the effects of corporate acquisitions in their current position or had performed such analyses in the past. The block ended with three questions aimed to measure knowledge of IFRS in general and two specific standards, IFRS 3 and IAS 36. Respondents were asked to rate how well they knew the standards on a six-point scale with anchors ranging from "Not well at all" to "Very well". The responses to these three questions tested RP 1, RP 2, and RP 3.

Block 2: This block included questions pertaining to the use of accounting information when evaluating acquisitions. Three questions concerned the extent to which respondents considered the AA and the impairment tests of goodwill in their analyses. One question asked whether the analyst made follow-up analyses of acquisition outcomes. These four questions were answered on seven-point scales with anchors ranging from "never" to "always". Another question asked the respondent to rate how the purchase price allocation into goodwill and other intangibles affected the valuation of the acquiring firm. A seven-point scale ranging from "not at all" to "a very high extent" was used for this purpose. The block ended with a question asking respondents to rate the respective importance of seven items from the AA (consideration transferred, the size of the goodwill amount, the amortization period, the size of the intangible assets, and intangible assets in terms of product rights, brands, and customer relations) using a seven-point scale with anchors ranging between "No, not important at all" to "Yes, very important". Responses to the questions in Block 2 tested RP 3.

Block 3: This block had three questions of which two asked the respondent to state their extent of agreement with two statements about the significance of goodwill impairment tests. Agreement was measured on a five-point scale ranging from "strongly disagree" to "strongly agree". Responses to these questions tested RP 3. The third question asked respondents to report, on a seven-point scale (with the anchors "never" and "always"), their use of six financial measures (DCF, EV/EBITDA, EV/EBIT, EV/sales, price / book value, and PE-ratio)[6] when evaluating the effects of corporate acquisitions. Answers concerning the use of DCF tested RP 2.

Block 4: This block asked respondents to state how they would act in two hypothetical situations: (i) in response to a firm's quarterly report announcement, and (ii) after having conducted a comprehensive industry analysis. For each situation, respondents were asked to rate their degree of agreement with four statements of which two related to firm valuation (DCF vs. earnings development) and two concerned client communication focus (development of fundamental firm value and

[4] The questionnaire was constructed using the Qualtrics Survey Software. Before distributing the questionnaire, several drafts of it were tested on one professional analyst and four PhD students in finance and accounting.

[5] Rather than prompting respondents to answer on a similar scale throughout the questionnaire, three different scales were used (five-point, six-point, and seven-point). The use of different scales increases respondents' attentiveness. In addition, when asking respondents to rate their knowledge of accounting standards, a six-point scale was used, as the lack of a midpoint would encourage respondents to take a stand. In contrast, when asking respondents about how frequently they used certain financial measures, it was deemed appropriate to use a seven-point scale to capture the variation of the use, while five-point scales were considered more appropriate for questions where respondents were asked to agree (or disagree) with statements.

[6] EBITDA refers to "earnings before interest, tax, depreciation and amortization", EBIT to "earnings before interest and tax", and PE-ratio to "price-earnings ratio".

share price development, respectively). The degree of agreement was rated on a five-point scale ranging from "strongly disagree" to "strongly agree". Responses concerning the use of DCF tested RP 2.

Blocks 2–4 of the survey only appeared to respondents with experience of evaluating corporate acquisitions.[7]

Self-reported knowledge of accounting standards is used to measure the level of knowledge, operationalized by using a six-point Likert scale, where we interpret a "high level" as knowing the standards fairly well (5) or very well (6).[8,9] Arguably, these levels correspond with the IASB's expectations on understandability for financial advisers.

4.2. Distribution of the survey

For the distribution of the survey, we cooperated with the Swedish Society of Financial Analysts (Sveriges Finansanalytikers Förening, SFF), which embodies professionals active in the sphere of qualified financial analysis in Sweden and is also a member of the European Federation of Financial Analyst Societies (EFFAS). On two different occasions, December 2010 and September 2017,[10] SFF's general secretary distributed the survey as a web link in a short e-mail where he briefly described the research study and called for the members of the society to respond. SFF has some 1100 members. By such procedures, we collected two samples of responses from financial analysts from two different time periods. From a statistical point, the samples might not be considered independent, as the surveys were anonymously answered and one cannot rule out that they included some identical respondents.

4.3. Respondents

Financial analysts are difficult for researchers to access, especially in this case where we required exposure to FSC. Our cooperation with SFF enabled such access to Swedish analysts who, arguably, are representative of analysts in well-developed financial markets. Sweden has been a member of the EU since 1995, hosts a significant European stock exchange (Hellman, Gray, Morris, & Haller, 2015), and has a disproportionally high number of multinational firms (Cooke, 1989). In response to capital market demands, Sweden began to voluntarily adopt IAS in 1991 (e.g. Aisbitt, 2001). Burgstahler, Hail, and Leuz (2006) found, in a European study, that firms with Scandinavian legal origin show the lowest earnings management scores together with the UK. In a comparison between Swedish and US analysts, Olbert (1994) found no significant differences regarding the frequency with which the analysts used fundamental analysis for stock valuation purposes, how often they used PE-ratios for stock valuation purposes, or how highly they ranked income statements as a source of information. Experimental studies have used Swedish analysts as subjects and reported results comparable to other countries (Andersson & Hellman, 2007; Hellman, Andersson, & Fröberg, 2016).

The survey data consist of two sets of samples. Sample 1 (S1) received the survey distributed from December 16, 2010 to February 10, 2011. In all, 112 individuals opened the web link to the survey. Sixty-seven met the criterion of past or present work with analyzing the effects of corporate acquisitions (FSC exposure).[11] All of these 67 analysts did not respond to all four blocks of questions, but, in order, the following frequencies were observed for Blocks 1, 2, 3, and 4: 61, 53, 43, and 41.[12] In sum, 41 of the 67 analysts completed the whole survey.

Sample 2 (S2) received the same survey except distributed from September 26, 2017 to November 15, 2017. A total of 114 individuals opened the web link of the survey. Fifty-three stated they analyze corporate acquisitions as part of their work, but many did not complete all questions.[13] In order, the following number of responses were registered for Blocks 1, 2, 3, and 4: 48, 35, 33, and 31.[14] In sum, 31 of the 53 respondents returned complete surveys.

Admittedly, the response rates are low. The percentage of completely answered surveys were 3.7% and 2.8% for S1 and S2, respectively. Those response rates should be considered in the light of the following circumstances. According to Sax et al.

[7] Otherwise the respondent was automatically directed to the end of the questionnaire. The survey also included a few additional blocks of questions focusing on other aspects of analysts' work.

[8] It is not uncommon in accounting research to rely on self-evaluation measures to assess the level of knowledge or expertise (e.g. Brown & Jones, 2011; Knechel & Leiby, 2016). Criticism may be raised against such measures, as they may not be reliably accurate. We address this concern in the final section.

[9] An alternative to self-reported knowledge is quiz questions of the kind used in financial literacy studies (see Section 2.4). We considered the methodological uncertainty involved in constructing such questions for professional users regarding complex accounting information to be too high (to the best of our knowledge, no prior studies use a quiz approach for professional analysts). Moreover, we expected such a quiz to decrease the response rate and possibly bias the results, as professionals with lower knowledge might be reluctant to show their lack of knowledge by means of a quiz.

[10] More than 90% of the firms listed on Nasdaq Nordic Stockholm have financial years ending 31 December. The surveys were sent out in the beginning of periods expected to be less busy; mid-December (low market activity, Christmas holidays) and late September (quiet period before third quarter reports). There were no indications in the survey material that the difference in timing during the year (Dec. vs. Sept.) had any impact on the results.

[11] Respondents who did not evaluate acquisitions as part of their job had the following characteristics: 32% were females; median age = 46; median years of experience as financial analysts = 9; 55% had no certification.

[12] Analyses of the responses to questions in Block 1 regarding the 42 analysts who completed the whole survey and the 25 analysts completing only parts of the survey, suggested that the two groups had similar background except for their perceived knowledge of IAS 36. The medians of this variable for the former and latter groups were 4.00 and 3.00, respectively. A Mann-Whitney test showed that the scores were significantly different ($U = 329.0$, $p < 0.05$). Thus, limited knowledge of accounting standards might have affected the response rate.

[13] Respondents not evaluating acquisitions as part of their job had the following characteristics: 23% were females; median age = 49.5; median years of experience as financial analysts = 15; 53% had no certification.

[14] Analyses of the responses to the questions in Block 1 regarding the 31 analysts who completed the whole survey and the 20 analysts completing only parts of the survey but did not respond to the questions in Block 4, suggest that the two groups had similar background and responses to the questions in Blocks 1–3.

(2003), web surveys generally have lower response rates than paper surveys. Financial analysts' high opportunity cost is presumably a major reason for the low response rates, further lowered by the required exposure to FCS information. A well-cited survey study on how investment professionals perceive the usefulness of financial accounting measurement concepts had a response rate of 1.9% (Gassen & Schwedler, 2010).[15]

Table 1 provides participant background details of the two samples. The S2 respondents tended to be older, more experienced, and had stayed longer in their current job positions than those of S1. Non-parametric tests (Mann-Whitney) showed that these differences were significant (U = 894, 950, and 718, $p < 0.001$). As the differences almost coincide with the years between the two surveys, one may suspect that some respondents took part in both surveys. The two samples also include variety in terms of work experience and fields of work. The latter implies that their "client categories" vary and that their incentive structures may differ; this is something that must be considered when interpreting the results. Generally, there is a weak tradition of analyst certification in Sweden and, therefore, the relatively low share of analysts holding the Swedish (AFA), European (CEFA) or American (CFA) certificates is not surprising.[16] Holding the certification was unrelated to years of financial analyst experience.

4.4. Employed statistical analyses

As the two samples comprise analyst behavior at two occasions about seven years apart, the sample statistics are reported separately. However, there were few statistically significant differences between the samples. Unless otherwise stated below, the samples gave similar results. Due to the relatively small number of respondents and the characteristics of the variables (i.e. non-continuous), we mainly conduct non-parametric statistical analyses. Parametric statistical analyses returned similar results. Rather than limiting our analyses to respondents who returned complete surveys, we used all available responses. Consequently, the number of observations may differ for the variables as some individuals declined to answer all questions (see Section 4.3). Analyses based on only complete responses gave similar results.

5. Findings

5.1. Analysts' perceived knowledge of accounting for acquisitions

The respondents seemed better informed of IFRS in general compared to the specific standards IFRS 3 and IAS 36. The median values for perceived knowledge of IFRS in general, IFRS 3 and IAS 36, were 5, 4, and 4, corresponding to the response options "fairly well" (5) and "to some extent" (4). Non-parametric tests (Friedman) showed that knowledge of IFRS in general scored significantly higher than knowledge of IFRS 3 and IAS 36 (S1: χ^2_F (2, N = 61) = 37.8, $p < 0.001$; S2: χ^2_F (2, N = 61) = 42.5, $p < 0.001$).

Fig. 1 shows that groups of more and less knowledgeable respondents could be distinguished. The more knowledgeable group (knowing the specific standards fairly well or very well) comprised 33% (25%) of S1 (S2) for IFRS 3 and 35% (29%) of S1 (S2) for IAS 36. At the other end, the less knowledgeable group (knowing the specific standards not well at all or to a slight or very slight extent) represented about 41% (30%) of S1 (S2) for IFRS 3 and about 36% (29%) of S1 (S2) for IAS 36. The respondents with and without certifications (AFA, CEFA or CFA) did not statistically differ with respect to levels of self-reported knowledge of IFRS in general, IFRS 3, and IAS 36 (Mann-Whitney tests).

The results do not support RP 1. The median analyst knew the standards "to some extent" which we interpret as a *poorer* knowledge level compared to the IASB's user and adviser requirements referred to in Section 2.2. The results further show that knowledge varied greatly between the analysts. In the sections below, we refer to an index variable ("IFRS knowledge"), which is the average of the three measures of knowledge (IFRS in general, IFRS 3, and IAS 36). Those measures had a strong degree of internal consistency (S1: Cronbach's $\alpha = 0.86$; S2: Cronbach's $\alpha = 0.85$).[17]

[15] A common practice in survey methodology is to offer some kind of incentive to individuals who participate, as a way to stimulate the response rate. However, consistent with Gassen & Schwedler (2010), our first survey distribution did not offer anything for participation, as we assumed the analysts would be motivated to take part and contribute without explicit incentives. In the second survey distribution, we offered incentives to increase the response rate. Specifically, the analysts were told that they would receive their own choice of reward in return for answering the survey. They could pick one of three options: (1) a voucher for a cinema ticket, (2) three lottery tickets, or (3) a monetary donation to a well-known independent non-profit organization aiming to raise and distribute money for cancer research. All options had the same value (about €10), as explicitly stated in the survey.

[16] Since 1994, AFA (*auktoriserad finansanalytiker*) is awarded by SFF after completing an educational program over 30 days (plus seven exams). Statistics are not available on the number of practising AFA analysts but based on the available information we estimate about 400 (600) AFAs in 2010 (2017). CEFA (Certified European Financial Analyst) certification is controlled by EFFAS and no statistics are available on the number of Swedish CEFAs. CFA Society Sweden was founded in 2003 and had 151 individual members in 2016 (Dagens industri, 2016). Since 2014, there is also a Swedish license for financial specialists issued by the organization SwedSec. SwedSec is a private body and its license system is based on self-regulation. Applicants must pass a 3-hour test with questions on ethics and regulation, financial markets, and economic analysis. Accounting knowledge is not part of the test. A holder of AFA and the SwedSec licence for financial specialists, is eligible for CEFA without any further requirements. The questionnaire checks whether respondents have any of the three certifications as they require accounting knowledge, but it does not check separately for the SwedSec license.

[17] As suggested by one reviewer, we also performed the statistical analyses by using each of the three measures of knowledge (IFRS in general, IFRS 3, and IAS 36). The results from these analyses were consistent with those obtained from the analyses using the index variable. We thank the reviewer for this advice.

Table 1
Descriptive statistics for respondents who analyze the effects of corporate acquisitions as part of the their work.

	Sample 1				Sample 2			
Variables	n	Median	Min.	Max.	n	Median	Min.	Max.
Panel A: Age and years of experience								
Age (years)	65	45.00	31	66	51	50.00	32	70
Years of experience as financial analyst	62	12.50	3	35	49	20.00	5	40
Years on current job position	59	4.00	0	27	49	9.00	1	20
Variable	Frequency	Percent			Frequency	Percent		
Panel B: Gender								
Male	56	85			39	74		
Female	10	15			14	26		
Total	66	100			53	100		
Variables	Frequency	Percent			Frequency	Percent		
Panel C: Analyst certification								
AFA, CEFA or CFA	27	41			20	38		
No certification	39	59			33	62		
Total	66	100			50	100		
Variables	Frequency	Percent			Frequency	Percent		
Panel D: Field of work[a]								
Sell-side analyst	6	8			1	2		
Buy-side analyst	4	5			2	4		
Independent analyst	11	15			4	8		
Credit analyst	9	12			10	19		
Corporate finance	21	28			8	15		
Portfolio management	11	15			12	23		
Other[b]	13	17			16	30		
Total	75	100			53	100		

Notes:
[a] Six respondents of Sample 1 and ten respondents of Sample 2 indicated multiple fields of work.
[b] This referred to a variety of areas such as client executive, private equity, and research.

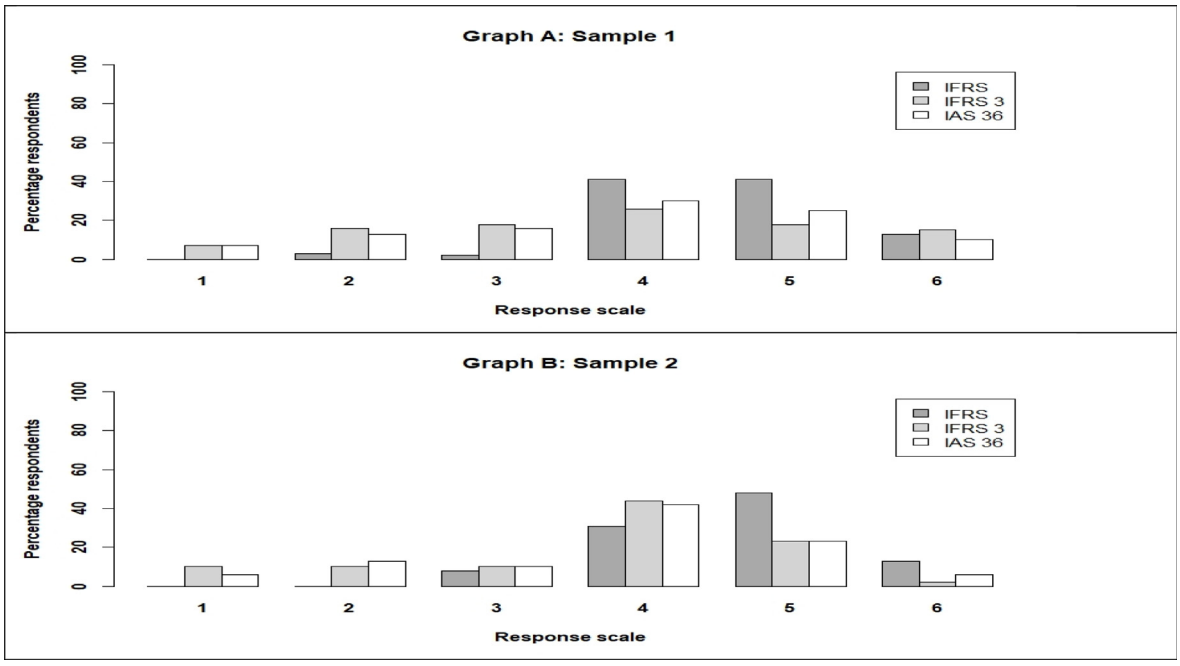

Fig. 1. Self-reported knowledge of IFRS Standards. Notes: Graph A and Graph B show the frequencies of the responses by the 61 respondents of Sample 1 and the 48 respondents of Sample 2 to the questions: (1) How well do you know the International Financial Reporting Standards (IFRS)?; (2) How well do you know IFRS 3 (Business combinations)?; and (3) How well do you know about IAS 36 (Impairment of Assets)? Each question had six-point response scales with the anchors: 1 = Not well at all, 2 = To a very slight extent, 3 = To a slight extent, 4 = To some extent, 5 = Fairly well, and 6 = Very well.

5.2. Analysts' valuation approaches in relation to perceived knowledge of accounting standards

Table 2 reports how the respondents considered the use of general company valuation approaches when responding to a quarterly report announcement (Panel A) and after conducting a comprehensive analysis (Panel B). For both situations, the median scores for the use of DCF vs. earnings development approaches were 4 on the 5-point scale. Consistent with Demirakos et al. (2004) and Imam et al. (2008), the percentages of respondents preferring an earnings development approach in the two situations were somewhat (but not statistically significantly) greater than the percentages of respondents stating they would use a DCF approach. Statistical analysis suggested that the valuation approaches were applied consistently across the two situations.[18]

The correlations between IFRS knowledge and use of DCF were negative, but not significantly so for the situation with a quarterly report announcement (S1: r_s (37) = −0.25, p = n.s.; S2: r_s (31) = −0.21, p = n.s.) or for the situation referring to a comprehensive analysis (S1: r_s (37) = −0.30, p = n.s.; S2: r_s (31) = −0.14, p = n.s.). The correlations between IFRS knowledge and use of the firm's earnings development were negative and nonsignificant both for the first situation (S1: r_s (37) = −0.14 and S2: r_s (31) = −0.16) and the second situation (S1: r_s (37) = −0.09; S2: r_s (31) = −0.14, p = n.s.).

We also analyzed the individual responses regarding the two valuation approaches for each of the two situations. As regards the situation of responding to a quarterly report announcement, about 61% (71%) of S1 (S2) indicated they used both DCF and earnings-development approaches. The corresponding percentages for the comprehensive analysis situation were 66% (77%). Thus, in line with Imam et al. (2013), most respondents claimed to rely on multiple valuation approaches. However, this tendency was unrelated to IFRS knowledge.

Table 3 shows the specific use of valuation measures in the context of evaluating the effects of acquisitions. The measures had a high degree of internal consistency (Cronbach's α = 0.75 for both samples). The table suggests that DCF was used to a greater extent than the PE-ratio. A non-parametric test (Wilcoxon) showed that this tendency was statistically significant (S1: T = 96.50, z = −2.24, p < 0.05; S2: T = 40.50, z = −2.98, p < 0.01). IFRS knowledge was poorly and nonsignificantly correlated with the variable denoting use of DCF (S1: r_s (43) = −0.01; S2: r_s (33) = 0.05). In regard to the other variables representing use of different valuation measures, IFRS knowledge did not significantly (or consistently) correlate with these measures (S1: −0.15 < r_s (43) −0.01; S2: 0.01 < r_s (33) < 0.32). In sum, the results do not support RP 2. A higher level of IFRS knowledge did not correspond with the use of a more sophisticated valuation approach (DCF) when evaluating acquisition effects.

5.3. Analysts' use of accounting information when evaluating acquisitions recently announced

The survey also had two questions regarding the importance of PPA and AA information. As shown by Table 4 (Panel A) the median score was 4 ("to some extent", 7-point scale) to the question regarding how the allocation of purchase price into goodwill and other intangibles affected the valuation of the acquirer. The correlation between IFRS knowledge and the PPA-variable was nonsignificant for S1 (r_s (50) = 0.18), but significantly positive for S2 (r_s (35) = 0.40, p < 0.01). Moreover, Table 4 (Panel B) reports that the median score was 5 ("often", 7-point scale) to the question regarding the extent of consideration of the AA when evaluating corporate acquisitions. IFRS knowledge had a nonsignificantly positive correlation with this variable for both samples (S1: r_s (50) = 0.10; S2: r_s (35) = 0.25).

Table 5 reports the respondents' perceived importance of seven AA items. A non-parametric test (Friedman) showed that the perceived importance of the items varied significantly (S1: χ^2_F (6, N = 52) = 101.7, p < 0.001; S2: χ^2_F (6, N = 34) = 79.0, p < 0.001). For example, nearly all respondents claimed that "consideration transferred" was very important, but less than 70% of them stated that "intangible assets in the form of customer relations" and "amortization period" were important. As the items had a high degree of internal consistency (S1: Cronbach's α = 0.91; S2: Cronbach's α = 0.87), they were averaged into an index variable having the following median scores for S1 and S2: 5.43 and 5.29. The samples did not significantly differ in regard to this index variable. IFRS knowledge showed no correlation with the index variable for S1 (r_s (52) = −0.02, p = n.s.) but a significantly positive correlation for S2 (r_s (34) = 0.38, p < 0.05).

In sum, as indicated by the correlational analyses, there was mixed support for RP 3 regarding IFRS information related to acquisitions recently announced.

5.4. Following up on previously made acquisitions

Table 6 shows that about half of the respondents conducted follow-up analyses of previous acquisitions, considered future goodwill impairments, and read annual report descriptions of goodwill impairment tests. IFRS knowledge was poorly correlated (nonsignificantly) with the inclination to make follow-up analyses (S1: r_s (53) = 0.13; S2: r_s (35) = 0.28). Somewhat stronger correlations were observed between IFRS knowledge and analyst consideration of future goodwill impairments (S1 & S2: 0.31 < r_s < 0.33, S1: p < 0.05). Finally, IFRS knowledge was significantly positively correlated with paying attention to annual report descriptions of goodwill impairment tests (S1: r_s = 0.30 (53), p < 0.05; S2: r_s (35) = 0.45, p < 0.01).

Generally, these results do not provide support for RP 3. However, there are a few exceptions, most notably that more knowledgeable analysts pay more attention to the annual report descriptions of goodwill impairment tests.

[18] The DCF approach measure correlated strongly across the situations (S1: r_s (41) = 0.76, p < 0.001; S2: r_s (31) = 0.80, p < 0.001). Similarly, the earnings development approach measure correlated strongly across the two situations (S1: r_s = 0.85 (41), p < 0.001; S2: r_s (31) = 0.91, p < 0.001).

Table 2
Valuation approaches in two situations: Median values and distribution of responses (in percent).

Statement	Sample 1 (41 Respondents)				Sample 2 (31 Respondents)			
	Median	Disagree[a]	Hesitant[b]	Agree[c]	Median	Disagree[a]	Hesitant[b]	Agree[c]
Panel A: In response to a quarterly report announcement:								
In my appraisal of the company, I primarily focus on the company's earnings development	4	5%	10%	85%	4	3%	0%	97%
In my appraisal of the company, I primarily focus on the company's discounted cash flows	4	10%	22%	68%	4	3%	23%	74%
Panel B: After having conducted a comprehensive analysis:								
In my appraisal of the company, I primarily focus on the company's earnings development	4	5%	12%	83%	4	0%	7%	94%
In my appraisal of the company, I primarily focus on the company's discounted cash flows	4	2%	24%	73%	4	3%	13%	84%

Notes: Agreement with each statement was answered on a five-point scale.
[a] Includes the respondents who disagreed with the statement (scale points 1 or 2).
[b] Includes the respondents who ticked the midpoint of the scale (scale point 3).
[c] Includes the respondents who agreed with the statement (scale points of 4 or 5).

Table 3
The use of valuation measures when evaluating the effects of corporate acquisitions: Median values and distribution of responses (in percent).

	Sample 1 (43 Respondents)				Sample 2 (33 Respondents)			
	Median	Never[a]	Occasionally[b]	Frequently	Median	Never[a]	Occasionally[b]	Frequently[c]
Discounted cash flows	6	2%	19%	79%	6	3%	9%	88%
EV/EBITDA	6	9%	14%	77%	6	6%	21%	73%
EV/EBIT	6	5%	16%	79%	5	3%	30%	67%
EV/Sales	5	7%	37%	56%	5	21%	24%	55%
PE ratio	5	12%	28%	61%	5	12%	30%	58%
Price/Book ratio	4	7%	49%	44%	4	12%	42%	45%

Notes: Each measure was rated on a seven-point scale.
[a] Includes the response options "never" or "hardly ever" (the scale points 1 and 2).
[b] Includes the response options "seldom" or "sometimes" (the scale points 3 and 4).
[c] Includes the response options "often", "almost always", or "always" (the scale points 5, 6, and 7).

Table 4
The effects of purchase price allocation (PPA) and use of the acquisition analysis (AA): Median values and distribution of responses (in percent).

Panel A: PPA impact	Sample 1 (53 Respondents)				Sample 2 (35 Respondents)			
	Median	Very little[a]	To some degree[b]	Very much[c]	Median	Very little[a]	To some degree[b]	Very much[c]
How does the purchase price allocation into goodwill and other intangibles affect your appraisal of the acquiring firm?	4	28%	47%	25%	4	37%	49%	14%
	Sample 1 (53 Respondents)				Sample 2 (35 Respondents)			
Panel B: Use of the AA	Median	Never[d]	Occasionally[e]	Frequently[f]	Median	Never[d]	Occasionally[e]	Frequently[f]
To what extent do you take the acquisition analysis into account when evaluating corporate acquisitions?	5	11%	55%	34%	5	14%	52%	34%

Notes: The questions of Panels A and B were answered on separate seven-point scales.
[a] Includes the response options "not at all" or "to a very little extent" (scale points 1 and 2).
[b] Includes the response options "to a little extent" or "to some extent" (scale points 3 and 4).
[c] Includes the response options "to a moderate extent", "to a high extent", or "to a very high extent" (scale points 5, 6, and 7).
[d] Includes the response options options "never" or "hardly ever" (scale points 1 and 2).
[e] Includes the response options "seldom" or "sometimes" (scale points 3 and 4).
[f] Includes the response options "often", "almost always", or "always" (scale points 5, 6, and 7).

5.5. The role of experience and institutional context

On the whole, experience had limited impact. Greater experience was not associated with higher IFRS knowledge for any of our samples. None of the valuation measures in Section 5.2 correlated significantly with years of experience. There were no significant correlations between experience and responses to the questions regarding the PPA impact on valuation, con-

Table 5
The significance of the details of the acquisition analysis: Median values and distribution of responses (in percent).

	Sample 1 (52 Respondents)				Sample 2 (34 Respondents)			
	Median	Unimportant[a]	Hesitant[b]	Important[c]	Median	Unimportant[a]	Hesitant[b]	Important[c]
Consideration transferred	7	2%	2%	96%	7	0%	0%	100%
The size of the goodwill amount	6	8%	14%	79%	5	15%	18%	68%
The size of the intangible assets	6	8%	14%	79%	5	9%	15%	77%
Intangible assets in the form of product rights	5	10%	19%	71%	5	9%	15%	77%
Intangible assets in the form of brands	5	12%	15%	73%	5	9%	27%	65%
Intangible assets in the form of customer relations	5	21%	15%	64%	5	18%	27%	56%
Amortization period	5	19%	17%	63%	5	12%	24%	65%

Notes: Respondents rated the importance on a seven-point scale.
[a] Includes the response options "no, not important at all", "no, not very important", and "no, probably not that important" (scale points 1, 2, and 3).
[b] Includes the scale's midpoint "hesitant whether important or not" (scale point 4).
[c] Includes the response options 'yes, probably somewhat important", "yes, important", and "yes, very important" (scale points 5, 6, and 7).

Table 6
Following up on acquisitions and the significance of impairment tests: Median values and distribution of responses (in percent).

	Sample 1 (53 Respondents)				Sample 2 (35 Respondents)			
	Median	Never[a]	Occasionally[b]	Frequently[c]	Median	Never[a]	Occasionally[b]	Frequently[c]
To what extent do you follow up on the outcome of companies' acquisitions in order to see if they were successful?	5	6%	42%	53%	4	9%	43%	49%
In your analysis to what extent do you take into account whether the acquiring company will report future impairment on goodwill?	5	4%	34%	62%	5	6%	34%	60%
To what extent do you take annual report descriptions of impairment tests of goodwill into account in your work?	4	8%	47%	45%	4	9%	49%	43%

Notes: Each statement was rated on a seven-point scale.
[a] Includes the response options "never" or "hardly ever" (scale points 1 and 2).
[b] Includes the response options "seldom" or "sometimes" (scale points 3 and 4).
[c] Includes the response options "often", "almost always", or "always" (scale points 5, 6, and 7).

sideration of the AA, or any of the items of the AA (see Tables 4 and 5). The same result was observed for the three questions concerning follow-up analysis and goodwill impairment tests (see Table 6).

As regards the possible impact of recent changes in the institutional environment on analyst behavior, we did not find any significant differences in IFRS knowledge level between the two points in time covered (2010 vs. 2017). The only exception was that the index variables of the seven AA items was uncorrelated for S1 but significantly positive for S2 (see Section 5.3).

5.6. Research propositions evaluated using multivariate statistics

The RPs were evaluated in Sections 5.1–5.4 using univariate statistics. In this section, we report on results from four ANOVA models used to test RP 2 and RP 3. While the dependent variables differed, the models had the two samples as the (dummy) independent variable and covariate variables representing IFRS knowledge and length of experience, respectively.[19] The inclusion of the latter variable was motivated by prior audit research (Section 2.9).

To test RP 2, the following procedures were carried out. First, the mean of the DCF measures (see Table 2) was calculated across the two situations. The ANOVA model with this variable as the dependent variable was found to have a nonsignificant independent variable and nonsignificant covariates, as shown in Table 7 (Panel A). Second, the variable representing the use of the DCF-measure (see Table 3) was added as the dependent variable in another ANOVA-model. This model also has a nonsignificant independent variable and nonsignificant covariates, as reported in Table 7 (Panel B). In sum, the multivariate analysis does not provide support for RP 2.

To evaluate RP 3, two ANOVA models were run. The dependent variable of the first model was the index variable comprising the seven details of the AA (see Table 5). As shown by Table 7 (Panel C), this ANOVA model had a nonsignificant independent variable and nonsignificant covariates. The second ANOVA-model included a dependent variable that was the mean value of the following five strongly inter-correlated measures (S1: Cronbach's α = 0.82; S2: Cronbach's α = 0.80): the two

[19] The sample sizes did not permit additional covariates. For example, the respondents' fields of work would be an obvious control variable to include in the ANOVA models, but due to the great variation of fields and their few numbers, it was deemed to be of little use to have fields of work as a covariate.

Table 7
Four one-way ANOVA-models to test the research propositions RP 2 (Panels A and B) and RP 3 (Panels C and D).

Panel A: Dependent variable = Mean value of DFC-measures from Table 2				
Independent / covariate variables	Mean square	F-statistics	p-value	Effect size
IFRS knowledge	1.03	1.41	0.239	0.02
Experience	0.82	1.12	0.295	0.02
Samples (S1 vs. S2)	0.31	0.42	0.520	0.01
Panel B: Dependent variable = The use of the DFC-measure from Table 3				
Independent / covariate variables	Mean square	F-statistics	p-value	Effect size
IFRS knowledge	1.12	0.62	0.436	0.01
Experience	1.00	0.55	0.460	0.01
Samples (S1 vs. S2)	1.11	0.61	0.436	0.01
Panel C: Dependent variable = The index variable of the seven AA item from Table 5				
Independent / covariate variables	Mean square	F-statistics	p-value	Effect size
IFRS knowledge	0.05	0.05	0.830	0.01
Experience	0.27	0.24	0.627	0.01
Samples (S1 vs. S2)	0.22	0.19	0.662	0.01
Panel D: Dependent variable = The index variable of five measures from Table 4 and Table 6 related to PPA, AA, goodwill impairment, and following up on previously made acquisitions				
Independent / covariate variables	Mean square	F-statistics	p-value	Effect size
IFRS knowledge	10.10	9.21	0.003	0.11
Experience	0.02	0.01	0.908	0.00
Samples (S1 vs. S2)	0.33	0.30	0.583	0.01

Notes: IFRS knowledge is the average of three measures of knowledge (IFRS in general, IFRS 3, and IAS 36). Effect size refers to Partial Eta Squared.

measures regarding importance of the PPA and the AA (see Table 4) and the three measures concerning goodwill impairment and following up on previously made acquisitions (see Table 6). As reported by Table 7 (Panel D), this ANOVA-model had a nonsignificant independent variable, a nonsignificant covariate representing experience but a significant covariate denoting IFRS knowledge. In sum, the results are mixed. The significant result for the second model provides some support for RP 3, suggesting that the analysts with more IFRS knowledge used the acquisition-related financial statement information for valuation purposes to a greater extent than the analysts with less knowledge. However, this result was not observed for the detailed items of the AA.

5.7. Complementary analysis: Client communication

The survey also asked the respondents to what extent they would focus on the future development of a company's value in terms of fundamental analysis and the future development of the company's share price, when communicating with clients in two situations: in response to a quarterly report announcement and after a comprehensive analysis. For both situations, the vast majority of the respondents stated that they would focus on the fundamental analysis (S1: 73% vs. 78%; S2: 77% vs. 84%), while about half of the respondents would consider the future share price development (S1: 54% vs. 54%; S2: 52% vs. 48%). IFRS knowledge correlated poorly with the communication focus for both contexts (S1: $0.16 < r_s\,(41) < 0.20$; S2: $-0.05\,(31) < r_s < 0.27$).[20] To sum up, the observed emphasis on company value based on fundamental analysis in the two hypothetical client communication situations arguably provides some empirical support for the line of argument behind the RP formulations (Section 3), as analysts require knowledge to understand the business, accounting, and valuation of companies in order to perform fundamental analyses.

6. Discussion and concluding remarks

Using questionnaire data and guided by three research propositions, this exploratory study investigates the links between analysts' accounting knowledge and their use of accounting information for company valuation purposes. The study aims to

[20] Specifically, the instructions for the two situations read: (1) "Consider the following situation. A company that you follow has recently announced a quarterly report. Indicate to what extent you agree with the below statements" and (2) "Consider the following situation. You have recently performed a comprehensive analysis of an industry including a company that you follow. Indicate to what extent you agree with the below statements". For each of the situations, the respondents were asked to consider the two statements: (1) "In my communication with clients I focus on how the company's share will develop in the future" and (2) "In my communication with clients I focus on how the company's value based on fundamental analysis will develop in the future". Each statement was answered on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). The midpoint (3) denoted "hesitant". Median responses to three out of the four statements were 4 for both samples. The exception was that the median response for S2 concerning the first scenario and the focus on future stock price was 3.00. The reported percentages refer to those respondents who agreed with the statements (i.e., answered with the scale points 4 and 5). Moreover, the respondents reacted consistently to the two situations. Those stating that their emphasis was on the company's value for the first scenario did so also for the other scenario (S1: $r_s\,(41) = 0.72$, $p < 0.001$; S2: $r_s\,(31) = 0.89$, $p < 0.001$). Similarly, those who focused on future share prices when responding to quarterly report announcements selected this response option also for the other scenario (S1: $r_s\,(41) = 0.93$, $p < 0.001$; S2: $r_s\,(31) = 0.90$, $p < 0.001$).

fill a research gap as the role of financial analysts' accounting knowledge is not examined in prior analyst research, and the literatures on financial literacy and accounting understandability have not used analysts as respondents/subjects.

RP 1 suggests that analysts who evaluate complex accounting information as part of their work will have a high level of knowledge of the relevant accounting standards. Accounting for corporate acquisitions is the complex issue evaluated and IFRS are the relevant accounting standards for Swedish analysts. We find that the median analyst only knew the standards "to some extent", which we interpret as a *poorer* knowledge level compared to the IASB's understandability level that we refer to as our benchmark. This result is relevant to the IASB who rely on users and financial advisers to cope with the high complexity level of their standards. It also suggests that the presumption sometimes made that analysts are financial experts, even as regards complex accounting issues (e.g. Chang et al., 2016), may not be valid.

RP 2 addresses whether and why analysts need to know complex accounting. Based on the logic of the IASB (accounting information cannot be useful unless it is relevant to the primary users and this will be hard to achieve if the information is not understandable to them or their advisers) and proponents of fundamental analysis (Penman, 2011), we argue that in order to perform fundamental analysis, the analyst needs to understand the complexities of the firm's business, the relevant accounting, and the employed valuation method. We further argue that a more sophisticated valuation approach (DCF) requires detailed inputs and assumptions related to accounting items (including FSC items). Accordingly, we propose that analysts who are more knowledgeable of the relevant accounting standards in an area of FSC will use more sophisticated valuation measures than less knowledgeable analysts (RP 2). RP 2 was rejected by the data. We conclude that the choice of valuation approach or valuation measure was not governed by the level of IFRS knowledge. A possible reason may be that more sophisticated models (in our case the DCF model) are not applied in a sophisticated way, so that the complex accounting information is either not considered or used incorrectly. This is supported by Bischof et al. (2014) who observed large variation as regards how analysts treated FSC information related to financial instruments for valuation purposes (p. 365):

> While some analysts add back unrealised fair value changes of reclassified assets going forward, others adjust their predictions of different earnings components because the [profit or loss] effects of reclassified assets shift from trading into interest income and impairments.

Bischof et al. (2014) suggest that there is no standard processing of the fair-value related information in the analysts' decision processes because the decision usefulness is likely to be context-specific. In light of our results, an alternative explanation is that analysts lacked sufficient IFRS knowledge and were, therefore, unable to make appropriate adjustments.

Our third research proposal is that analysts more knowledgeable of the relevant accounting standards in an area of FSC will consider the specific financial statement items in this area to a greater extent, and assign greater importance to them, than less knowledgeable analysts (RP 3). The evidence for RP 3 was mixed. On the one hand, most univariate analyses and the ANOVA-model using an index variable based on the detailed items of the AA as the dependent variable, suggested no link between IFRS knowledge and information use. On the other hand, the second ANOVA with a dependent variable that was an index of five factors (two measures regarding PPA and AA and three measures related to acquisition follow-up and goodwill impairment), showed a significant effect in that analysts with more IFRS knowledge used this acquisition-related accounting information for valuation purposes to a greater extent than the less knowledgeable analysts.

The mixed results for RP 3 may partly explain the observation by Kerl et al. (2012) that M&A news has limited effects on analyst outputs if the acquisition-related IFRS information is only used by the knowledgeable analysts. The results also point to differences in analysts' ability to make accurate forecasts due to more limited consideration of complex accounting information by the less knowledgeable analysts. This finding is relevant to the literature on firm valuation in connection with acquisitions (Section 2.7) as it relies on analyst forecasts. However, in our study the use and perceived importance of complex information concerning acquisitions was also rather high among the less knowledgeable analysts. Many univariate tests and the ANOVA referring to AA details showed no effects concerning IFRS knowledge. Our interpretation is that some analysts use complex accounting information even though they lack sufficient knowledge of the relevant accounting standards. There is a risk that this group of analysts will interpret FSC information inadequately.

Even though the analysts in our samples were committed to fundamental analysis when communicating with clients (see Section 5.7), the choice of a sophisticated valuation approach was found to be unrelated to IFRS knowledge. In relation to our literature review, these results suggest that analysts' investments in accounting knowledge may be driven by other factors than those related to fundamental analysis (e.g. Abhayawansa et al., 2015). Our examination of other factors indicated that the level of such knowledge was not explained by analyst experience or changed incentives over time due to new technology or regulation.

Our study is subject to some limitations. One limitation concerns the somewhat small sample sizes. But that should be viewed in light of the general problem of gaining access to professional analysts and also the FSC restriction that they should have experience of evaluating acquisitions. Second, the study relies on responses from analysts from one single country (Sweden) where IFRS is used. However, Swedish analysts are used in previous studies on the use of accounting information (e.g. Andersson & Hellman, 2007) and arguably the results will be comparable to studies of analysts in other well-developed financial markets (e.g. Olbert, 1994). Third, our samples of analysts were not homogeneous in that they did not only include sell-side analysts. This may limit the generalizability of the findings, as most of the prior literature targets sell-side analysts and incentives may not be the same for other analyst categories. Fourth, the participating analysts subjectively estimated their knowledge of accounting standards. While such self-evaluation measures have been employed previously in accounting

research (e.g. Brown & Jones, 2011; Knechel & Leiby, 2016), there may be concerns about their validity. Much research in psychology has addressed this issue, suggesting that people tend to have moderate insights into their abilities (Zell & Krizan, 2014); but when asked to rate how much they know about specific details of a domain, their perceptions tend to substantially correspond to objective measures of knowledge (e.g. Ackerman, Beier, & Bowen, 2002). The latter research finding relates to the measures of self-reported knowledge in our study in that participating analysts were asked to report how much they knew about specific accounting standards rather than accounting in general. Arguably, the employed self-reported measures have some validity and, thus, may reflect the actual level of knowledge of accounting standards possessed by the analysts.

In sum, our results point at a need to better understand the incentives of analysts to invest in accounting knowledge. Although the IASB has made commendable efforts on education and outreach, these may be insufficient if these users do not have strong enough incentives to learn and use complex accounting information. Complementing methodologies and larger, more international and more homogeneous, samples in future research would be valuable for validating (or rejecting) the exploratory empirical findings of this article.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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References

Abhayawansa, S., Aleksanyan, M., & Bahtsevanoglou, J. (2015). The use of intellectual capital information by sell-side analysts in company valuation. *Accounting and Business Research, 45*(3), 279–306.
Ackerman, P. L., Beier, M. E., & Bowen, K. R. (2002). What we really know about our abilities and our knowledge. *Personality and Individual Differences, 33*(4), 587–605.
Aisbitt, S. (2001). Measurement of harmony of financial reporting within and between countries: The case of the Nordic countries. *European Accounting Review, 10*(1), 51–72.
Almenberg, J., & Dreber, A. (2015). Gender, stock market participation and financial literacy. *Economic Letters, 137*(Dec), 140–142.
Andersson, P., & Hellman, N. (2007). Does pro forma reporting bias analyst forecasts?. *European Accounting Review, 16*(2), 277–298.
Baik, B., Farber, D. B., & Petroni, K. (2009). Analysts' incentives and street earnings. *Journal of Accounting Research, 47*(1), 46–69.
Bailey, M., & Harrison, C. (1984). Cloze procedure as a measure of reading comprehension: The effects of variations in subject matter on textual redundancy. *Human Learning, 3*, 185–201.
Barker, R. G. (1999). The role of dividends in valuation models used by analysts and fund managers. *European Accounting Review, 8*(2), 195–218.
Barker, R., & Imam, S. (2008). Analysts' perceptions of 'earnings quality'. *Accounting and Business Research, 38*(4), 313–329.
Bischof, J., Daske, H., & Sextroh, C. (2014). Fair value-related information in analysts' decision processes: Evidence from the financial crises. *Journal of Business Finance & Accounting, 41*(3–4), 363–400.
Bonner, S. E. (2008). *Judgment and decision making in accounting*. Upper Saddle River, NJ: Pearson Education.
Bouwman, M. J., Frishkoff, P. A., & Frishkoff, P. (1987). How do financial analysts make decisions? A process model of the investment screening decision. *Accounting, Organizations and Society, 12*(1), 1–29.
Bouwman, M. J., Frishkoff, P., & Frishkoff, P. A. (1995). The relevance of GAAP-based information: A case study exploring some uses and limitations. *Accounting Horizons, 9*(4), 22–47.
Bradshaw, M. T. (2009). Analyst information processing, financial regulation, and academic research. *The Accounting Review, 84*(4), 1073–1083.
Bradshaw, M. T., Huang, A. G., & Tan, H. (2019). The effects of analyst-country institutions on biased research: Evidence from target prices. *Journal of Accounting Research, 57*(1), 85–120.
Bréton, G., & Taffler, R. J. (1995). Creative accounting and investment analyst response. *Accounting and Business Research, 25*(98), 81–92.
Brown, D. L., & Jones, K. T. (2011). Audit experience, accounting education and perceptions about the efficacy of Sarbanes-Oxley and the PCAOB. *Journal of Accounting & Finance, 11*(2), 58–68.
Brown, L. D., Call, A. C., Clement, M. B., & Sharp, N. Y. (2015). Inside the 'black box' of sell-side financial analysts. *Journal of Accounting Research, 53*(1), 1–47.
Brown, L. D., Call, A. C., Clement, M. B., & Sharp, N. Y. (2016). The activities of buy-side analysts and the determinants of their stock recommendations. *Journal of Accounting and Economics, 62*(1), 139–156.
Burgstahler, D. C., Hail, L., & Leuz, C. (2006). The importance of reporting incentives: Earnings management in European private and public firms. *The Accounting Review, 81*(5), 983–1016.
Carter, C., & Spence, C. (2014). Being a successful professional: An exploration of who makes partner in the Big 4. *Contemporary Accounting Research, 31*(4), 949–981.
Chang, H. S., Donohoe, M., & Sougiannis, T. (2016). Do analysts understand the economic and reporting complexities of derivatives? *Journal of Accounting and Economics, 61*(2–3), 584–604.
Chychyla, R., Leone, A. J., & Minutti-Meza, M. (2019). Complexity of financial reporting standards and accounting expertise. *Journal of Accounting and Economics, 67*(2019), 226–253.
Cooke, T. E. (1989). Disclosure in the annual reports of Swedish companies. *Accounting and Business Research, 19*(74), 113–124.
Cowen, A., Groysberg, B., & Healy, P. (2006). Which types of analyst firms are more optimistic?. *Journal of Accounting and Economics, 41*(1–2), 119–146.
Dagens industri [Swedish business newspaper] (2016). Interview with the Chairman of CFA Society Sweden, June 15, 2016. https://www.ohman.se/wp-content/uploads/CFA_Society_Sweden_Advertorial_Di_20160615.pdf Accessed 30 December 2019.
Demirakos, E., Strong, N., & Walker, M. (2004). What valuation models do analysts use?. *Accounting Horizons, 18*(4), 221–240.

Donnelly, R., & Hajbaba, A. (2014). The acquisition-puzzle and mispricing: Evidence of over-optimism. *International Journal of Managerial Finance, 10*(4), 470–493.
Doukas, J. A., Kim, C. (F.), & Pantzalis, C. (2008). Do analysts influence corporate financing and investment?. *Financial Management, 37*(2), 303–339.
Engelberg, J., McLean, R. D., & Pontiff, J. (2020). Analysts and anomalies. Journal of Accounting and Economics, 69(2020) 101249, 1–13.
ESMA (European Securities and Markets Authority) (2019). MiFID II. Retrieved from https://www.esma.europa.eu/policy-rules/mifid-ii-and-mifir Accessed 21 August 2019.
Ewer, S. R. (2007). Transparency and understandability, but for whom?. *The CPA Journal, 77*(2), 16–22.
FASB (Financial Accounting Standards Board) (1978). Statement of financial accounting concepts no. 1: objectives of financial reporting by business enterprises. Available at: file:///C:/Users/rklar/Downloads/371_398_con1.pdf.
FASB (Financial Accounting Standards Board) (1980). Statement of financial accounting concepts no. 2: qualitative characteristics of accounting information. Available at: file:///C:/Users/rklar/Downloads/244_276_con2.pdf.
Filzen, J. J., & Peterson, K. (2015). Financial statement complexity and meeting analysts' expectations. *Contemporary Accounting Research, 32*(4), 1560–1594.
Fransman, M. (1994). Information, knowledge, vision and theories of the firm. *Industrial and Corporate Change, 3*(3), 713–757.
Gassen, J., & Schwedler, K. (2010). The decision usefulness of financial accounting measurement concepts: Evidence from an online survey of professional investors and their advisors. *European Accounting Review, 19*(3), 495–509.
Glaum, M., Schmidt, P., Street, D., & Vogel, S. (2013). Compliance with IFRS 3- and IAS 36-required disclosures across 17 European countries: Company- and country-level determinants. *Accounting and Business Research, 43*(3), 163–204.
Hamberg, M., & Beisland, L.-A. (2014). Changes in the value relevance of goodwill accounting following the adoption of IFRS 3. *Journal of International Accounting, Auditing & Taxation, 23*(2014), 59–73.
Haw, I.-M., Jung, K., & Ruland, W. (1994). The accuracy of financial analysts' forecasts after mergers. *Journal of Accounting, Auditing & Finance, 9*(3), 465–483.
Hellman, N., Andersson, P., & Fröberg, E. (2016). The impact of IFRS goodwill reporting on financial analysts' equity valuation judgements: Some experimental evidence. *Accounting and Finance, 56*(1), 113–157.
Hellman, N., Gray, S. J., Morris, R. D., & Haller, A. (2015). The persistence of international accounting differences as measured on transition to IFRS. *Accounting and Business Research, 45*(2), 166–195.
Holland, J. H., Holyoak, K. J., Nisbett, R. E., & Thagard, P. R. (1989). *Induction: Processes of inference, learning, and discovery*. Cambridge, Mass.: The MIT Press.
Huettinger, M., & Krašauskaitė, A. (2019). Will MiFID II tame the investment services industry of the Baltic tigers?. *Qualitative Research in Financial Markets, 12*(3), 315–331. https://doi.org/10.1108/QRFM-12-2018-0141.
IASC (International Accounting Standards Committee) (1989). *Framework for the preparation and presentation of financial statements*. London: International Accounting Standards Committee Foundation (IASCF) Publications Department.
IASB (International Accounting Standards Board) (2010). Conceptual framework phase A: Objectives and qualitative characteristics.
Imam, S., & Spence, C. (2016). Context, not predictions: A field study of financial analysts. *Accounting, Auditing & Accountability Journal, 29*(2), 226–247.
Imam, S., Barker, R., & Clubb, C. (2008). The use of valuation models by UK investment analysts. *European Accounting Review, 17*(3), 503–535.
Imam, S., Chan, J., & Shah, S. Z. A. (2013). Equity valuation models and target price accuracy in Europe: Evidence from equity reports. *International Review of Financial Analysis, 28*(1), 9–19.
Johansson, S.-E., Hjelström, T., & Hellman, N. (2016). Accounting for goodwill under IFRS: A critical analysis. *Journal of International Accounting, Auditing & Taxation, 27*(2016), 13–25.
Jones, M., & Smith, M. (2014). Traditional and alternative methods of measuring understandability of accounting narratives. *Accounting, Auditing & Accountability Journal, 27*(1), 183–208.
Kerl, A., Stolper, O., & Walter, A. (2012). Tagging the triggers: An empirical analysis of information events prompting sell-side analyst reports. *Financial Markets and Portfolio Management, 26*(2), 217–246.
Knechel, W. R., & Leiby, J. (2016). If you want my advice: Status motives and audit consultations about accounting estimates. *Journal of Accounting Research, 54*(5), 1331–1363.
Krische, S. D. (2019). Investment experience, financial literacy, and investment-related judgments. *Contemporary Accounting Research, 36*(3), 1634–1668.
Ma, Q., Whidbee, D., & Zhang, A. (2011). Value, valuation, and the long-run performance of merged firms. *Journal of Corporate Finance, 17*(1), 1–17.
Olbert, L. (1994). Stock valuation methods of financial analysts in a thin stock market in Sweden, with comparisons to the United Kingdom and the United States. *The International Journal of Accounting, 29*(2), 123–135.
Orens, R., & Lybaert, N. (2007). Does the financial analysts' usage of non-financial information influence the analysts' forecast accuracy? Some evidence from the Belgian sell-side financial analyst. *The International Journal of Accounting, 42*(2007), 237–271.
Orens, R., & Lybaert, N. (2010). Determinants of sell-side financial analysts' use of non-financial information. *Accounting and Business Research, 40*(1), 39–53.
Pacelli, J. (2019). Corporate culture and analyst catering. *Journal of Accounting and Economics, 67*(1), 120–143.
Penman, S. H. (2011). *Accounting for value*. New York, NY: Columbia University Press.
Penman, S. H. (2012). *Financial statement analysis and security valuation* (5th ed.). New York, NY: McGraw-Hill.
Plumlee, M. A. (2003). The effect of information complexity on analysts' use of that information. *The Accounting Review, 78*(1), 275–296.
Pollock, N., & Williams, R. (2015). Industry analysts – how to conceptualise the distinctive new forms of IT market expertise? *Accounting, Auditing & Accountability Journal, 28*(8), 1373–1399.
Preda, A. (2009). *Framing finance: The boundaries of markets and modern capitalism*. Chicago, IL: University of Chicago Press.
Ramanna, K., & Watts, R. L. (2012). Evidence on the use of unverifiable estimates in required goodwill impairment. *Review of Accounting Studies, 17*, 749–780.
Renneboog, L., & Vansteenkiste, C. (2019). Failure and success in mergers and acquisitions. *Journal of Corporate Finance, 58*(2019), 650–699.
Roberts, J., Sanderson, P., Barker, R., & Hendry, J. (2006). In the mirror of the market: The disciplinary effects of company/fund manager meetings. *Accounting, Organizations and Society, 31*(3), 277–294.
Sax, L. J., Gilmartin, S. K., & Bryant, A. N. (2003). Assessing response rates and nonresponse bias in web and paper surveys. *Research in Higher Education, 44*(4), 409–432.
Shalev, R., Zhang, I. X., & Zhang, Y. (2013). CEO compensation and fair value accounting: Evidence from purchase price allocation. *Journal of Accounting Research, 51*, 819–854.
Solomon, I., Shields, M., & Whittington, O. (1999). What do industry-specialist auditors know?. *Journal of Accounting Research, 37*(1), 191–208.
Spence, C., Aleksanyan, M., Millo, Y., Imam, S., & Abhayawansa, S. (2019). Earning the 'write to speak': Sell-side analysts and their struggle to be heard. *Contemporary Accounting Research, 36*(4), 2635–2662.
Tan, H.-T., & Libby, R. (1997). Tacit managerial versus technical knowledge as determinants of audit expertise in the field. *Journal of Accounting Research, 35*(1), 97–113.
Tehranian, H., Zhao, M., & Zhu, J. (2014). Can analysts analyse mergers?. *Management Science, 60*(4), 959–979.
van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial Economics, 101*(3), 449–472.
Zell, K., & Krizan, Z. (2014). Do people have insight into their abilities? A metasynthesis. *Perspectives on Psychological Science, 9*(2), 111–125.